IPG PHOTONICS CORP
Form S-1
August 11, 2006

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As filed with the Securities and Exchange Commission on August 11, 2006
Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

IPG Photonics Corporation
(Exact name of Registrant as specified in its charter)

Delaware	**3674**	**04-3444218**
(State or other jurisdiction of incorporation or organization)	*(Primary Standard Industrial Classification Code Number)*	*(I.R.S. employer identification number)*

50 Old Webster Road
Oxford, Massachusetts 01540
(508) 373-1100

(Address, including zip code, and telephone number, including area code, of registrant s principal executive offices)

Valentin P. Gapontsev, Ph.D.
Chief Executive Officer and Chairman of the Board
IPG Photonics Corporation
50 Old Webster Road
Oxford, Massachusetts 01540
(508) 373-1100
(Name, address, including zip code, and telephone number, including area code, of agent for service)

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Approximate date of commencement of proposed sale to the public: As soon as practicable after the effectiveness of this registration statement.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, please check the following box. o

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. o

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Proposed Maximum Aggregate Offering Price(a)(b)	Amount of Registration Fee
Common Stock, par value $0.0001 per share	$130,000,000	$13,910

(a) Includes shares of Common Stock which may be purchased by the underwriters to cover overallotments, if any.
(b) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(o) promulgated under the Securities Act.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act, or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to Completion
Preliminary Prospectus dated , 2006

PROSPECTUS

Shares
Common Stock

This is IPG Photonics Corporation s initial public offering of its common stock. We are offering shares of common stock. The selling stockholders named in this prospectus, including our chairman and chief executive officer and two other members of our board of directors, are offering an additional shares of common stock. We expect the public offering price to be between $ and $ per share.

Currently, no public market exists for our common stock. After pricing of the offering, we expect that our common stock will be quoted on the Nasdaq Global Market under the symbol IPGP.

Investing in our common stock involves risks that are described in the Risk Factors section beginning on page 7 of this prospectus.

	Per Share	Total
Public offering price	$	$
Underwriting discount	$	$
Proceeds, before expenses, to IPG Photonics	$	$
Proceeds, before expenses, to selling stockholders	$	$

The underwriters may also purchase up to an additional shares of common stock from us at the public offering price, less the underwriting discount, within 30 days from the date of this prospectus to cover overallotments.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The shares will be ready for delivery on or about , 2006.

Joint Book-Running Managers

Merrill Lynch & Co. **Lehman Brothers**

Needham & Company, LLC

Jefferies & Company

Thomas Weisel Partners LLC

The date of this prospectus is , 2006.

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EX-3.1 Amended and Restated Certificate of Incorporation of the Registrant
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EX-10.6 Form of Subordinated Note of the Registrant to be issued to holders of Series B preferred stock
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Ex-10.8 Employment Agreement, Valentin P. Gapontsev
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Ex-10.10 Employment Agreement, Tim Mammen
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EX-10.13 Form of Indemnification Agreement
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EX-10.17 Form of Conifidentiality, Non-Competition and Confirmatory Assignment Agreement
EX-10.18 Construction Loan Agreement, dated as of April 28, 2000
EX-10.19 Loan and Security Agreement, dated as of November 15, 2004
EX-21.1 List of Subsidiaries
EX-23.1 Consent of Deloitte & Touche LLP

You should rely only on the information contained in this prospectus or any free writing prospectus prepared by or on behalf of us. We have not, and the underwriters have not, authorized anyone to provide you with additional information or information different from that contained in this prospectus. We are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of shares of our common stock.

In this prospectus, references to IPG Photonics, our company, we, us and our refer to IPG Photonics Corporation and its consolidated subsidiaries, except where the context otherwise indicates.

The market and industry data and forecasts included in this prospectus are based upon independent industry sources, including Laser Focus World, Strategies Unlimited and Frost & Sullivan. Although we believe that these independent sources are reliable, we have not independently verified the accuracy and completeness of this information, nor have we independently verified the underlying economic assumptions relied upon in preparing any data or forecasts.

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PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus. Because it is a summary, it does not contain all of the information that you should consider before investing in our common stock. You should read the entire prospectus carefully, including our financial statements and the related notes and the risks of investing in our common stock discussed under Risk Factors before making an investment decision.

IPG Photonics Corporation

Overview

We are the leading developer and manufacturer of a broad line of high-performance fiber lasers and amplifiers for diverse applications in numerous markets. Since our founding in 1990, we have pioneered the development and commercialization of optical fiber-based lasers. Fiber lasers are a new generation of lasers that combine the advantages of semiconductor diodes, such as their long life and high efficiency, with the high amplification and precise beam qualities of specialty optical fibers to deliver superior performance, reliability and usability at a lower total cost of ownership compared to conventional lasers. Our products are displacing traditional lasers in many current applications and enabling new applications for lasers. Our vertically integrated operations allow us to rapidly develop and integrate advanced products, protect our proprietary technology and ensure access to critical components while reducing manufacturing costs.

Our diverse lines of low, mid and high-power lasers and amplifiers are used in materials processing, communications, medical and advanced applications. For the year ended December 31, 2005, we reported net sales of $96.4 million and net income of $7.4 million, an increase of 59% and 269%, respectively, compared to the year ended December 31, 2004. For the six months ended June 30, 2006, we reported net sales of $64.9 million and net income of $6.1 million, an increase of 56% and 185%, respectively, from the six months ended June 30, 2005.

Our headquarters and manufacturing facilities are located in Oxford, Massachusetts. We have additional manufacturing facilities in Germany, Russia and Italy, and regional sales offices in the United States, Japan, Korea, India and the United Kingdom.

Industry Background

Historically, CO_2 gas lasers and crystal lasers have been the two principal laser types used in materials processing and many other applications. A CO_2 laser produces light by electrically stimulating a gas-filled tube, while a crystal laser uses a lamp, diode stack or array to optically pump a special crystal. Traditional lasers have a number of disadvantages and limitations, including low beam quality, low reliability, limited output powers and wavelength choices, high energy consumption, large size, lack of mobility, the need for expensive replacement parts and complex cooling and maintenance requirements. In addition, the operating parameters of traditional lasers are difficult to control precisely.

We believe that fiber lasers represent a disruptive technology that has broad implications for many industries as well as the many processes that use lasers. Fiber lasers use semiconductor diodes as the light source to pump specialty optical fibers, which are infused with rare earth ions. The laser emission is created within optical fibers and delivered through a flexible cable. Over the last several years, technological improvements in active optical fibers, semiconductor diodes and other optical components have resulted in performance improvements and increases in cost effectiveness, reliability and output power levels of fiber lasers. As a result, fiber lasers have gained market share by replacing traditional lasers in existing laser applications and enabling new applications by addressing customer needs that are not met by traditional lasers and non-laser processes. We believe that fiber lasers provide a combination of benefits that include:

Superior Performance. Fiber lasers provide high beam quality over the entire power range.

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Lower Total Cost of Ownership. Fiber lasers offer strong value to customers because of their lower total operating costs due to their lower maintenance costs, high reliability and energy efficiency.

Ease of Use. The all solid-state design and integrated fiber delivery of fiber lasers make them easy to operate, maintain and integrate into laser-based systems.

Compact Size and Portability. Fiber lasers are typically smaller and lighter than traditional lasers, and their portability and versatility allow them to be used in new laser applications.

Choice of Wavelengths and Precise Control of Beam. The design of fiber lasers generally provides a broad range of wavelength choices and increased beam control, allowing users to select the precise wavelength and beam parameter that best match their application and materials.

According to Strategies Unlimited, the fiber laser market is estimated to grow at a compound annual growth rate of approximately 39%, from $131 million in 2005 to $673 million by 2010. Strategies Unlimited also estimates the total available market for fiber lasers to be growing at 9% annually from $1.8 billion in 2005 to $2.8 billion by 2010. The penetration of fiber lasers is estimated to grow from 7% to 24% of the total available market for fiber lasers during that time period.

Our Strengths

Our key strengths and competitive advantages include:

Differentiated Proprietary Technology Platform. Our proprietary technology platform allows our products to have higher output powers and superior beam quality than are achievable through traditional techniques. In addition, we have developed a wide range of advanced proprietary optical components that contribute to the superior performance and reliability of our products.

Leading Market Position. As a pioneer and technology leader in fiber lasers and amplifiers, we have built leading positions in our various end markets with a large and diverse customer base.

Breadth and Depth of Expertise. We have extensive know-how in materials sciences, which enables us to make our specialty optical fibers, semiconductor diodes and other critical components. We also have expertise in optical, electrical, mechanical and semiconductor engineering which we use to develop and manufacture our products.

Vertically Integrated Development and Manufacturing. We believe that we are the only fiber laser manufacturer that is vertically integrated. We develop and manufacture all of the key components of our fiber lasers, including semiconductor diodes, specialty optical fibers and other advanced optical components. We believe our vertical integration enhances our ability to meet customer requirements, accelerate development, manage costs and improve component yields, while maintaining high performance and quality standards.

Diverse Customer Base, End Markets and Applications. Our diverse customer base, end markets and applications provide us with many growth opportunities. We have shipped more than 21,000 units and, in 2005, we shipped to more than 300 customers worldwide.

Broad Product Portfolio and Ability to Meet Customer Requirements. We offer a broad range of standard and custom fiber lasers and amplifiers ranging in power from one watt to 50 kilowatts. As a result of our modular, scalable technology platform, we are able to easily customize and upgrade our products to meet customer requirements.

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Our Strategy

We intend to maintain and extend our leadership position by pursuing the following key elements of our strategy:

Leverage Our Technology to Gain Market Share. We plan to leverage our brand and position as the leader in developing and commercializing fiber lasers and amplifiers to increase our market share in the broader market. We believe that our fiber lasers will continue to displace traditional lasers in many existing applications due to their superior performance and value.

Target New Applications for Lasers. We intend to continue to enable and penetrate additional applications where lasers have not traditionally been used. We believe that fiber laser technology can overcome many of the limitations that have slowed the adoption of traditional lasers.

Expand Our Product Portfolio. We plan to continue to invest in research and development to add additional wavelengths, power levels and other parameters, improve beam quality and develop new products.

Optimize Our Manufacturing Capabilities. We plan to seek further increases in the automation of our component manufacturing processes and device assembly to improve component yields and increase the power outputs and capacities of the various components that we make.

Expand Global Reach to Attract Customers Worldwide. We intend to capitalize on and grow our global customer base by opening new application development centers as well as sales and service offices in Asia, Europe and the United States.

Risk Factors

Our business is subject to numerous risks and uncertainties, including those highlighted in the section entitled Risk Factors immediately following this prospectus summary. The principal risks that we face relate to the following factors:

our future growth depends upon our ability to penetrate new applications for fiber lasers and to increase our market share in existing applications;

if fiber lasers do not achieve broader market acceptance or if market penetration occurs more slowly than we expect, prospects for our growth and profitability may be negatively impacted;

we may not be able to effectively manage our growth, which may harm our business and operating results;

our vertical integration strategy results in high levels of fixed costs, and our manufacturing capacity may not be at the appropriate size for future levels of demand; and

we are currently subject to claims that we are infringing third-party intellectual property rights and other claims may arise in the future, which could result in costly and lengthy litigation, the outcome of which is unknown.

Corporate Information

We began our operations in Russia in 1990 and were incorporated in Delaware in 1998. Our principal executive offices are located at 50 Old Webster Road, Oxford, Massachusetts 01540, and our telephone number is (508) 373-1100. Our website is located at *www.ipgphotonics.com*. Information on our website should not be considered part of this prospectus.

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THE OFFERING

Common stock offered by IPG Photonics	shares
Common stock offered by the selling stockholders	shares
Common stock to be outstanding after the offering	shares
Use of proceeds	We expect to receive net proceeds from the offering of approximately $ million. We expect to use the net proceeds from the offering to repurchase our series B warrants, to repay certain of our outstanding indebtedness and for general corporate purposes, including working capital, expansion of our manufacturing facilities, purchases of equipment and expansion of our applications development and service capabilities. See Use of Proceeds. We will not receive any proceeds from the shares sold by the selling stockholders. The selling stockholders include our chairman and chief executive officer and two other members of our board of directors. See Principal and Selling Stockholders. Entities that may be deemed to be affiliates of Merrill Lynch & Co., one of the underwriters in this offering, will receive a portion of the proceeds of this offering as a result of our repurchase of series B warrants held by them. See Underwriting Certain Relationships.
Nasdaq Global Market Symbol	IPGP

The number of shares of common stock to be outstanding after the offering is based on 40,883,700 shares outstanding as of June 30, 2006 and includes shares that we will issue upon conversion of our outstanding preferred stock effective immediately prior to completion of the offering assuming an initial public offering price of $ per share, which is the midpoint of the range set forth on the cover page of this prospectus.

The number of shares of common stock to be outstanding after the offering excludes:

- 6,655,960 shares issuable upon exercise of stock options outstanding as of June 30, 2006, which have a weighted average exercise price of $1.71 per share;
- 4,790,034 additional shares reserved as of June 30, 2006 for future issuance under our stock-based compensation plans;
- warrants to purchase shares of our common stock that will be repurchased at the closing of this offering; and
- 2,684,211 shares of our series D preferred stock that were issuable upon conversion of a convertible note. We repaid the convertible note in August 2006 and therefore the series D preferred stock underlying the convertible note will not be issued.

Unless otherwise stated, all information contained in this prospectus:

- gives effect to the conversion of our outstanding preferred stock into a combination of common stock and subordinated notes;
- gives effect to amendments to our certificate of incorporation and by-laws that will become effective upon completion of this offering; and

assumes no exercise of the option to purchase additional shares of common stock granted to the underwriters.

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SUMMARY CONSOLIDATED FINANCIAL DATA

The following summary consolidated financial data should be read together with the more detailed information contained in Selected Consolidated Financial Data, Management s Discussion and Analysis of Financial Condition and Results of Operations and our consolidated financial statements and the related notes included elsewhere in this prospectus. The data for the years ended December 31, 2003, 2004 and 2005, is derived from our audited consolidated financial statements and related notes included elsewhere in this prospectus. The data for the years ended December 31, 2001 and 2002, is derived from our audited consolidated financial statements and related notes not included in this prospectus. The summary interim consolidated financial data as of June 30, 2006 and for the six months ended June 30, 2005 and 2006, is derived from our unaudited consolidated financial statements and related notes included elsewhere in this prospectus. We have prepared our unaudited interim consolidated financial data on a basis consistent with our audited consolidated financial statements except that, effective January 1, 2006, we were required to begin accounting for stock-based payments at fair value, as discussed in note 2 to the consolidated financial statements. In the opinion of our management, our unaudited interim consolidated financial statements reflect all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of our results of operations and financial position. Our historical results are not necessarily indicative of the results for any future period.

	Year Ended December 31,					Six Months Ended June 30,	
	2001	2002	2003	2004	2005	2005	2006
						(unaudited)	
	(in thousands, except per share data)						
Consolidated Statement of Operations Data:(1)							
Net sales	$ 26,490	$ 22,180	$ 33,740	$ 60,707	$ 96,385	$ 41,630	$ 64,927
Cost of sales	26,223	23,277	38,583	42,274	62,481	28,437	39,119
Gross profit (loss)	267	(1,097)	(4,843)	18,433	33,904	13,193	25,808
Operating expenses:							
Sales and marketing	21,240	19,910	2,110	2,363	3,236	1,538	2,343
Research and development	8,407	8,383	10,063	4,831	5,788	2,873	2,622
General and administrative	18,875	13,354	9,998	8,179	10,598	4,352	5,813
Other operating expenses	15,042	9,474					
Total operating expenses	63,564	51,121	22,171	15,373	19,622	8,763	10,778
Operating (loss) income	(63,297)	(52,218)	(27,014)	3,060	14,282	4,430	15,030
Interest income (expense), net	1,857	(1,089)	(1,505)	(2,150)	(1,840)	(969)	(709)
Fair value adjustment to series B warrants(2)	6,862	2,518	(3,664)	(615)	(745)	(314)	(2,219)

Other income, net	975	2,414	1,647	196	236	141	12
(Loss) income before benefit from (provision for) income taxes and minority interests in consolidated subsidiaries	(53,603)	(48,375)	(30,536)	491	11,933	3,288	12,114
Benefit from (provision for) income taxes	3,985	(1,175)	2,205	1,601	(4,080)	(1,219)	(5,598)
Minority interests in consolidated subsidiaries	(4)	165	121	(80)	(426)	81	(398)
Net (loss) income	$ (49,622)	$ (49,385)	$ (28,210)	$ 2,012	$ 7,427	$ 2,150	$ 6,118
Net (loss) income per share:							
Basic	$ (1.45)	$ (1.42)	$ (0.93)	$ (0.01)	$ 0.11	$ 0.02	$ 0.11
Diluted	$ (1.45)	$ (1.42)	$ (0.93)	$ (0.01)	$ 0.11	$ 0.02	$ 0.10
Weighted average shares outstanding:							
Basic	35,959	36,476	38,302	38,547	39,348	39,008	40,385
Diluted	35,959	36,476	38,302	38,547	45,252	44,912	49,584
Supplementary pro forma net income per share(3)					$		$

(footnotes on following page)

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(1) Stock-based compensation is included in the following financial statement captions as follows:

	Year Ended December 31,					Six Months Ended June 30,	
	2001	2002	2003	2004	2005	2005	2006
						(unaudited)	
	(in thousands)						
Cost of sales	$ 2,574	$ 789	$ 577	$ 218	$ 4	$	$ 37
Sales and marketing	19,148	17,260	18	6	1		11
Research and development	1,608	314	1,062	669	1		3
General and administrative	9,403	3,326	546	10	1		75
Total	$ 32,733	$ 21,689	$ 2,203	$ 903	$ 7	$	$ 126

Due primarily to certain stock-based compensation awarded primarily in 2000 and 2001, we have recorded significant stock-based compensation during the years ended December 31, 2001, 2002 and 2003. Those awards became fully vested during the year ended December 31, 2004.

(2) The change in value of the series B warrants is a non-cash charge related to recording the increase or decrease in the fair value of the warrants. The change in fair value for this derivative instrument is directly related to the probability that the warrants will be exercised prior to their expiration in April 2008. We intend to use a portion of the net proceeds from this offering to repurchase the series B warrants. See Management s Discussion and Analysis of Financial Condition and Results of Operations Factors and Trends That Affect our Operations and Financial Results Effect of Preferred Stock On Net Income and Net Income Per Share.

(3) The supplemental pro forma disclosures are intended to demonstrate the effects on net income per share of the completion of this offering and the related impacts of the conversion of our preferred stock and the repurchase of the series B warrants with a portion of the net proceeds of this offering. The number of shares used in the calculation of supplementary pro forma net income per common share includes (a) the basic weighted average common stock outstanding, (b) shares of common stock, which will be issued upon completion of this offering upon the conversion of our preferred stock, and (c) shares related to the additional dilutive impact of existing options assuming that the fair value of the common stock increases to the midpoint of the range set forth on the cover page of this prospectus. Supplementary pro forma net income used in the calculation of supplementary pro forma net income per share reflects the elimination of the increase in value of the series B warrants, which will be repurchased upon the completion of this offering, totaling $745,000 for the year ended December 31, 2005 and $2.2 million for the six months ended June 30, 2006. In addition, all accretion of preferred stock has been eliminated in the determination of net income attributable to common stockholders. See Use of Proceeds, Management s Discussion and Analysis of Financial Condition and Results of Operations Critical Accounting Policies and Estimates Fair Value Adjustment of Warrants and Certain Relationships and Related Party Transactions.

The table below summarizes our consolidated balance sheet as of June 30, 2006 on an actual basis, on a pro forma basis to give effect to the conversion of all outstanding shares of preferred stock as of that date into common stock and the issuance of subordinated notes totaling $20.0 million, which will occur upon closing of this offering, and on a pro forma as adjusted basis to reflect the transactions described above as well as the sale of shares of our common stock in this offering at an assumed offering price of $ per share and the application of the

estimated net proceeds therefrom as described in Use of Proceeds.

	As of June 30, 2006		
	Actual	Pro Forma	Pro Forma as Adjusted
		(unaudited) (in thousands)	
Consolidated Balance Sheet Data:			
Cash and cash equivalents	$ 11,282	$ 11,282	
Working capital	22,721	22,721	
Total assets	131,996	131,996	
Long-term debt, including current portion	24,268	44,268	
Series B warrants	16,863	16,863	
Convertible redeemable preferred stock	97,385		
Preferred stock	4,880		
Stockholders (deficit) equity	(38,545)	38,840	

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RISK FACTORS

This offering involves a high degree of risk. You should carefully consider the risks and uncertainties below, together with the financial and other information contained in this prospectus, before you decide to buy our common stock. If any of the following risks and uncertainties actually occur, our business, prospects, financial condition and results of operations would likely suffer. In these circumstances, the market price of our common stock could decline, and you could lose all or part of your investment in our common stock.

Risks Related To Our Business

Our future growth depends upon our ability to penetrate new applications for fiber lasers and increase our market share in existing applications.

Our future growth will depend on our ability to generate sales of fiber lasers in applications where traditional lasers, such as CO_2 and yttrium aluminum garnet (YAG) lasers, have been used or in new and developing markets and applications for lasers where they have not been used previously. To date, a significant portion of our revenue growth has been derived from sales of fiber lasers primarily for applications where CO_2 and YAG lasers historically have been used. In order to increase market demand for our fiber laser products, we will need to devote substantial resources to:

- demonstrate the effectiveness of fiber lasers in new applications;
- increase our direct and indirect sales efforts;
- extend our product line to address new applications for our products;
- continue to reduce our manufacturing costs and enhance our competitive position; and
- effectively service and support our installed product base.

If we are unable to implement our strategy to develop new applications for our products, our revenues, operating results and financial condition could be adversely affected. We cannot assure you that we will be able to successfully implement our business strategy. In addition, our newly developed or enhanced products may not achieve market acceptance or may be rendered obsolete or less competitive by the introduction of new products by other companies.

If fiber lasers do not achieve broader market acceptance or if market penetration occurs more slowly than we expect, prospects for our growth and profitability may be negatively impacted.

The fiber laser market is relatively new when compared to the conventional laser market and our future success depends on the development and broader market acceptance of fiber lasers. Potential customers may be reluctant to adopt fiber lasers as an alternative to traditional lasers, such as CO_2 and YAG, and non-laser methods, such as mechanical tools. Such potential customers may have substantial investments and know-how related to their existing laser and non-laser technologies, and may perceive risks relating to the reliability, quality, usefulness and cost-effectiveness of fiber lasers when compared to other laser or non-laser technologies available in the market. Many of our target markets, such as the automotive, machine tool and other manufacturing, communications and medical industries, have historically adopted new technologies slowly. These markets often require long test and qualification periods or lengthy government approval processes before adopting new technologies. As a result, we may expend significant resources and time to qualify our products for a new customer application, and we cannot assure that our products will be qualified or approved for such markets. If acceptance of fiber laser technology, and of our fiber lasers in particular, does not continue to grow within the markets that we serve, then the opportunities to increase our revenues and profitability may be severely limited.

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We may not be able to effectively manage our growth and we may need to incur significant costs to address the operational requirements related to our growth, either of which could harm our business and operating results.

We have been experiencing a period of significant growth and expansion, both in the United States and internationally, which has required, and will continue to require, increased efforts of our management and other resources. Our recent and anticipated growth has placed, and is expected to continue to place, significant strain on our research and development, sales and marketing, operational and administrative resources. To manage our growth, we will need to continue to improve our operational and financial systems and expand, train and manage our employees. For example, we must implement new modules of our management information system, hire and train new sales representatives, service and application personnel, and expand our supply chain management and quality control operations. This may require substantial managerial and financial resources, and our efforts in this regard may not be successful. If we fail to adequately manage our expected growth, or to improve our operational, financial and management information systems, or fail to effectively motivate or manage our new and future employees, the quality of our products and the management of our operations could suffer and our operating results could be adversely affected.

Our vertically integrated business results in high levels of fixed costs that may adversely impact our gross profits and our operating results in the event of a reduction in demand for our products.

We have a high fixed cost base due to our vertically integrated business model, including the fact that approximately 710 of our 900 employees as of June 30, 2006 were employed in our manufacturing operations. We cannot adjust these fixed costs quickly to adapt to rapidly changing market conditions. Our gross profit, in absolute dollars and as a percentage of net sales, is greatly impacted by our sales volume and the corresponding absorption of fixed manufacturing overhead expenses. In addition, because we are a vertically integrated manufacturer and design and manufacture our key specialty components, insufficient demand for our products may subject us to the risk of high inventory carrying costs and increased inventory obsolescence. As a result, we may be required to write down inventory costs in the future as we have done in the past, and the high inventory costs may have an adverse effect on our gross profits and our operating results.

We are subject to lawsuits alleging that we are infringing third-party intellectual property rights. Intellectual property claims could result in costly litigation and harm our business.

In recent years, there has been significant litigation involving intellectual property rights in many technology-based industries, including our own. We face risks and uncertainties in connection with such litigation, including the risk that patents issued to others may harm our ability to do business; that there could be existing patents of which we are unaware that could be pertinent to our business; and that it is not possible for us to know whether there are patent applications pending that our products might infringe upon, since patent applications often are not disclosed until a patent is issued or published.

From time to time, we have been notified of allegations and claims that we may be infringing patents or intellectual property rights owned by third parties. We are presently defending two patent infringement lawsuits brought by the Scientific-Atlanta division of Cisco Systems, Inc. and Spectra-Physics, a division of Newport Corporation. See Business Legal Proceedings. There can be no assurance that we will be able to amicably dispose of the pending litigation, claims and other allegations made against us and claims that may be asserted in the future. The outcome of any litigation, including the pending litigations, is uncertain. Even if we ultimately are successful on the merits of any such litigation, legal and administrative proceedings related to intellectual property are typically expensive and time-consuming, generate negative publicity and divert financial and managerial resources. Some litigants against us may have greater financial resources and may be able to sustain the costs of complex intellectual property litigation more easily than we can.

If we do not prevail in any intellectual property litigation brought against us, it could affect our ability to sell our products and materially harm our business, financial condition and results of operations.

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These developments could adversely affect our ability to compete for customers and increase our revenues. Plaintiffs in intellectual property cases often seek, and sometimes obtain, injunctive relief. Intellectual property litigation commenced against us could force us to take actions that could be harmful to our business, including the following:

- stop selling our products or using the technology that contains the allegedly infringing intellectual property;
- pay actual monetary damages, royalties, lost profits or increased damages and the plaintiff s attorneys fees;
- attempt to obtain a license to use the relevant intellectual property, which may not be available on reasonable terms or at all; and
- attempt to redesign the products that allegedly infringed upon intellectual property of others.

In addition, intellectual property lawsuits can be brought by third parties against OEMs and end users that incorporate our products into their systems or processes. In some cases, we indemnify OEMs against third-party infringement claims relating to our products and we often make representations affirming, among other things, that our products do not infringe on the intellectual property rights of others. As a result, we may incur liabilities in connection with lawsuits against our customers. Any such lawsuits, whether or not they have merit, could be time-consuming to defend, damage our reputation and result in substantial and unanticipated costs.

Our inability to protect our intellectual property and proprietary technologies could result in the unauthorized use of our technologies by third parties, hurt our competitive position and adversely affect our operating results.

We rely on trade secret laws, contractual agreements, technical know-how and other unpatented proprietary information to protect our products, product development and manufacturing activities from unauthorized copying by third parties. While we own a small number of patents, we have not historically emphasized patents as a source of significant competitive advantage, and we do not expect these patents alone to prevent third parties from unauthorized copying of our technologies, products and product components. Rather, we seek to protect our proprietary technology under laws affording protection for trade secrets. We also seek to protect our trade secrets and proprietary information, in part, by requiring employees to enter into agreements providing for the maintenance of confidentiality and the assignment of rights to inventions made by them while employed by us. We have significant international operations and we are subject to foreign laws which differ in many respects from U.S. laws. Policing unauthorized use of our trade secret technologies throughout the world and proving misappropriation of our technologies are particularly difficult, especially due to the number of our employees and operations in numerous foreign countries. The steps that we take to acquire ownership of our employees inventions and trade secrets in foreign countries may not have been effective under all such local laws, which could expose us to potential claims or the inability to protect intellectual property developed by our employees. Furthermore, any changes in, or unexpected interpretations of, the trade secret and other intellectual property laws in any country in which we operate may adversely affect our ability to enforce our trade secret and intellectual property positions. Costly and time-consuming litigation could be necessary to determine the scope of our confidential information and trade secret protection. We also enter into confidentiality agreements with our consultants and other suppliers to protect our confidential information that we deliver to them. However, there can be no assurance that our confidentiality agreements will not be breached, that we will be able to effectively enforce them or that we will have adequate remedies for any breach.

Given our reliance on trade secret laws, others may independently develop similar or alternative technologies or duplicate our technologies and commercialize discoveries that we have made. Therefore, our intellectual property efforts may be insufficient to maintain our competitive advantage or to stop other parties from commercializing similar products or technologies. Many countries outside of the United States afford little or no protection to trade secrets and other intellectual property rights. Intellectual property

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litigation can be time-consuming and expensive, and there is no guarantee that we will have the resources to fully enforce our rights. If we are unable to prevent misappropriation or infringement of our intellectual property rights, or the independent development or design of similar technologies, our competitive position and operating results could suffer.

We depend upon internal production and on outside single or limited-source suppliers for many of our key components and raw materials. Any interruption in the supply of these key components and raw materials could adversely affect our results of operations.

We rely exclusively on our own production capabilities to manufacture certain of our key components, such as semiconductor diodes, specialty optical fibers and optical components. We do not have redundant production lines for some of our components, such as our diodes and some other components, which are made at a single manufacturing facility. These may not be readily available from other sources at our current costs. If our manufacturing activities were obstructed or hampered significantly, it could take a considerable length of time, or it could increase our costs, for us to resume manufacturing or find alternative sources of supply. Many of the tools and equipment we use are custom-designed, and it could take a significant period of time to repair or replace them. In particular, we use complex tools in the production of our semiconductor diodes that may be taken out of production for months to be serviced and the tools must be recertified before they are put back into production. If we are unable to successfully recommission these tools in a timely fashion, our results of operations and business may be adversely affected. If, as a result of a flood, fire, natural disaster, political unrest, act of terrorism, war, outbreak of disease or other similar event, any of our three major manufacturing facilities or equipment should become inoperable, inaccessible, damaged or destroyed, our business could be adversely affected to the extent that we do not have redundant production capabilities.

Also, we purchase certain raw materials used in the manufacture of our products and other components, such as semiconductor wafer substrates, modulators and high-power beam delivery products, from single or limited-source suppliers. In general, we have no long-term contractual supply arrangements with these suppliers. Some of our suppliers are also our competitors. Furthermore, other than our current suppliers, there are a limited number of entities from whom we could obtain these supplies. We do not anticipate that we would be able to purchase these components or raw materials that we require in a short period of time or at the same cost from other sources in commercial quantities or that have our required performance specifications. Any interruption or delay in the supply of any of these components or materials, or the inability to obtain these components and materials from alternate sources at acceptable prices and within a reasonable amount of time, could adversely affect our business. If our suppliers face financial or other difficulties or if there are significant changes in demand for the components and materials we obtain from them, they could limit the availability of these components and materials to us, which in turn could adversely affect our business.

We rely on the significant experience and specialized expertise of our senior management and scientific staff and if we are unable to retain these key employees and attract other highly skilled personnel necessary to grow our business successfully, our business and results of operations could suffer.

Our future success is substantially dependent on the continued service of our executive officers, particularly our founder and chief executive officer, Dr. Valentin P. Gapontsev, and our managing director of IPG Laser, Dr. Eugene Shcherbakov, our highly trained team of scientists, many of whom have several years of experience and specialized expertise in optical fibers, semiconductors and optical component technology, and other key engineering, sales, marketing, manufacturing and support personnel, any of whom may leave, which could harm our business. Furthermore, our business requires scientists and engineers with experience in several disciplines, including physics, optics, materials sciences, chemistry and electronics. We will need to continue to recruit and retain highly skilled scientists and engineers for certain functions. Our future success also depends on our ability to identify, attract, hire, train, retain and motivate highly skilled research and development, managerial, operations, sales, marketing and customer service personnel. If we fail to attract, integrate and retain the necessary personnel, our ability to extend and

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maintain our scientific expertise and grow our business could suffer significantly. In addition, following the completion of this offering, our ability to attract and retain employees with equity compensation may be limited.

Failure to effectively build and expand our direct field service and support organization could have an adverse effect on our business.

We believe that it will become increasingly important for us to provide rapid, responsive service directly to our customers throughout the world and to build and expand our own personnel resources to provide these services. Accordingly, we have an ongoing effort to develop our direct support systems in Asia, one of our largest markets. This requires us to recruit and train additional qualified field service and support personnel as well as maintain effective and highly trained organizations that can provide service to our customers in various countries. We may not be able to attract and train additional qualified personnel to expand our direct support operations successfully. We may not be able to find and engage additional qualified third-party resources to supplement and enhance our direct support operations. Further, we may incur significant costs in providing these direct field and support services. Failure to implement our direct support operation effectively could adversely affect our relationships with our customers, and our operating results may suffer.

The laser and amplifier industries may experience declining average selling prices, which could cause our gross margins to decline and harm our operating results.

Products in the laser and amplifier industries generally, and our products specifically, have in the past and may in the future continue to experience a decline in average selling prices (ASPs) as a result of new product and technology introductions, increased competition and price pressures from significant customers. If the ASPs of our products decline and we are unable to increase our unit volumes, introduce new or enhanced products with higher margins or reduce manufacturing costs to offset anticipated decreases in the prices of our existing products, our operating results may be adversely affected. In addition, because of our significant fixed costs, we are limited in our ability to reduce total costs quickly in response to any revenue shortfalls. Because of these factors, we may experience material adverse fluctuations in our future operating results on a quarterly or annual basis if the ASPs of our products continue to decline.

A few customers account for a significant portion of our sales, and if we lose any of these customers or they significantly curtail their purchases of our products, our results of operations could be adversely affected.

We rely on a few customers for a significant portion of our sales. Our top five customers accounted for an aggregate of between 37% and 38% of our consolidated net sales for each of the past three years. Our largest customer has accounted for at least 10% of our net sales for each of the last three years and accounted for approximately 13% of our consolidated net sales in 2005 and approximately 11% for the six months ended June 30, 2006. We generally do not enter into agreements with our customers obligating them to purchase our fiber lasers or amplifiers. Our business is characterized by short-term purchase orders and shipment schedules. If any of our principal customers discontinues its relationship with us, replaces us as a vendor for certain products or suffers downturns in its business, our business and results of operations could be adversely affected.

We have experienced, and expect to experience in the future, fluctuations in our quarterly operating results. These fluctuations may increase the volatility of our stock price.

We have experienced, and expect to continue to experience, fluctuations in our quarterly operating results. We believe that fluctuations in quarterly results may cause the market price of our common stock

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to fluctuate, perhaps substantially. Factors which may have an influence on our operating results in a particular quarter include:

- the increase, decrease, cancellation or rescheduling of significant customer orders;
- the timing of revenue recognition based on the installation or acceptance of certain products shipped to our customers;
- the timing of customer qualification of our products and commencement of volume sales of systems that include our products;
- the rate at which our present and future customers and end users adopt our technologies;
- the gain or loss of a key customer;
- product or customer mix;
- competitive pricing pressures;
- the relative proportions of our U.S. and international sales;
- our ability to design, manufacture and introduce new products on a cost-effective and timely basis;
- the incurrence of expenses to develop and improve application and support capabilities, the benefits of which may not be realized until future periods, if at all;
- different capital expenditure and budget cycles for our customers, which affect the timing of their spending;
- foreign currency fluctuations; and
- our ability to control expenses.

These factors make it difficult for us to accurately predict our operating results. In addition, our ability to accurately predict our operating results is complicated by the fact that many of our products have long sales cycles, some lasting as long as twelve months. Once a sale is made, our delivery schedule typically ranges from four weeks to four months, and therefore our sales will often reflect orders shipped in the same quarter that they are received and will not enhance our ability to predict our results for future quarters. In addition, long sales cycles may cause us to incur significant expenses without offsetting revenues since customers typically expend significant effort in evaluating, testing and qualifying our products before making a decision to purchase them. Moreover, customers may cancel or reschedule shipments, and production difficulties could delay shipments. Accordingly, our results of operations are subject to significant fluctuations from quarter to quarter, and we may not be able to accurately predict when these fluctuations will occur.

Our manufacturing capacity may not be at the appropriate size for future levels of demand.

In response to an increase in demand for our fiber lasers over the last three years, we started adding substantial manufacturing capacity at our facilities in the United States, Germany and Russia beginning in early 2005, and we are continuing to expand our capacity further. A significant portion of our manufacturing facilities and production equipment, such as our semiconductor production and processing equipment, diode packaging equipment and diode burn-in stations, are special-purpose in nature and cannot be adapted easily to make other products. If the demand for fiber lasers or amplifiers does not increase from current levels, we may have significant excess manufacturing

capacity, which could in turn adversely affect our business.

Conversely, if demand for fiber lasers or amplifiers increases substantially more than we anticipate, our manufacturing capacity may not be adequate to meet the increased customer demand. As a result, we might not be able to fulfill customer orders in a timely manner, which could adversely affect our customer relationships and operating results. Moreover, our efforts to increase our production capacity may

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not succeed in enabling us to manufacture the required quantities of our products in a timely manner or at gross profit margins that we have achieved in the past. As a result, the profit margins we ultimately achieve on sales of fiber lasers and amplifiers may be lower than our historical profit margins.

Future downturns in the economy, particularly in the materials processing and communications markets, could have a material adverse effect on our sales and profitability.

Our business depends substantially upon capital expenditures by our customers, particularly by manufacturers in the materials processing and communications markets. We estimate that approximately 79% of our revenues during 2005 were in these two markets. Although these industries are broad, they are cyclical and have historically experienced sudden and severe downturns and periods of oversupply, resulting in significantly reduced demand for capital equipment, including the products that we manufacture and market. For the foreseeable future, our operations will continue to depend upon capital expenditures by customers in these markets, which, in turn, depend upon the demand for their products or services. Decreased demand for products and services from customers in these industries during an economic downturn may lead to decreased demand for our products, which would reduce our sales or sales growth rate.

We depend on our OEM customers and system integrators and their ability to incorporate our products into their systems.

Our future growth will depend in part on our ability to maintain existing and secure new OEM customers. Our revenues also depend in part upon the ability of our current and potential OEM customers and system integrators to develop and sell systems that incorporate our laser and amplifier products. The commercial success of these systems depends to a substantial degree on the efforts of these OEM customers and system integrators to develop and market products that incorporate our technologies. Relationships and experience with traditional laser makers, limited marketing resources, reluctance to invest in research and development and other factors affecting these OEM customers and third-party system integrators could have a substantial impact upon our financial results. Furthermore, if our OEM customers or third-party system integrators experience financial or other difficulties that adversely affect their operations, our financial condition or results of operations may also be adversely affected.

Because we lack long-term purchase commitments from our customers, our sales can be difficult to predict, which could adversely affect our operating results.

We generally do not enter into long-term agreements with our customers obligating them to purchase our fiber lasers or amplifiers. Our business is characterized by short-term purchase orders and shipment schedules and, in some cases, orders may be cancelled or delayed without significant penalty. As a result, it is difficult to forecast our revenues and to determine the appropriate levels of inventory required to meet future demand. In addition, due to the absence of long-term volume purchase agreements, we forecast our revenues and plan our production and inventory levels based upon the demand forecasts of our OEM customers, end users, and distributors, which are highly unpredictable and can fluctuate substantially. If our OEM customers, end users or distributors fail to accurately forecast the demand for our products, fail to accurately forecast the timing of such demand, or are unable to consistently negotiate acceptable purchase order terms with customers, our results of operations may be adversely affected.

The markets for our products are highly competitive and increased competition could increase our costs, reduce our sales or cause us to lose market share.

The industries in which we operate are characterized by significant price and technological competition. Our fiber laser and amplifier products compete with conventional laser technologies and amplifier products offered by several well-established companies, some of which are larger and have substantially greater financial, managerial and technical resources, more extensive distribution and service networks, greater sales and marketing capacity, and larger installed customer bases than we do. Also, we compete with widely used non-laser production methods, such as resistance welding. We believe that

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competition will be particularly intense from makers of CO_2 and YAG lasers, as these makers of traditional solutions may lower prices to maintain current market share and have committed significant research and development resources to pursue opportunities related to these technologies.

Further, we face competition from a growing number of fiber laser makers. We also expect competition from established laser makers which may have started or may start programs to develop and sell fiber lasers or alternative new solid state laser technologies. Because many of the components required to develop and produce low-power fiber lasers and amplifiers are commercially available, barriers to entry into these submarkets are relatively low, and we expect new competitive product entries in these submarkets. We may not be able to successfully differentiate our current and proposed products from the products of our competitors and the market may not consider our products to be superior to competing products. To maintain our competitive position in these markets, we believe that we will be required to continue a high level of investment in research and development, application development and customer service and support, and react to market pricing conditions. We may not have sufficient resources to continue to make these investments and we may not be able to make the technological advances or price adjustments necessary to maintain our competitive position. We also compete against our OEM customers internal production of competitive laser technologies.

Our inability to manage risks associated with our international customers and operations could adversely affect our business.

Our products are currently marketed and sold in numerous countries. The United States, Germany, Japan and Russia are our principal markets. A significant amount of our revenues are derived from customers outside of the United States. We anticipate that foreign sales will continue to account for a significant portion of our revenues in the foreseeable future. Our operations and sales in these markets are subject to risks inherent in international business activities, including:

longer accounts receivable collection periods;

changes in the values of foreign currencies;

changes in a specific country s or region s economic conditions, such as recession;

compliance with a wide variety of domestic and foreign laws and regulations and unexpected changes in those laws and regulatory requirements, including uncertainties regarding taxes, tariffs, quotas, export controls, export licenses and other trade barriers;

certification requirements;

environmental regulations;

less effective protection of intellectual property rights in some countries;

potentially adverse tax consequences;

different capital expenditure and budget cycles for our customers, which affect the timing of their spending;

political, legal and economic instability, foreign conflicts, and the impact of regional and global infectious illnesses in the countries in which we and our customers, suppliers, manufacturers and subcontractors are located;

preference for locally produced products;

difficulties and costs of staffing and managing international operations across different geographic areas and cultures;

seasonal reductions in business activities; and

fluctuations in freight rates and transportation disruptions.

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Political and economic instability and changes in governmental regulations could adversely affect both our ability to effectively operate our foreign sales offices and the ability of our foreign suppliers to supply us with required materials or services. Any interruption or delay in the supply of our required components, products, materials or services, or our inability to obtain these components, materials, products or services from alternate sources at acceptable prices and within a reasonable amount of time, could impair our ability to meet scheduled product deliveries to our customers and could cause customers to cancel orders.

We are also subject to risks of doing business in Russia through our indirect subsidiary, NTO IRE-Polus, which conducts research and development and provides components and test equipment to us. The results of operations, business prospects and facilities of NTO IRE-Polus are subject to the economic and political environment in Russia. In recent years Russia has undergone substantial political, economic and social change. As is typical of an emerging market, Russia does not possess a well-developed business, legal and regulatory infrastructure that would generally exist in a more mature free market economy. In addition, the tax, currency and customs legislation within Russia is subject to varying interpretations and changes, which can occur frequently. The future economic direction of Russia remains largely dependent upon the effectiveness of economic, financial and monetary measures undertaken by the government, together with tax, legal, regulatory, and political developments. Our failure to manage the risks associated with NTO IRE-Polus and our other existing and potential future international business operations could have a material adverse effect upon our results of operations.

Foreign currency transaction risk may negatively affect our net sales, cost of sales and operating margins and could result in exchange losses.

We conduct our business and incur costs in the local currency of most countries in which we operate. In 2005, our net sales outside the United States represented a significant portion of our total sales. We incur currency transaction risk whenever one of our operating subsidiaries enters into either a purchase or a sales transaction using a different currency from the currency in which it receives revenues. We currently do not hedge against foreign currency exchange risks, and therefore the impact of future exchange rate fluctuations on our results of operations cannot be accurately predicted. Given the volatility of exchange rates, we may not be able to effectively manage our currency transaction or translation risks, and any volatility in currency exchange rates may increase the price of our products in local currency to our foreign customers, which may have an adverse effect on our financial condition, cash flows and profitability.

Our products could contain defects, which may reduce sales of those products, harm market acceptance of our fiber laser products or result in claims against us.

The manufacture of our fiber lasers and amplifiers involves highly complex and precise processes. Despite testing by us and our customers, errors have been found, and may be found in the future, in our products. These defects may cause us to incur significant warranty, support and repair costs, divert the attention of our engineering personnel from our product development efforts and harm our relationships with our customers. These problems could result in, among other things, loss of revenues or a delay in revenue recognition, loss of market share, harm to our reputation or a delay or loss of market acceptance of our fiber laser products. Defects, integration issues or other performance problems in our fiber laser and amplifier products could also result in personal injury or financial or other damages to our customers, which in turn could damage market acceptance of our products. Our customers could also seek damages from us for their losses. A product liability claim brought against us, even if unsuccessful, could be time-consuming and costly to defend.

We may pursue acquisitions and investments in new businesses, products or technologies. These may involve risks which could disrupt our business and may harm our financial condition.

We currently have no commitments or agreements to make any acquisitions and have limited experience in making acquisitions. In the future, we may make acquisitions of and investments in new

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businesses, products, technologies and geographic areas, or we may acquire operations that expand our current capabilities. Acquisitions present a number of potential risks and challenges that could, if not met, disrupt our business operations, increase our operating costs and reduce the value of the acquired company to us. For example, if we identify an acquisition candidate, we may not be able to successfully negotiate or finance the acquisition on favorable terms. Even if we are successful, we may not be able to integrate the acquired businesses, products or technologies into our existing business and products. As a result of the rapid pace of technological change in our industry, we may misgauge the long-term potential of the acquired business or technology, or the acquisition may not be complementary to our existing business. Furthermore, potential acquisitions and investments, whether or not consummated, may divert our management s attention and require considerable cash outlays at the expense of our existing operations. In addition, to complete future acquisitions, we may issue equity securities, incur debt, assume contingent liabilities or have amortization expenses and write-downs of acquired assets, which could adversely affect our profitability and result in dilution to our existing and future stockholders.

We are subject to various environmental laws and regulations that could impose substantial costs upon us and may adversely affect our business, operating results and financial condition.

Some of our operations use substances regulated under various federal, state, local, and international laws governing the environment, including those relating to the storage, use, discharge, disposal, labeling, and human exposure to hazardous and toxic materials. We could incur costs, fines and civil or criminal sanctions, third-party property damage or personal injury claims, or could be required to incur substantial investigation or remediation costs, if we were to violate or become liable under environmental laws. Liability under environmental laws can be joint and several and without regard to comparative fault. Compliance with current or future environmental laws and regulations could restrict our ability to expand our facilities or require us to acquire additional expensive equipment, modify our manufacturing processes, or incur other significant expenses. There can be no assurance that violations of environmental laws or regulations will not occur in the future as a result of the inability to obtain permits, human error, accident, equipment failure or other causes.

The European Union Directive 2002/96/ EC on waste electrical and electronic equipment, known as the WEEE Directive, requires producers of certain electrical and electronic equipment to be financially responsible for specified collection, recycling, treatment and disposal of past and present covered products placed on the market in the European Union. As a manufacturer of potentially covered products, we may be required to register as a producer in some European Union countries, and we may incur some financial responsibility for the collection, recycling, treatment and disposal of both new product sold, and product already sold prior to the WEEE Directive s enforcement date, to customers within the European Union. European Union Directive 2002/95/ EC on the restriction of the use of hazardous substances in electrical and electronic equipment, known as the RoHS Directive restricts the use of certain hazardous substances in specified covered products. We are implementing changes to our manufacturing processes and redesigning products regulated under the RoHS Directive in order to be able to continue to offer them for sale within the European Union, a market currently accounting for approximately one-third of our revenues. We will continue to review the applicability and impact of both directives and, although we cannot currently estimate the extent of such impact, they are likely to result in additional costs, which may adversely affect our operating results. Failure to comply with the directives could result in the imposition of fines and penalties, inability to sell covered products in the European Union, and loss of revenues. Similar laws may be enacted in other countries in the near future, which would result in similar risks and impacts to operating results.

We are subject to export control regulations that could restrict our ability to increase our international sales and may adversely affect our business.

A significant part of our business is the export of our products to other countries. Certain of these products are subject to the Export Administration Regulations, administered by the Department of Commerce and the Bureau of Industry Security, and their foreign counterpart laws and regulations which

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require that we obtain an export license before we can export products or technology to specified countries. In addition, our products are subject to export controls that may be more stringent than those applicable to traditional lasers. The stricter controls applicable to some products could put us at a competitive disadvantage in selling our products to customers in certain countries that require an export license, restrict our ability to sell products to customers in certain countries, or give rise to delays or expenses in obtaining appropriate licenses. Failure to comply with these laws and regulations could result in government sanctions, including substantial monetary penalties, denial of export privileges, debarment from government contracts and a loss of revenues. Delays in obtaining or failure to obtain required export licenses also may require us to defer shipments to subsequent periods or cancel orders. Any of these could adversely affect our operations and, as a result, our financial results could suffer.

Risks Related To This Offering

The market price of our common stock may be volatile, which could result in substantial losses for investors purchasing shares in this offering.

Prior to this offering, there has not been a public market for our common stock, and an active market for our common stock may not develop or be sustained after this offering. The market price of our common stock after this offering may vary from its initial public offering price. Fluctuations in market price and volume are particularly common among securities of technology companies. As a result, you may be unable to sell your shares of common stock at or above the initial offering price. The market price of our common stock may fluctuate significantly in response to the following factors, among others, some of which are beyond our control:

general market conditions;

U.S. and international economic factors;

actual or anticipated fluctuations in our quarterly operating results;

changes in or failure to meet publicly disclosed expectations as to our future financial performance;

changes in securities analysts estimates of our financial performance or lack of research and reports by industry analysts;

changes in market valuations or earnings of similar companies;

announcements by us or our competitors of significant products, contracts, acquisitions or strategic partnerships;

developments or disputes concerning intellectual property or proprietary rights, including increases or decreases in litigation expenses associated with intellectual property lawsuits we may initiate, or in which we may be named as defendants;

failure to complete significant sales;

any future sales of our common stock or other securities; and

additions or departures of key personnel.

We could be the subject of securities class action litigation due to future stock price volatility, which could divert management s attention and adversely affect our operating results.

The stock market in general, and market prices for the securities of technology companies like ours in particular, have experienced volatility from time to time that often has been unrelated to the operating performance of the underlying companies. A certain degree of stock price volatility can be attributed to being a newly public

company. These broad market and industry fluctuations may adversely affect the market price of our common stock, regardless of our operating performance. In several recent situations where the market price of a stock has been volatile, holders of that stock have instituted

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securities class action litigation against the company that issued the stock. If any of our stockholders were to bring a lawsuit against us, the defense and disposition of such lawsuit could be costly and divert the time and attention of management and harm our business.

Dr. Valentin P. Gapontsev, our chairman, chief executive officer and principal stockholder, will control more than % of our voting power after the completion of this offering, and will have a significant influence on the outcome of director elections and other matters requiring stockholder approval, including a change in corporate control.

After giving effect to the offering, Dr. Valentin P. Gapontsev, our chairman and chief executive officer, and IP Fibre Devices (UK) Ltd. (IPFD), of which Dr. Gapontsev is the managing director and majority owner, will beneficially own an aggregate of shares of our common stock, or % of our common stock. In addition, after giving effect to the offering, Dr. Denis Gapontsev, our Vice President of Research and Development and the son of Dr. Valentin P. Gapontsev, will beneficially own 2,578,352 shares of our common stock, or % of our common stock, and collectively with Dr. Valentin P. Gapontsev, % of our common stock. As a result, Dr. Valentin P. Gapontsev will continue to have a significant influence on the outcome of matters requiring stockholder approval, including:

election of our directors;

amendment of our certificate of incorporation or by-laws; and

approval of mergers, consolidations or the sale of all or substantially all of our assets.

Dr. Valentin P. Gapontsev may vote his shares of our common stock in ways that are adverse to the interests of other holders of our common stock, including investors in this offering. Dr. Valentin P. Gapontsev s significant ownership interest could delay, prevent or cause a change in control of our company, any of which could adversely affect the market price of our common stock.

Dr. Valentin P. Gapontsev, our chairman, chief executive officer and principal stockholder, owns a material portion of one of our operating subsidiaries, which creates the possibility of a conflict of interest.

Although we own 51.0% of NTO IRE-Polus, our Russian subsidiary, Dr. Valentin P. Gapontsev owns 26.7%, and the remaining 22.3% is owned by unaffiliated third parties and certain current and former employees of NTO IRE-Polus. NTO IRE-Polus conducts research and development for us and provides us with components and test equipment. Transactions between us and NTO IRE-Polus generated approximately $7.8 million and $5.8 million of revenues for NTO IRE-Polus for the year ended December 31, 2005 and the six months ended June 30, 2006, respectively. Dr. Gapontsev s significant ownership interest in this entity creates the possibility of a conflict of interest since, by having an ownership interest in both our company and NTO IRE-Polus, his economic interests may be affected by transactions between the two entities. Under Russian law and NTO IRE-Polus s charter, supermajority or unanimous stockholder approval is required to take certain significant non-operational actions, such as amending NTO IRE-Polus s charter, electing the executive body or altering certain fundamental stockholder rights. Although we have taken steps to address possible conflicts of interests and potential issues concerning the requirement to obtain supermajority approval, these steps may not prove effective. See Certain Relationships and Related Party Transactions Transactions with NTO-IRE Polus.

Anti-takeover provisions in our charter documents and Delaware law could prevent or delay a change in control of our company, even if a change in control would be beneficial to our stockholders.

Provisions of our certificate of incorporation and by-laws that will be in effect upon completion of this offering, including certain provisions that will take effect when certain of our stockholders collectively cease to beneficially own an aggregate of 25% or more of our outstanding voting securities, may discourage, delay or prevent a merger, acquisition or change of control, even if it would be beneficial to

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our stockholders. The existence of these provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock. These provisions include:

authorizing the issuance of blank check preferred stock;

establishing a classified board;

providing that directors may only be removed for cause;

prohibiting stockholder action by written consent;

limiting the persons who may call a special meeting of stockholders;

establishing advance notice requirements for nominations for election to the board of directors and for proposing matters to be submitted to a stockholder vote; and

supermajority stockholder approval to change these provisions.

Provisions of Delaware law may also discourage, delay or prevent someone from acquiring or merging with our company or obtaining control of our company. Specifically, Section 203 of the Delaware General Corporation Law, which will apply to our company upon the completion of this offering, may prohibit business combinations with stockholders owning 15% or more of our outstanding voting stock.

Substantial sales of our common stock could cause our stock price to decline.

Sales of a substantial number of shares of common stock after the completion of this offering, or the perception that sales could occur, could adversely affect the market price of our common stock. On completion of this offering, we will have shares of common stock outstanding and shares subject to outstanding options. The shares sold in this offering will be freely tradable without restriction or further registration under the federal securities laws. An additional shares will be eligible for sale without restriction under Rule 144(k) under the Securities Act. Our directors, executive officers and other stockholders holding in the aggregate approximately % of our outstanding shares have agreed not to sell or otherwise dispose of any shares of common stock for a period of at least 180 days after the date of this prospectus without the prior written approval of Merrill Lynch & Co. and Lehman Brothers Inc., which could be given at any time. When the lock-up agreements expire or are terminated, approximately shares of our common stock will be eligible for sale under Rule 144, Rule 144(k) or Rule 701. An additional shares will become eligible for sale under one or more of those rules from time to time thereafter. After the completion of this offering, the holders of an aggregate of approximately shares of common stock will have registration rights, including the right to require us to register the sale of their shares and the right to include their shares in public offerings we undertake in the future. After the completion of this offering, we intend to register all shares of common stock that we may issue under our stock option plans. Once we register these shares, they may be freely sold in the public market, subject to the lock-up restrictions described above, and subject, in the case of any awards under our stock-based compensation plans, to applicable vesting requirements.

We will incur increased costs and demands upon management as a result of complying with the laws and regulations affecting public companies, which could adversely affect our operating results.

As a public company, we will incur significant legal, accounting and other expenses that we did not incur as a private company, including costs associated with public company reporting requirements. We also have incurred and will incur costs associated with recently adopted corporate governance requirements, including requirements under the Sarbanes-Oxley Act of 2002, as well as new rules implemented by the SEC and the Nasdaq Global Market. The expenses incurred by public companies generally for reporting and corporate governance purposes have been increasing. We expect these rules and regulations to significantly increase our legal and financial compliance costs and to make some activities more time-consuming and costly, and we may be required to hire additional personnel. We also expect these rules and regulations may make it more difficult and more expensive for us to obtain director

and officer liability insurance, and we may be required to accept reduced policy limits and coverage or incur

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substantially higher costs to obtain the same or similar coverage. As a result, it may be more difficult for us to attract and retain qualified individuals to serve on our board of directors or as our executive officers.

We will be required to evaluate our internal control over financial reporting under Section 404 of the Sarbanes-Oxley Act of 2002, and any adverse results from such evaluation could result in a loss of investor confidence in our financial reports and have an adverse effect on our stock price.

Pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, beginning as early as the time of the filing of our Annual Report on Form 10-K for the fiscal year ending December 31, 2007, we will be required to furnish a report by our management on our internal control over financial reporting. Such a report will contain, among other matters, an assessment of the effectiveness of our internal control over financial reporting as of the end of our fiscal year, including a statement as to whether or not our internal control over financial reporting is effective. This assessment must include disclosure of any material weaknesses in our internal control over financial reporting identified by management. Such report must also contain a statement that our independent registered public accounting firm has issued an attestation report on management s assessment of such internal controls.

We have begun the systems and process documentation and evaluation needed to comply with Section 404. If our management identifies one or more material weaknesses in our internal control over financial reporting, we will be unable to assert that such internal control is effective. If we are unable to assert that our internal control over financial reporting is effective, or if our independent registered public accounting firm is unable to attest that our management s report is fairly stated or it is unable to express an opinion on the effectiveness of our internal controls, investors could lose confidence in the accuracy and completeness of our financial reports, which could have an adverse effect on our stock price.

Investors in this offering will experience immediate and substantial dilution.

The initial public offering price of our common stock will be substantially higher than the net tangible book value per share of our common stock immediately after the completion of this offering. Therefore, if you purchase our common stock in this offering, you will incur an immediate dilution of $ in net tangible book value per share from the price you paid. In the past, we issued options to acquire common stock at prices significantly below the initial public offering price. To the extent these outstanding options are ultimately exercised, there will be further dilution to investors.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements that involve substantial risk and uncertainties. All statements, other than statements of historical facts, included in this prospectus are forward-looking statements, including, but not limited to, statements regarding our strategy, future operations, future financial position, future revenues, projected costs and prospects. In some cases, you can identify forward-looking statements by terminology such as may, could, should, expect, intend, plan, anticipate, believe, estimate, predict, potential similar expressions, whether in the negative or affirmative. These statements are only predictions and may be inaccurate. Actual events or results may differ materially and adversely from those anticipated, estimated or expected. In evaluating these statements, you should specifically consider various factors, including the risks outlined under Risk Factors and in other parts of this prospectus. These factors may cause our actual results to differ materially from any forward-looking statement. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements and you should not place undue reliance on our forward-looking statements. The forward-looking statements made in this prospectus relate only to events as of the dates on which the statements are made. We do not assume any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

This prospectus also contains market data related to our business and industry. This market data includes projections that are based on a number of assumptions. If these assumptions turn out to be incorrect, actual results may differ from the projections based on these assumptions. As a result, our markets may not grow at the rates projected by this data, or at all. The failure of these markets to grow at these projected rates may have a material adverse effect on our business, results of operations and financial condition and the market price of our common stock.

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USE OF PROCEEDS

We estimate that the net proceeds from the sale of the shares of common stock we are offering will be approximately $ after the underwriting discount, commissions and expenses, assuming an initial public offering price of $ per share, the midpoint of the price range set forth on the cover of this prospectus. If the underwriters overallotment option is exercised in full, the net proceeds from the shares we sell will be approximately $ million. We will not receive any proceeds from the sale of shares of common stock by the selling stockholders. Our chairman and chief executive officer and two other members of our board of directors are selling shares of common stock in this offering. See Principal and Selling Stockholders.

A $1.00 increase (decrease) in the assumed initial public offering price of $ per share would increase (decrease) the net proceeds to us from this offering by $ million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

We intend to use the net proceeds from this offering as follows:

- approximately $22.1 million to repurchase the warrants to purchase shares of our common stock that are owned by holders of the series B preferred stock;
- approximately $4.7 million to repay Euro-denominated construction loans due from 2006 to 2010 that bear annual interest at 5.25%;
- approximately $5.7 million to repay a U.S. construction loan due January 2007 that bears annual interest at 7.9%;
- approximately $5.5 million to repay other Euro-denominated term debt with various maturities ranging from 2006 to 2019 with fixed and variable interest rates ranging from 4.2% to 6.5%; and
- the balance of the net proceeds for general corporate purposes, including working capital, expansion of our manufacturing facilities, purchases of equipment and expansion of our applications development and service capabilities.

We may also use a portion of the net proceeds in acquisitions of businesses, products and technologies that are complementary to our business. Although we have from time to time evaluated possible acquisitions, we currently have no commitments or agreements to make any acquisitions, and we cannot assure you that we will make any acquisitions in the future. Until we use our net proceeds of the offering, we intend to invest the funds in U.S. government securities and other short-term, investment-grade, interest-bearing instruments or high-grade corporate notes. Management will have significant flexibility in applying the net proceeds of the offering.

TA Associates, Inc. beneficially owns 2,000,000 shares of our series B preferred stock and will beneficially own % of our common stock after the completion of this offering. TA Associates, Inc. will receive $ of the proceeds of this offering as a result of our repurchase of the series B warrants held by it. One of our directors, Michael C. Child, is a managing director of TA Associates, Inc. See Principal and Selling Stockholders.

Entities that may be deemed to be affiliates of Merrill Lynch & Co., one of the underwriters in this offering, will receive $ of the proceeds of this offering as a result of our repurchase of series B warrants held by them. See Underwriting Certain Relationships.

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DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We anticipate that we will retain any future earnings to support operations and to finance the growth and development of our business. Therefore, we do not expect to pay cash dividends in the foreseeable future. Our payment of any future dividends will be at the discretion of our board of directors after taking into account general economic and business conditions, any contractual and legal restrictions on our payment of dividends, and our financial condition, operating results, cash needs and growth plans. In addition, current agreements with certain of our lenders contain, and future loan agreements may contain, restrictive covenants that generally prohibit us from paying cash dividends, making any distribution on any class of stock or making stock repurchases.

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CAPITALIZATION

The following table sets forth our cash and cash equivalents and capitalization as of June 30, 2006:

- on an actual basis;
- on a pro forma basis to give effect to the conversion of all outstanding shares of preferred stock upon the closing of this offering into shares of common stock and the issuance of subordinated notes totaling $20.0 million to the holders of our series B preferred stock; and
- on a pro forma as adjusted basis to give effect to the transactions described above as well as our sale of shares of our common stock in this offering and the application of the estimated net proceeds therefrom as described in Use of Proceeds.

You should read the following table together with Management s Discussion and Analysis of Financial Condition and Results of Operations, Use of Proceeds, Selected Consolidated Financial Data and Certain Relationships and Related Party Transactions and our consolidated financial statements and the related notes included elsewhere in this prospectus.

	As of June 30, 2006		
	Actual	Pro Forma	Pro Forma As Adjusted
	(unaudited)		
	(in thousands, except share and per share data)		
Cash and cash equivalents	$ 11,282	$ 11,282	$
Short-term debt:			
Revolving line-of-credit facilities	11,011	11,011	
Subordinated notes		20,000	
Other long-term debt (including current maturities)	24,268	24,268	
Total debt	35,279	55,279	
Series B warrants	16,863	16,863	
Convertible redeemable preferred stock, par value $0.0001 per share:			
Series B preferred stock, 3,800,000 shares designated, issued and outstanding, actual; no shares designated, issued or outstanding, pro forma and pro forma as adjusted	92,285		
Series D preferred stock, 5,400,000 shares designated, 2,684,211 shares issued and outstanding, actual; no shares designated, issued or outstanding, pro forma and pro forma as adjusted	5,100		
Stockholders (deficit) equity:			
Preferred stock, par value $0.0001 per share, 15,000,000 shares authorized, actual; Series A preferred	4,880		

stock, 500,000 shares designated, 488,000 shares issued and outstanding, actual; 5,000,000 shares authorized, no shares issued or outstanding, pro forma and pro forma as adjusted			
Common stock, par value $0.0001 per share, 70,000,000 shares authorized, 40,883,700 shares issued and outstanding, actual; 175,000,000 shares authorized, pro forma and pro forma as adjusted; shares issued and outstanding, pro forma; shares issued and outstanding, pro forma as adjusted	4	4	
Additional paid-in capital	94,912	177,177	
Notes receivable from stockholders	(463)	(463)	
Accumulated deficit	(143,507)	(143,507)	
Accumulated other comprehensive income	5,629	5,629	
Total stockholders (deficit) equity	$ (38,545)	$ 38,840	$
Total capitalization	$ 110,982	$ 110,982	$

The Pro forma and Pro forma as adjusted columns above do not reflect the following transactions, which occurred after June 30, 2006:

we repaid a $4.6 million credit line through an exchange with our chief executive officer;

we repaid a $5.1 million subordinated note; and

two of our directors repaid $681,000 owed to us.

See Certain Relationships and Related Party Transactions.

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DILUTION

Our pro forma net tangible book value as of June 30, 2006 was approximately $38.8 million, or $ per share of common stock. Pro forma net tangible book value per share represents the amount of our total tangible assets less our total liabilities, divided by the number of shares of common stock outstanding as of June 30, 2006 and reflects the conversion of all of our preferred stock upon the closing of this offering and the issuance of subordinated notes to the holders of our series B preferred stock.

After giving effect to the transactions described above and the sale by us of shares of common stock in this offering after deducting underwriting discounts and commissions and estimated offering expenses payable by us and the use of the proceeds therefrom, our adjusted pro forma net tangible book value as of June 30, 2006 would have been approximately $ million, or approximately $ per share. This amount represents an immediate increase in pro forma net tangible book value of $ per share to our existing stockholders and an immediate dilution in pro forma net tangible book value of approximately $ per share to new investors purchasing shares of common stock in this offering. We determine dilution by subtracting the adjusted pro forma net tangible book value per share immediately after the completion of this offering from the amount of cash that a new investor paid for a share of our common stock. The following table illustrates this dilution on a per share basis:

Assumed initial public offering price per share		$
Pro forma net tangible book value as of June 30, 2006	$ ( )	
Increase per share attributable to new investors		
Adjusted pro forma net tangible book value per share after this offering		
Dilution in pro forma net tangible book value per share to new investors		$

If the underwriters exercise their option to purchase additional shares of our common stock in full, the pro forma net tangible book value per share after the offering would be $ per share, the increase in pro forma net tangible book value per share to existing stockholders would be $ per share and the dilution to new investors purchasing shares of common stock in the offering would be $ per share.

The following table summarizes, on a pro forma as adjusted basis as of June 30, 2006, the differences between the number of shares purchased from us, the total consideration paid to us and the average price per share that existing stockholders and new investors paid, before deducting underwriting discounts and commissions and estimated offering expenses payable by us. The table gives effect to the conversion of all of our preferred stock into common stock.

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders		%	$	%	$
New investors					
Total		100.0%	$	$ 100.0%	

The foregoing tables and calculations assume no exercise of any options outstanding as of June 30, 2006. To the extent that any of our outstanding options are exercised, there will be further dilution to new investors.

A $1.00 increase (decrease) in the assumed initial public offering price of $ per share would increase (decrease) the total consideration that we receive from this offering by $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

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SELECTED CONSOLIDATED FINANCIAL DATA

The following selected consolidated financial data should be read in conjunction with, and is qualified by reference to, our consolidated financial statements and related notes and Management s Discussion and Analysis of Financial Condition and Results of Operations included elsewhere in this prospectus. The data as of December 31, 2004 and 2005, and for the years ended December 31, 2003, 2004 and 2005, is derived from our audited consolidated financial statements and related notes included elsewhere in this prospectus. The data as of December 31, 2001, 2002 and 2003, and for the years ended December 31, 2001 and 2002, is derived from our audited consolidated financial statements and related notes not included in this prospectus. The selected interim consolidated financial data as of June 30, 2006 and for the six months ended June 30, 2005 and 2006, is derived from our unaudited consolidated financial statements and related notes included elsewhere in this prospectus. We have prepared our interim unaudited consolidated financial data on a basis consistent with our audited consolidated financial statements except that, effective January 1, 2006, we were required to begin accounting for stock-based payments at fair value, as discussed in note 2 to the consolidated financial statements. In the opinion of our management, our interim unaudited consolidated financial statements reflect all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of our results of operations and financial position. Our historical results are not necessarily indicative of the results for any future period.

	Year Ended December 31,					Six Months Ended June 30,	
	2001	2002	2003	2004	2005	2005	2006
						(unaudited)	
	(in thousands, except per share data)						
Consolidated Statement of Operations Data:(1)							
Net sales	$ 26,490	$ 22,180	$ 33,740	$ 60,707	$ 96,385	$ 41,630	$ 64,927
Cost of sales	26,223	23,277	38,583	42,274	62,481	28,437	39,119
Gross profit (loss)	267	(1,097)	(4,843)	18,433	33,904	13,193	25,808
Operating expenses:							
Sales and marketing	21,240	19,910	2,110	2,363	3,236	1,538	2,343
Research and development	8,407	8,383	10,063	4,831	5,788	2,873	2,622
General and administrative	18,875	13,354	9,998	8,179	10,598	4,352	5,813
Aborted offering costs	2,156						
In-process research and development	900						
Provision for contract settlement		9,474					
Amortization and impairment of intangible assets	11,986						
Total operating expenses	63,564	51,121	22,171	15,373	19,622	8,763	10,778

Operating (loss) income	(63,297)	(52,218)	(27,014)	3,060	14,282	4,430	15,030
Interest income (expense), net	1,857	(1,089)	(1,505)	(2,150)	(1,840)	(969)	(709)
Fair value adjustment to series B warrants(2)	6,862	2,518	(3,664)	(615)	(745)	(314)	(2,219)
Other income, net	975	2,414	1,647	196	236	141	12
(Loss) income before benefit from (provision for) income taxes and minority interests in consolidated subsidiaries	(53,603)	(48,375)	(30,536)	491	11,933	3,288	12,114
Benefit from (provision for) income taxes	3,985	(1,175)	2,205	1,601	(4,080)	(1,219)	(5,598)
Minority interests in consolidated subsidiaries	(4)	165	121	(80)	(426)	81	(398)
Net (loss) income	$ (49,622)	$ (49,385)	$ (28,210)	$ 2,012	$ 7,427	$ 2,150	$ 6,118
Net (loss) income per share:							
Basic	$ (1.45)	$ (1.42)	$ (0.93)	$ (0.01)	$ 0.11	$ 0.02	$ 0.11
Diluted	$ (1.45)	$ (1.42)	$ (0.93)	$ (0.01)	$ 0.11	$ 0.02	$ 0.10
Weighted average shares outstanding:							
Basic	35,959	36,476	38,302	38,547	39,348	39,008	40,385
Diluted	35,959	36,476	38,302	38,547	45,252	44,912	49,584
Supplementary pro forma net income per share(3)					$		$

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	As of December 31,					As of June 30,
	2001	2002	2003	2004	2005	2006
						(unaudited)
			(in thousands)			
Consolidated Balance Sheet Data:						
Cash and cash equivalents	$ 8,851	$ 1,379	$ 536	$ 2,548	$ 8,361	$ 11,282
Working capital	44,711	35,669	16,303	20,934	23,550	22,721
Total assets	128,230	117,166	105,481	110,545	115,481	131,996
Long-term debt, including current portion and a provision for contract settlement	21,668	38,143	34,268	31,454	26,081	24,268
Series B warrants	12,138	9,620	13,284	13,899	14,644	16,863
Convertible redeemable preferred stock	81,842	84,194	91,646	93,997	96,348	97,385
Preferred stock	18,660	5,000	5,000	4,880	4,880	4,880
Stockholders equity (deficit)	12,090	(19,516)	(51,947)	(49,038)	(46,504)	(38,545)

(1) Stock-based compensation is included in the following financial statement captions as follows:

	Year Ended December 31,					Six Months Ended June 30,	
	2001	2002	2003	2004	2005	2005	2006
							(unaudited)
			(in thousands)				
Cost of sales	$ 2,574	$ 789	$ 577	$ 218	$ 4	$	$ 37
Sales and marketing	19,148	17,260	18	6	1		11
Research and development	1,608	314	1,062	669	1		3
General and administrative	9,403	3,326	546	10	1		75
Total	$ 32,733	$ 21,689	$ 2,203	$ 903	$ 7	$	$ 126

Due primarily to certain stock-based compensation awarded primarily in 2000 and 2001, we have recorded significant stock-based compensation during the years ended December 31, 2001, 2002 and 2003. Those awards became fully vested during the year ended December 31, 2004.

(2) The change in value of the series B warrants is a non-cash charge related to recording the increase or decrease in the fair value of the warrants. The change in fair value for this derivative instrument is directly related to the probability that the warrants will be exercised prior to their expiration in April 2008. We intend to use a portion of the net proceeds from this offering to repurchase the series B warrants. See Management s Discussion and Analysis of Financial Condition and Results of Operations Factors and Trends That Affect our Operations and

Financial Results Effect of Preferred Stock On Net Income and Net Income Per Share.

(3) The supplemental pro forma disclosures are intended to demonstrate the effects on net income per share of the completion of this offering and the related impacts of the conversion of our preferred stock and the repurchase of the series B warrants with a portion of the net proceeds of this offering. The number of shares used in the calculation of supplementary pro forma net income per common share includes (a) the basic weighted average common stock outstanding, (b) shares of common stock, which will be issued upon completion of this offering upon the conversion of our preferred stock, and (c) shares related to the additional dilutive impact of existing options assuming that the fair value of the common stock increases to the midpoint of the range set forth on the cover page of this prospectus. Supplementary pro forma net income used in the calculation of supplementary pro forma net income per share reflects the elimination of the increase in value of the series B warrants, which will be repurchased upon the completion of this offering, totaling $745,000 for the year ended December 31, 2005 and $2.2 million for the six months ended June 30, 2006. In addition, all accretion of preferred stock has been eliminated in the determination of net income attributable to common stockholders. See Use of Proceeds, Management s Discussion and Analysis of Financial Condition and Results of Operations Critical Accounting Policies and Estimates Fair Value Adjustment of Warrants and Certain Relationships and Related Party Transactions.

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MANAGEMENT S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with Selected Consolidated Financial Data, our consolidated financial statements and the related notes included elsewhere in this prospectus. In addition to historical consolidated financial information, the following discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results could differ materially from those anticipated by these forward-looking statements as a result of many factors, including those discussed under Risk Factors and elsewhere in this prospectus.

Overview

We are the leading developer and manufacturer of a broad line of high-performance fiber lasers and amplifiers for diverse applications in numerous markets. Since our founding in 1990, we have pioneered the development and commercialization of optical fiber-based lasers. Fiber lasers are a new generation of lasers that combine the advantages of semiconductor diodes, such as long life and high efficiency, with the high amplification and precise beam qualities of specialty optical fibers to deliver superior performance, reliability and usability at a lower total cost of ownership compared to conventional lasers. Our products are displacing traditional lasers in many current applications and enabling new applications for lasers.

Our diverse lines of low, mid and high-power lasers and amplifiers are used in materials processing, communications, medical and advanced applications. We sell our products globally to original equipment manufacturers, or OEMs, system integrators and end users. We market our products internationally primarily through our direct sales force and also through agreements with independent sales representatives and distributors. We have sales offices in the United States, Germany, Italy, United Kingdom, Japan, Korea, India and Russia.

We are vertically integrated such that we design and manufacture all key components used in our finished products, from semiconductor diodes to optical fiber preforms, finished fiber lasers and amplifiers. Our vertically integrated operations allow us to reduce manufacturing costs, ensure access to critical components and rapidly develop and integrate advanced products while protecting our proprietary technology.

Since our formation in 1990 in Russia, we have been focused on developing and manufacturing high-power fiber lasers and amplifiers. We established manufacturing and research operations in Germany in 1994 and in the United States in 1998. In the following years, we developed numerous OEM customer relationships for our advanced, active fiber-based products and generated a substantial majority of our sales from communications companies. Despite the significant economic downturn in the communications industry during 2001 and 2002, we invested in developing and manufacturing our own semiconductor diodes, one of our highest-cost components, rather than purchasing them from third-party vendors. Also, we developed new products with higher output levels, targeting new applications and markets outside of the communications industry, particularly materials processing.

Description of Our Net Sales, Costs and Expenses

Net sales. We derive net sales primarily from the sale of fiber lasers and amplifiers. We also sell diode lasers, communications systems and complementary products. We develop our products to standard specifications and use a common set of components within our product architectures. We sell our products through our direct sales organization and our network of distributors and sales representatives, as well as system integrators. We sell our products to OEMs that supply materials processing laser systems, communications systems and medical laser systems to end users. We also sell our products to end users that build their own systems which incorporate our products or use our products as an energy or light source. Sales of our products generally are recognized upon shipment, provided that no obligations remain and collection of the receivable is reasonably assured.

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Our sales cycle varies substantially, ranging from a period of a few weeks to as long as one year or more. Our scientists and engineers work closely with OEMs and end users to analyze their system requirements and select and meet appropriate specifications. We estimate that the life cycles of our products range from two to five years. Our sales typically are made on a purchase order basis rather than through long-term purchase commitments.

The average selling prices of our products generally decrease as the products mature. These decreases arise from factors such as increased competition, the introduction of new products, increases in unit volumes and market share considerations. In the past, we have lowered our selling prices in order to penetrate new markets and applications in which previously it was not economically feasible for customers to deploy our products. Furthermore, we offer volume discounts to customers who buy multiple units. We cannot predict the timing and degree of these price declines.

Cost of sales. Our cost of sales consists primarily of the cost of raw materials and components, direct labor expenses and manufacturing overhead. We are vertically integrated and currently manufacture all critical components for our products as well as assemble finished products. We believe our vertical integration allows us to increase efficiencies, leverage our scale and lower our cost of sales. For example, we believe that our internally manufactured diodes offer performance superior to that of commercially available diodes. Cost of sales also includes personnel costs and overhead related to our manufacturing and engineering operations, related occupancy and equipment costs, shipping costs and reserves for inventory obsolescence and for warranty obligations. Inventories are written off and charged to cost of sales when identified as excess or obsolete.

Due to our vertical integration strategy, we maintain a relatively high fixed manufacturing overhead. We cannot adjust these fixed costs quickly to adapt to rapidly changing market conditions. Our gross profit, in absolute dollars and as a percentage of net sales, is greatly impacted by our sales volume and the corresponding absorption of fixed manufacturing overhead expenses. Additionally, because many of our products are customized, we are frequently required to devote significant engineering resources to the sales process, which we also include in cost of product sales as incurred.

Sales and marketing. Our sales and marketing expense consists primarily of compensation, costs of advertising, trade shows, professional and technical conferences, promotions, travel related to our sales and marketing operations, related occupancy and equipment costs and other marketing costs.

Research and development. Our research and development expense consists primarily of compensation, test and development expenses related to the design of our products and certain components, and facilities costs. We use a common research and development platform for our products. Costs related to product development are recorded as research and development expenses in the period in which they are incurred.

General and administrative. Our general and administrative expense consists primarily of compensation and associated costs for executive management, finance and other administrative personnel, outside professional fees, allocated facilities costs and other corporate expenses.

Fair value adjustment to series B warrants. In connection with the issuance of our series B preferred stock in 2000, we issued warrants to purchase shares of our common stock. The fair value adjustment to our series B warrants consists of a non-cash benefit or expense relating to a change in the fair value of the warrants. These warrants are accounted for as a derivative and are exercisable only after an initial public offering, a merger or liquidation or the sale of a majority of our common stock. A change in the fair value of the warrants is based on a change in the probability of any of such events occurring prior to the expiration of the warrants. We will continue to incur a non-cash benefit or expense each quarter based upon the increase or decrease, respectively, in the fair value of the warrants until such warrants are repurchased, exercised or otherwise are no longer outstanding. We intend to use a portion of the net proceeds from this offering to repurchase the series B warrants, following which we will record no further adjustments to their fair value in our financial statements.

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Minority interests in consolidated subsidiaries. Our financial statements consolidate the financial results of our subsidiaries, including the subsidiaries that are not wholly owned by us. We own all of the stock of our subsidiaries, except for 20% of our Italian subsidiary, IPG Fibertech S.r.l., 49% of our Russian subsidiary, NTO IRE-Polus, 20% of our Japanese subsidiary, IPG Photonics (Japan) Ltd. (IPG Japan), and 10% of our Korean subsidiary, IPG Photonics (Korea) Ltd. We reduce or increase our net income by the net income or loss, respectively, attributable to the minority ownership interest in such subsidiaries. Any reduction in net loss related to such subsidiaries is limited to the extent that the minority stockholders are obligated and have the ability to absorb such losses.

Factors and Trends That Affect Our Operations and Financial Results

In reading our financial statements, you should be aware of the following factors and trends that our management believes are important in understanding our financial performance.

Net sales. Our net sales have grown rapidly in recent years. From 2002 to 2005, our net sales grew from $22.2 million to $96.4 million, representing a compound annual growth rate of approximately 63%. Our net sales in the six months ended June 30, 2006 increased by 56% over the corresponding period in 2005. The principal drivers of our net sales growth have been (i) introduction of new products, including our high-power lasers, and increasing demand for our products, fueled by the decreasing average cost per watt of output power, (ii) the expansion of our product line into higher output power levels, (iii) the growing market acceptance of fiber lasers, (iv) the development of new applications for our products and new OEM customer relationships, and (v) the increased investment by communications system providers for broadband applications. Although we believe we have multiple opportunities for additional net sales growth and are planning our business accordingly, we do not expect our net sales to continue to grow at rates as high as those we have recently experienced. We experienced periods of rapid growth from 1998 to 2000 and from 2002 to the present, as well as a period when net sales decreased in 2001 and 2002 following the decline in the communications market. Since 2002 we have diversified our end markets and reduced our reliance on any particular industry.

In planning our business, we take into account the cyclical nature of some of the end markets that we serve, as well as the longer-term historical patterns in the development of our business. For example, our net sales growth from materials processing applications could slow if there is a decline in investment in machinery and equipment used in manufacturing. Net sales derived from communications sales were adversely affected following the increase in inventory levels of communications devices in 2000 and 2001. Furthermore, net sales can be affected by the time taken to qualify our products for use in new applications in the end markets that we serve. The adoption of our products by a new customer or qualification in a new application can lead to an increase in net sales for a period, which may then slow until we further penetrate new markets or customers.

Gross margin. One of our important objectives is maintaining and improving our gross margin, which is our gross profit expressed as a percentage of our net sales. In the last three years our gross margins have increased from (14.4)% in 2003 to 30.4% in 2004 and 35.2% in 2005.

Our total gross margin in any period can be affected by total net sales in any period, product mix, that is, the percentage of our revenue in that period that is attributable to higher or lower-power products, and by other factors, some of which are not under our control. Due to the fact that we have high fixed costs, our costs are difficult to adjust in response to changes in demand. Therefore, our manufacturing costs as a percentage of net sales are volatile and can increase or decrease depending on total net sales reported in a period. Our product mix affects our margins because the selling price per watt is higher for low and mid-power devices than for high-power devices. The overall cost of high-power lasers may be partially offset by improved absorption of fixed overhead costs associated with sales of larger volumes of higher-power products. We regularly review our inventory for items that have been rendered obsolete or determined to be excess, and any writeoff of such obsolete or excess inventory affects our gross margins.

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The factors that can influence the gross margins derived from sales of any individual product include the following:

- factors that affect the prices we can charge, including the features and performance of our products, their output power, the nature of the end user and application, and competitive pressures;
- factors that affect the cost of our net sales, including the cost of raw materials and components, manufacturing costs and shipping costs;
- production volumes of specific product lines; and
- in the case of our OEM customers, the type of market that they serve and the competitive pricing pressures faced by our OEM customers.

Cost of diodes. Prior to 2004, we used semiconductor diodes purchased from a third-party supplier. In 2004, we began production at our semiconductor diode manufacturing facility, which enabled us to significantly reduce the cost of our semiconductor diodes and eliminate reliance upon suppliers for this component. For many of our products, particularly at higher power levels, the cost of diodes is the most important factor in determining the price of the product. In addition, we have increased the output power of an individual semiconductor diode, further reducing our cost per watt. We do not anticipate that any further reductions in the cost of diodes will be as significant as we have experienced in the past.

Sales and marketing expense. We expect to continue to expand our worldwide direct sales organization and personnel involved in marketing in our existing and new geographic locations and to increase expenditures on sales and marketing activities in order to support the growth in our net sales. As such, we expect that our sales and marketing expenses will increase in the aggregate.

Research and development expense. We plan to continue to invest in research and development to improve our existing components and products and develop new components and products. We plan to increase the personnel involved in research and development and expect to increase other research and development expenses. As such, we expect our research and development expenses will increase in the aggregate.

General and administrative expense. We expect to expand our general and administrative personnel and other general and administrative expenses as we expand finance and other administrative functions to support our growth in net sales and additional reporting and compliance requirements associated with being a public company. As such, we expect that our general and administrative expenses will increase in the aggregate.

Major customers. We have historically depended on a few customers for a large percentage of our annual net sales. The composition of this group can change from year to year. Net sales derived from our five largest customers as a percentage of our annual net sales was 38% in 2003, 37% in 2004 and 37% in 2005. Sales to our largest customer accounted for 17%, 20%, 13% and 11% of our net sales in 2003, 2004 and 2005 and the six months ended June 30, 2006, respectively. We seek to add new customers and to expand our relationships with existing customers. We anticipate that the composition of our net sales to our significant customers will continue to change. If any of our significant customers were to substantially reduce their purchases from us, our results would be adversely affected.

Effect of preferred stock on net income and net income per share. Our net income per share computations historically have been impacted by our convertible preferred stock, convertible debt and the series B warrants. Upon completion of this offering, we will no longer have any such convertible debt or equity instruments outstanding. As such, our net income per share computations will no longer be adjusted for the effects of these convertible instruments for the quarters following the completion of this offering. Elsewhere in this prospectus, we have supplementally provided pro forma net income per share information for the year ended December 31, 2005 and the six months ended June 30, 2006. See Selected Consolidated Financial Data. These pro forma disclosures are intended to demonstrate the effects on net

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income per share upon the completion of this offering and the related impacts of the conversion of our preferred stock and the repurchase of the series B warrants.

In connection with the issuance of our series B preferred stock, we issued warrants (the series B warrants) to purchase, in the aggregate, shares of our common stock valued at $47.5 million at an equivalent per-share price of 50% of the fair value on the date of an initial public offering of common stock or the sale, merger or liquidation of our company. The series B warrants are exercisable upon the completion of this offering. The series B warrants constitute freestanding derivatives that are accounted for as liabilities at fair value and the changes in fair value of the series B warrants are recorded as non-cash expenses or benefits. Any increase in the fair value of the series B warrants has the effect of reducing our reported net income and net income per share. For the years ended December 31, 2003, 2004, and 2005, the fair value of the series B warrants increased by $3.7 million, $0.6 million and $0.7 million, respectively. For the six months ended June 30, 2006, the fair value of the series B warrants increased by $2.2 million. We will continue to incur a non-cash expense or benefit each quarter based upon the increase or decrease, respectively, in the fair value of the warrants until such warrants are repurchased, exercised or otherwise are no longer outstanding. We plan to repurchase the series B warrants using approximately $22.1 million of the net proceeds of this offering. In the quarter in which we complete this offering, we will record incremental expense associated with the series B warrants totaling approximately $ million, representing the increase in fair value from the carrying value on the most recent measurement date to the $22.1 million repurchase value. In subsequent quarters, we will not recognize any further income or expense with respect to the series B warrants.

The terms of our series A preferred stock and series B preferred stock include price protection or anti-dilution features that constitute a contingent beneficial conversion feature (or deemed dividend) that will be recorded upon the resolution of the contingency, which will occur upon the completion of this offering. The deemed dividend does not reduce net income but does reduce net income applicable to common stockholders in the computation of net income (loss) per share. A deemed dividend totaling approximately $ will be recorded in the period that this offering occurs. No further deemed dividends associated with the beneficial conversion features related to our series A preferred stock or series B preferred stock will be required following the completion of this offering.

Critical Accounting Policies and Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of net sales and expenses. By their nature, these estimates and judgments are subject to an inherent degree of uncertainty. On an ongoing basis we re-evaluate our judgments and estimates including those related to inventories, income taxes and the fair value of certain debt and equity instruments including stock-based compensation. We base our estimates and judgments on our historical experience and on other assumptions that we believe are reasonable under the circumstances, the results of which form the basis for making the judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results could differ from those estimates, which may result in material effects on our operating results and financial position. The accounting policies described below are those which, in our opinion, involve the most significant application of judgment, or involve complex estimation, and which could, if different judgments or estimates were made, materially affect our reported results of operations and financial position.

Revenue recognition. Our net sales are generated from sales of fiber lasers, fiber amplifiers, diode lasers and complementary products. Our products are used in a wide range of applications by different types of end users or used as components or integrated into systems by OEMs or system integrators, and are often used as sub-assemblies required for end products manufactured by or for the customer. We also sell communications systems that include our fiber lasers and amplifiers as components.

We recognize revenue in accordance with SEC Staff Accounting Bulletin, or SAB, No. 104, Revenue Recognition. SAB No. 104 requires that four basic criteria be met before revenue can be

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recognized: (i) persuasive evidence of an arrangement exists; (ii) delivery has occurred or services have been rendered; (iii) the fee is fixed or determinable; and (iv) collectibility is reasonably assured. Revenue from the sale of our products is generally recognized upon shipment, provided that the other revenue recognition criteria have been met. We have no obligation to provide upgrades, enhancements or customer support subsequent to the sale. Revenue from orders with multiple deliverables is divided into separate units of accounting when certain criteria are met. The consideration for the arrangement is then allocated to the separate units of accounting based on their relative fair values. We defer the revenue on multiple element arrangements if the fair values of all deliverables are not known or if customer acceptance is contingent on delivery of specified items or performance conditions. Applicable revenue recognition criteria are then applied separately for each separate unit of accounting.

Returns and customer credits are infrequent and are recorded as a reduction to revenue. Rights of return are generally not included in sales arrangements. Generally, we receive a customer purchase order as evidence of an arrangement and product shipment terms are free on board (F.O.B.) shipping point.

Inventory. Inventory is stated at the lower of cost (first-in, first-out method) or market. Inventory includes parts and components that may be specialized in nature and subject to rapid obsolescence. We maintain a reserve for inventory items to provide for an estimated amount of excess or obsolete inventory. The reserve is based upon a review of inventory materials on hand, which we compare with estimated future usage. In addition, we review the inventory and compare recorded costs with estimates of current market value. Writedowns are recorded to reduce the carrying value to the net realizable value with respect to any part with costs in excess of current market value. Estimating demand and current market values is inherently difficult, particularly given that we make unique components and products. We determine the valuation of excess and obsolete inventory by making our best estimate considering the current quantities of inventory on hand and our forecast of the need for this inventory to support future sales of our products. We often have limited information on which to base our forecasts. If future sales differ from these forecasts, the valuation of excess and obsolete inventory may change. For example, as a result of commencing internal production of our semiconductor diodes and due to the downturn in the communications market, we recorded a charge to inventory of $8.3 million in 2003 related to the reduction in the carrying value of semiconductor diodes and certain other optical components. In addition, during 2005 we recorded a charge against the remaining diodes that had been procured from third parties, other components and finished goods that totaled $2.4 million.

Stock-based compensation. Prior to January 1, 2006, we accounted for stock-based employee compensation arrangements in accordance with the intrinsic value provisions of Accounting Principles Board Opinion No. 25, Accounting for Stock Issued to Employees. Therefore, we did not record any compensation expense for stock options we granted to our employees where the exercise price was at least equal to the fair value of the stock on the date of grant. Due primarily to certain stock-based compensation awarded primarily in 2000 and 2001, we have recorded significant stock-based compensation during the years ended December 31, 2001, 2002 and 2003. Those awards became fully vested during the year ended December 31, 2004. We comply with the disclosure requirements of SFAS No. 123 and SFAS No. 148, which require that we disclose our pro forma net income or loss and net income or loss per common share as if we had expensed the options at fair value. As a private company, we applied the provisions of SFAS No. 123 using the minimum value computations, which assume no volatility in the fair value of our common stock underlying employee stock options. In December 2004, SFAS No. 123 was amended (now referred to as SFAS No. 123(R)), and we account for any newly issued, modified or settled stock awards on or after January 1, 2006 at fair value.

We adopted SFAS No. 123(R) using the prospective transition method. Under this method, compensation costs recorded during the six months ended June 30, 2006 include: (i) compensation costs for all share-based payment awards granted prior to, but not yet vested as of, January 1, 2006, based on the intrinsic value in accordance with the original provisions of APB 25; and (ii) compensation costs for all share-based payment awards granted subsequent to January 1, 2006, based on the grant-date fair value estimated in accordance with the provisions of SFAS No. 123(R). We allocate and record stock-based compensation expense on a straight-line basis over the requisite service period.

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Under SFAS No. 123(R), we calculate the fair value of stock option grants using the Black-Scholes option pricing model. Determining the appropriate fair value model and calculating the fair value of stock-based payment awards require the use of highly subjective assumptions, including the expected life of the stock-based payment awards and stock price volatility. The assumptions used in calculating the fair value of stock-based payment awards represent management s best estimates, but the estimates involve inherent uncertainties and the application of management judgment. As a result, if factors change and we use different assumptions, our stock-based compensation expense could be materially different in the future. The weighted average assumptions used in the Black-Scholes model were 6.25 years for the expected term, 65% for the expected volatility, 4.75% for the risk-free rate and 0% for dividend yield for the six months ended June 30, 2006. Because there is currently no public market for our common stock, we are unable to use actual price volatility or option life as input assumptions within our Black-Scholes valuation model.

The weighted average expected option term for 2006 reflects the application of the simplified method set forth in Securities and Exchange Commission Staff Accounting Bulletin, or SAB, No. 107, which was issued in March 2005. The simplified method defines the life as the average of the contractual term of the options and the weighted average vesting period for all option tranches.

Because there has been no public market for our common stock, the fair value of our common stock was determined by our board of directors based on consideration of relevant factors. Factors considered by our board of directors included:

- independent valuation reports that we received;
- the agreed-upon consideration paid in arms-length transactions in the form of convertible preferred stock and common stock;
- the superior rights and preferences of securities senior to our common stock at the time of each grant;
- historical and anticipated fluctuations in our net sales and results of operations, which reflect our dependence on certain key customers, the cyclical nature of certain of our end markets and market acceptance of our products; and
- the risk of owning our common stock and its non-liquid nature.

For the calculation of expected volatility, because there is currently no public market for our common stock, and therefore we lack company-specific historical and implied volatility information, we based our estimate of expected volatility on the expected volatility of similar entities whose share prices are publicly available. We used the following factors to identify similar public entities: industry, stage of life cycle, size and profitability. We intend to continue to consistently apply this process using the same or similar entities until a sufficient amount of historical information regarding the volatility of our own share price becomes available, or unless circumstances change such that the identified entities are no longer similar to us. In this latter case, more suitable, similar entities whose share prices are publicly available would be utilized in the calculation.

As stock-based compensation expense recorded in our statement of operations for the six months ended June 30, 2006 is based on options ultimately expected to vest, it has been reduced for estimated forfeitures. SFAS 123(R) requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. The stock-based compensation recorded for the six months ended June 30, 2006 reflects an estimated forfeiture rate of 5%. For purposes of preparing the pro forma information required under SFAS 123 for the periods prior to 2006, we accounted for forfeitures as they occurred.

In accordance with the prospective transition method, our financial statements for prior periods have not been restated to reflect, and do not include, the impact of SFAS 123(R). Total employee stock-based compensation expense recorded under SFAS 123(R) for the six months ended June 30, 2006 was $0.1 million. We expect that our quarterly stock-based compensation expense will increase for the remainder of 2006.

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Income taxes. We account for income taxes under the provisions of SFAS No. 109, Accounting for Income Taxes. Under this method, we determine the deferred tax assets and liabilities based upon the difference between the financial statements and the tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to affect taxable income. The tax consequences of most events recognized in the current year s financial statements are included in determining income taxes currently payable. However, because tax laws and financial accounting standards differ in their recognition and measurement of assets, liabilities, equity, net sales, expenses, gains and losses, differences arise between the amount of taxable income and pretax financial income for a year and the tax basis of assets or liabilities and their reported amounts in the financial statements. Because we assume that the reported amounts of assets and liabilities will be recovered and settled, respectively, a difference between the tax basis of an asset or a liability and its reported amount in the balance sheet will result in a taxable or a deductible amount in some future years when the related assets or liabilities are settled or the reported amount of the assets are recovered, giving rise to a deferred tax asset or liability. We must then periodically assess the likelihood that our deferred tax assets will be recovered from our future taxable income, and, to the extent we believe that it is more likely than not our deferred tax assets will not be recovered, we must establish a valuation allowance against our deferred tax assets.

We have used the majority of our net operating losses in Germany that we have previously generated and we are now paying income taxes in Germany. We have recorded deferred tax assets related to operating losses in Germany as we believe that no valuation allowance was necessary. As of December 31, 2005, we have a valuation allowance totaling $19.4 million, primarily against U.S. federal and state net operating losses as well as certain other U.S. timing differences. The release of the valuation allowance will depend upon the continued improvement in results of our U.S. operations and the reversal of a material U.S. timing difference. If the results of our U.S. operations continue to improve, we expect to be able to start using the net operating losses available in the United States and to release the valuation allowance. Our reported net income will increase substantially for the quarter in which we release the valuation allowance, reflecting the reduction of our future income taxes as a result of the utilization of the prior year net operating losses. Based on our projections of operating income and taxable income, we anticipate that we will release the valuation allowance in the latter half of 2006.

Fair value adjustment of warrants. In connection with the issuance of our series B preferred stock, we issued warrants to purchase, in the aggregate, shares of our common stock valued at $47.5 million at an equivalent per-share price of 50% of the fair value on the date of an initial public offering of our common stock or the sale, merger or liquidation of our company. The warrants are treated as a free-standing derivative under SFAS No. 133, Accounting for Derivative Instruments and Hedging Activities. SFAS No. 133 requires us to record a non-cash expense or benefit each quarter, based upon the increase or decrease in the fair value of the warrants, until such warrants are repurchased, exercised or otherwise are no longer outstanding. We periodically assess the fair value of the warrants by estimating the probability that the warrants will be exercised based upon our estimate of the increase or decrease in the likelihood of an initial public offering, merger, liquidation or sale of the majority of our common stock prior to the warrants expiration. Estimating these probabilities is inherently difficult.

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Results of Operations

The following table sets forth selected statement of operations data for the periods indicated in dollar amounts and expressed as a percentage of net sales.

	Year Ended December 31,						Six Months Ended June 30,			
	2003		2004		2005		2005		2006	
	(in thousands, except percentages)									
Net sales	$ 33,740	100.0%	$ 60,707	100.0%	$ 96,385	100.0%	$ 41,630	100.0%	$ 64,927	100.0%
Cost of sales	38,583	114.4	42,274	69.6	62,481	64.8	28,437	68.3	39,119	60.3
Gross (loss) profit	(4,843)	(14.4)	18,433	30.4	33,904	35.2	13,193	31.7	25,808	39.7
Operating expenses:										
Sales and marketing	2,110	6.3	2,363	3.9	3,236	3.4	1,538	3.7	2,343	3.6
Research and development	10,063	29.8	4,831	8.0	5,788	6.0	2,873	6.9	2,622	4.0
General and administrative	9,998	29.6	8,179	13.5	10,598	11.0	4,352	10.5	5,813	9.0
Total operating expenses	22,171	65.7	15,373	25.4	19,622	20.4	8,763	21.1	10,778	16.6
Operating (loss) income	(27,014)	(80.1)	3,060	5.0	14,282	14.8	4,430	10.6	15,030	23.1
Interest expense, net	(1,505)	(4.5)	(2,150)	(3.5)	(1,840)	(1.9)	(969)	(2.3)	(709)	(1.1)
Fair value adjustment to series B warrants	(3,664)	(10.9)	(615)	(1.0)	(745)	(0.8)	(314)	(0.8)	(2,219)	(3.4)
Other income, net	1,647	4.9	196	0.3	236	0.2	141	0.3	12	0.0
(Loss) income before benefit from (provision for) income taxes and minority interests in consolidated subsidiaries	(30,536)	(90.6)	491	0.8	11,933	12.3	3,288	7.8	12,114	18.6
	2,205	6.5	1,601	2.6	(4,080)	(4.2)	(1,219)	(2.9)	(5,598)	(8.6)

Benefit from (provision for) income taxes										
Minority interests in consolidated subsidiaries	121	0.4	(80)	(0.1)	(426)	(0.4)	81	0.2	(398)	(0.6)
Net (loss) income	$ (28,210)	(83.7)%	$ 2,012	3.3%	$ 7,427	7.7%	$ 2,150	5.1%	$ 6,118	9.4%

Comparison of Six Months Ended June 30, 2006 to Six Months Ended June 30, 2005

Net sales. Our net sales increased by $23.3 million, or 56.0%, to $64.9 million in the six months ended June 30, 2006 from $41.6 million in the six months ended June 30, 2005. This increase was primarily attributable to a higher volume of sales of fiber lasers in materials processing applications, where net sales increased by $20.2 million or by 86.9% of the total increase in net sales. Communications accounted for 13.0% of the increase in net sales. The growth in net sales resulted primarily from increased market acceptance of high-power fiber lasers and the continued growth in sales of low and medium-power fiber lasers for materials processing. Net sales growth was also driven by increased sales of fiber amplifiers used in broadband systems in the United States and communications systems in Europe.

Cost of sales and gross margin. Our costs of sales increased by $10.7 million, or 37.7%, to $39.1 million in the six months ended June 30, 2006 from $28.4 million in the six months ended June 30, 2005, as a result of the increased sales volume. Our gross margin increased to 39.7% in the six months ended June 30, 2006 from 31.7% in the six months ended June 30, 2005 because of a reduction in the cost of our internally manufactured optical components, including semiconductor diodes, and more favorable absorption of fixed manufacturing costs as a result of our higher production volume.

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Sales and marketing expense. Sales and marketing expense increased by $0.8 million, or 53.3%, to $2.3 million in the six months ended June 30, 2006 from $1.5 million in the six months ended June 30, 2005, primarily as a result of a $0.4 million increase in personnel costs due to increases in sales commissions and the expansion of our worldwide direct sales organization driven by the increase in net sales.

Research and development expense. Research and development expense decreased by $0.3 million, or 10.3%, to $2.6 million in the six months ended June 30, 2006 from $2.9 million in the six months ended June 30, 2005. This reduction in research and development expenses for the six months ended June 30, 2006 was primarily attributable to the timing of research and development projects and is not indicative of any reduction in our commitment to research and development.

General and administrative expense. General and administrative expense increased by $1.4 million, or 31.8%, to $5.8 million in the six months ended June 30, 2006 from $4.4 million in the six months ended June 30, 2005, primarily due to a $0.3 million increase in consulting costs and other administrative expenses. Personnel expenses related to general and administrative expense were approximately the same in the six months ended June 30, 2006 compared to the same period of 2005 despite an increase in headcount because the expenses for 2005 included bonuses to certain employees of $0.4 million.

Interest expense, net. Interest expense, net decreased by $0.3 million, or 30%, to $0.7 million in the six months ended June 30, 2006 from $1.0 million in the six months ended June 30, 2005, resulting from the repayment of term debt as well as lower utilization of our credit lines in Germany in the six months ended June 30, 2006.

Fair value adjustment to series B warrants. The fair value of the series B warrants increased by $2.2 million in the six months ended June 30, 2006 due to an increase in management s estimate of the probability of completion of an initial public offering prior to the expiration of the warrants.

(Provision for) benefit from income taxes. Our provision for income tax expense increased by $4.4 million, to a provision of $5.6 million in the six months ended June 30, 2006 from $1.2 million in the six months ended June 30, 2005 representing an effective tax rate of 39.0% in the six months ended June 30, 2006 as compared to 33.8% in the same period of 2005. The increase in the provision for income taxes was driven by an increase in earnings before tax of $8.8 million to $12.1 million in the six months ended June 30, 2006 from $3.3 million in the same period of 2005, as well as changes in the relative amounts of our taxable income generated throughout various tax jurisdictions.

Net income (loss). Net income increased by $3.9 million, or more than 100%, to $6.1 million for the six months ended June 30, 2006 from $2.2 million for the same period in 2005 and our net income margin increased by 4.2 percentage points to 9.4% of net sales for the six months ended June 30, 2006 from 5.2% of net sales for the same period in 2005.

Comparison of Year Ended December 31, 2005 to Year Ended December 31, 2004

Net sales. Our net sales increased by $35.7 million, or 58.8%, to $96.4 million in 2005 from $60.7 million in 2004. This increase was primarily attributable to higher sales of fiber lasers in the materials processing market, where net sales increased by $18.4 million or 51.5% of the total increase in net sales. Communications, medical and advanced applications each accounted for an approximately equal portion of the remaining increase in net sales. The growth in net sales resulted primarily from increased market acceptance of fiber lasers in materials processing applications, particularly high-power fiber lasers, and to a lesser extent, broadband systems rollouts that increased fiber amplifier sales.

Cost of sales and gross margin. Our cost of sales increased by $20.2 million, or 47.8%, to $62.5 million in 2005 from $42.3 million in 2004, as a result of increased sales volumes. Our gross margin increased to 35.2% in 2005 from 30.4% in 2004 because of a reduction in the cost of our internally manufactured semiconductor diodes and more favorable absorption of fixed manufacturing costs as a result of our increased production volume, offset by higher manufacturing and labor costs.

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Sales and marketing expense. Sales and marketing expense increased by $0.8 million, or 33.3%, to $3.2 million in 2005 from $2.4 million in 2004 as a result of a $0.4 million increase in personnel costs associated with the increase in sales commissions and the expansion of our worldwide direct sales organization.

Research and development expense. Research and development expense increased by $1.0 million, or 20.8%, to $5.8 million in 2005 from $4.8 million in 2004. The increase in our research and development expense was primarily attributable to a $1.9 million increase in personnel costs due to increased headcount, which was partially offset by a decrease in other development expenses.

General and administrative expense. General and administrative expense increased by $2.4 million, or 29.3%, to $10.6 million in 2005 from $8.2 million in 2004, primarily due to a $2.7 million increase in personnel costs, partially offset by a $0.5 million decrease in certain other expenses such as travel and lease expenses.

Interest expense, net. Interest expense, net decreased by $0.4 million, or 18.2%, to $1.8 million in 2005 from $2.2 million in 2004. The decrease resulted from the repayment of debt.

Fair value adjustment to series B warrants. The fair value of the series B warrants increased by $0.1 million to $0.7 million in 2005 from $0.6 million in 2004 due to an increase in the probability of their exercise as well as a lower total discount related to the time value of money.

(Provision for) benefit from income taxes. Our provision for income tax expense increased by $5.7 million, to $4.1 million in 2005 from a benefit of $1.6 million in 2004, representing an effective tax rate of 32.2% in 2005 and more than negative 100% in 2004. The $1.6 million benefit in 2004 largely reflects the reversal of $1.6 million in reserves for prior year taxes as a result of the completion of a tax audit in the United States. The relative amounts of our taxable income generated between Germany and the United States have a significant impact on our effective rate. In each of 2005 and 2004, we did not provide any benefits on our operating losses in the United States, whereas in Germany we have historically been profitable and recorded a tax provision without a valuation allowance. Absent the effects of the valuation allowance, our blended worldwide effective tax rate is estimated to have been approximately 40% in each of 2005 and 2004.

Net income (loss). Our net income increased by $5.4 million to $7.4 million in 2005 from $2.0 million in 2004 and our net income margin increased by 4.4 percentage points to 7.7% of net sales in 2005 from 3.3% of net sales in 2004.

Comparison of Year Ended December 31, 2004 to Year Ended December 31, 2003

Net sales. Our net sales increased by $27.0 million, or 80.1%, to $60.7 million in 2004 from $33.7 million in 2003. This increase was primarily attributable to a higher volume of sales of fiber lasers in the materials processing market, where net sales increased by $18.3 million. Communications equipment accounted for $4.5 million of the increase in net sales. The growth in net sales resulted primarily from increased market acceptance of fiber lasers for materials processing applications, as well as broadband systems rollouts that increased fiber amplifier sales. In 2004, our sales of high-power lasers began to increase as compared to 2003, when these products were still largely in the prototype phase, such that the increase in our net sales was also attributable to higher unit sales of high-power (generally one kilowatt and above) fiber lasers introduced in prior years.

Cost of sales and gross margin. Our cost of sales increased by $3.7 million, or 9.6%, to $42.3 million in 2004 from $38.6 million in 2003. The increase in materials costs related to increased sales volumes was partially offset by a reduction in charges related to inventory reserves. Excluding $8.3 million inventory reserves that we recorded in 2003, our cost of sales increased by $12.0 million, or 39.6%, in 2004 from 2003. Excluding the impact of this inventory reserve provision, our gross margin increased to 30.3% in 2004 from 10.1% in 2003 because of a reduction in our cost of materials resulting from a decrease in the cost of our in-house manufactured semiconductor diodes and more favorable absorption of fixed manufacturing costs as a result of our increased production volume.

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Sales and marketing expense. Sales and marketing expense increased by $0.3 million, or 14.3%, to $2.4 million in 2004 from $2.1 million in 2003 as a result of increases in personnel costs associated with the increase in sales commissions as a result of net sales growth and the expansion of our worldwide direct sales organization.

Research and development expense. Research and development expense decreased by $5.3 million, or 52.5%, to $4.8 million in 2004 from $10.1 million in 2003. The decrease in our research and development expense was primarily attributable to the fact that we began commercial production of our diodes in the first quarter of 2004. The costs related to the diode manufacturing facility that were previously classified as research and development were now classified as cost of sales. Excluding the expenses related to the diode manufacturing facility, research and development expense decreased by $1.4 million, or 22.6%, to $4.8 million in 2004 from $6.2 million in 2003.

General and administrative expense. General and administrative expense decreased by $1.8 million, or 18%, to $8.2 million in 2004 from $10.0 million in 2003, primarily due to a $0.5 million decrease in professional fees costs and a $0.5 million decrease in stock-based compensation.

Interest expense, net. Interest expense, net increased by $0.7 million, or 46.7%, to $2.2 million from $1.5 million in 2003, as a result of additional interest charges relating to the issuance of a note to a supplier and the increased use of lines of credit on which the interest rates exceeded our weighted average cost of bank debt.

Fair value adjustment to series B warrants. The fair value of the series B warrants decreased by $3.1 million to $0.6 million in 2004 from $3.7 million in 2003 due to a higher total discount related to the time value of money.

(Provision for) benefit from income taxes. Our benefit from income taxes decreased by $0.6 million, to $1.6 million in 2004 from a benefit of $2.2 million in 2003. In 2004, we released a $1.6 million reserve for prior year taxes upon the completion of a tax audit of our U.S. operations for the years 1999 through 2001. Our effective tax rates in each of 2004 and 2003 were impacted by the relative amounts of our taxable income generated between Germany and the United States and the full valuation allowance provided against U.S. timing differences as well as net operating loss carryforwards.

Net income (loss). Our net income (loss) increased by $30.2 million to net income of $2.0 million in 2004 from a net loss of $28.2 million in 2003 and our net income margin increased to 3.3% of net sales in 2004 from (83.7)% of net sales in 2003.

Selected Quarterly Results

The following table presents certain unaudited quarterly financial information for our last six quarters. The unaudited interim consolidated financial information contained herein has been prepared on the same basis as the audited consolidated financial statements and, in the opinion of management, includes all adjustments, consisting of only normal recurring adjustments, that we consider necessary to fairly present such information when read together with the audited consolidated financial statements and related notes appearing elsewhere in this prospectus.

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	Three Months Ended					
	Mar. 31, 2005	June 30, 2005	Sep. 30, 2005	Dec. 31, 2005	Mar. 31, 2006	June 30, 2006
	(in thousands)					
Net sales	$ 18,788	$ 22,843	$ 20,607	$ 34,147	$ 32,743	$ 32,184
Cost of sales	12,937	15,501	13,325	20,718	20,278	18,841
Gross profit	5,851	7,342	7,282	13,429	12,465	13,343
Operating expenses:						
Sales and marketing	650	887	817	882	1,080	1,263
Research and development	1,370	1,504	1,303	1,611	1,235	1,387
General and administrative	1,793	2,559	2,337	3,909	2,659	3,154
Total operating expenses	3,813	4,950	4,457	6,402	4,974	5,804
Operating income	2,038	2,392	2,825	7,027	7,491	7,539
Interest expense, net	(514)	(454)	(442)	(430)	(355)	(354)
Fair value adjustment to series B warrants	(155)	(159)	(163)	(268)	(1,862)	(357)
Other income, net	(2)	143	55	40	8	4
Income before provision for income taxes and minority interests in consolidated subsidiaries	1,367	1,922	2,275	6,369	5,282	6,832
Provision for income taxes	(468)	(751)	(818)	(2,043)	(2,833)	(2,765)
Minority interests in consolidated subsidiaries	77	5	(107)	(401)	(288)	(110)
Net income	$ 976	$ 1,176	$ 1,350	$ 3,925	$ 2,161	$ 3,957

The following table presents certain unaudited quarterly information as a percentage of our net sales for our last six quarters.

	Three Months Ended					
	Mar. 31, 2005	June 30, 2005	Sep. 30, 2005	Dec. 31, 2005	Mar. 31, 2006	June 30, 2006
Net sales	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of sales	68.9	67.9	64.7	60.7	61.9	58.5
Gross profit	31.1	32.1	35.3	39.3	38.1	41.5
Operating expenses:						
Sales and marketing	3.5	3.9	4.0	2.6	3.3	3.9
Research and development	7.3	6.6	6.3	4.7	3.8	4.3

General and administrative	9.5	11.2	11.3	11.4	8.1	9.8
Total operating expenses	20.3	21.7	21.6	18.7	15.2	18.0
Operating income	10.8	10.4	13.7	20.6	22.9	23.5
Interest expense, net	(2.7)	(2.0)	(2.1)	(1.3)	(1.1)	(1.1)
Fair value adjustment to series B warrants	(0.8)	(0.7)	(0.8)	(0.8)	(5.7)	(1.1)
Other income, net	(0.0)	0.6	0.3	0.1	0.0	0.0
Income before provision for income taxes and minority interests in consolidated subsidiaries	7.3	8.3	11.1	18.6	16.1	21.3
Provision for income taxes	(2.5)	(3.3)	(4.0)	(6.0)	(8.7)	(8.6)
Minority interests in consolidated subsidiaries	0.4	0.0	(0.5)	(1.2)	(0.9)	(0.3)
Net income	5.2%	5.0%	6.6%	11.4%	6.5%	12.4%

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Our net sales fluctuate on a quarterly basis and increased from $18.8 million in the quarter ended March 31, 2005 to $32.2 million in the quarter ended June 30, 2006, primarily due to the increased acceptance of our lasers in industrial markets. Our sales have been and will continue to be impacted by the timing of our shipments and customer acceptance of our products. For example, we experienced sequential growth in net sales in the first and second quarter of 2005. In the quarter ended September 30, 2005, our net sales declined as the revenue from one high-power laser shipped in that quarter had to be deferred until the fourth quarter of 2005 due to delayed installation and customer acceptance.

Our gross margin generally improved over the six quarters ended June 30, 2006, ranging from 31.1% to 41.5%. Gross profit varies from quarter to quarter depending upon changes in the level of net sales and upon customer and product mix. Such changes can impact our absorption of our indirect manufacturing costs. Furthermore, the level of gross profit in a quarter can be reduced by the need to record additional inventory provisions.

Our operating margin also fluctuated from quarter to quarter, although it improved as our net sales increased in the fourth quarter of 2005 and the first two quarters of 2006. The higher level of net sales and increase in gross profit in those quarters enabled us to reduce our operating expenses as a percentage of sales and improve our operating margin. Our operating margin decreased from 10.8% in the first quarter of 2005 to 10.4% in the second quarter of 2005 despite an increase in sales over the same period, then increased to 20.6% in the fourth quarter of 2005 and 23.5% in the second quarter of 2006. The decline in operating margin in the second quarter of 2005 was due primarily to an increase in operating expenses in that period, which offset the increase in gross profit. Operating expenses were higher in the second quarter, primarily due to personnel expenses relating to bonus payments and accounting and legal fees.

Our quarterly net sales and operating results have fluctuated in the past and are likely to continue to vary from quarter to quarter due to a number of factors, many of which are not within our control. Therefore, we do not believe that our operating results in any quarter or quarters should be relied upon as an accurate indicator of our future performance. In future periods, the market price of our common stock could decline if our net sales and results of operations are below the expectations of analysts and investors. Factors that may cause our net sales and operating results to fluctuate include those discussed in Risk Factors.

Liquidity and Capital Resources

We have financed our operations through internally generated cash flow from operations which includes, from time to time, deposits made by our customers when they place orders with us and private sales of common and preferred stock.

In addition to these sources, we negotiated line-of-credit facilities and term bank loans with our banks in the United States, Germany, Japan and Italy. A summary of these financing arrangements is shown below.

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The following table details our line-of-credit facilities:

Description	Available Principal	Interest Rate	Maturity	Security
Euro Overdraft Facility	Euro 4.4 million ($5.5 million)	7.5%-8.0%, depending upon principal outstanding	Euro 2.0 million ($2.5 million) available through September 2006 Euro 2.4 million ($3.0 million) available through March 2010	Common pool of assets of German subsidiary
U.S. Demand Line(1)	80% of eligible receivables, up to $7,000,000	LIBOR plus 3.0%	June 2008	All assets held by our U.S. parent company (IPG Photonics Corporation)
Japanese Overdraft Facility	100% of eligible receivables, up to JPY700,000,000 ($6.0 million)	1.88%	September 2006	Pool of assets of Japanese subsidiary

(1) This loan has a minimum debt service coverage covenant.

We also have two credit lines with total availability of $0.7 million which bear interest at rates ranging from 4.0% to 7.6% and are secured by assets of our Italian subsidiary.

The following table details our fixed-term debt. We plan to use a portion of the proceeds of this offering to repay this fixed-term debt:

Description	Principal	Interest Rate	Maturity	Security
U.S. Construction Loan(1)	$5.8 million	7.9%	January 2007	Property and plant in United States
Euro Construction Loans	$7.1 million	5.25%	September 2006 to December 2010	Property and plant in Germany
Other Euro-fixed term debt	$6.3 million	4.2-6.5%	December 2006 to December 2019	Property, plant and equipment, receivables and other assets in Germany

(1) The construction loan has a minimum debt service coverage covenant.

The improved performance of our business beginning in 2003 enabled us to negotiate the U.S. demand line-of-credit facility in the fourth quarter of 2004 and, in the second quarter of 2005, obtain the release of restricted cash held by a lender. In the second quarter of 2005, we obtained a new loan in Germany to finance part of the acquisition costs of a building there. The Japanese line of credit was negotiated in the third quarter of 2005 to finance the accounts receivable of IPG Japan as a result of the increase in net sales of that company.

While historically the use of lines of credit and bank term debt have been important sources of financing for us, we expect to repay substantially all of our term financing facilities with the proceeds of this offering. See Use of Proceeds. We intend to maintain availability under our lines of credit to finance our short-term working capital requirements that may arise from time to time.

Our principal sources of liquidity as of June 30, 2006 consisted of cash and cash equivalents of $11.3 million, unused credit lines and overdraft facilities of $8.9 million and working capital of

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$22.7 million. This compares to cash and cash equivalents of $7.0 million, unused credit lines and overdraft facilities of $3.8 million and working capital of $30.1 million as of June 30, 2005.

Operating activities. Cash provided by operating activities was $10.3 million and $1.5 million in the six months ended June 30, 2006 and 2005, respectively. The increase in cash provided by operating activities of $8.8 million in the six months ended June 30, 2006 as compared to the six months ended June 30, 2005 was primarily due to the increase in net income of $3.9 million and an increase in deferred income taxes as well as accounts payable, partially offset by an increase in inventory levels. Cash flows generated by operating activities were $13.6 million in the year ended December 31, 2005 as compared to cash generated by operating activities of $6.2 million in the year ended December 31, 2004 and cash used by operating activities of $1.1 million in the year ended December 31, 2003.

Given our vertical integration, rigorous and time-consuming testing procedures for both internally manufactured and externally purchased components and the lead time required to manufacture components used in our finished product, the rate at which we turn inventory has historically been low when compared to our cost of sales. We do not expect this to change significantly in the future and believe that we will have to maintain a relatively high level of inventory compared to our cost of sales. As a result we continue to expect to have a significant amount of working capital invested in inventory and for changes in our level of inventory to lead to an increase in cash generated from our operations when it is sold or a decrease in cash generated from our operations at times when the amount of inventory is increasing. A reduction in our level of net sales or the rate of growth of our net sales from their current levels would mean that the rate which we are able to convert our inventory into accounts receivable would decrease.

Investing activities. Cash used in investing activities was $8.0 million in the six months ended June 30, 2006 as compared to cash generated from investing activities of $0.2 million in the six months ended June 30, 2005. The cash used in investing activities in the six months ended June 30, 2006 was related to capital expenditures on plant and machinery and equipment, primarily in the United States and Germany. In the six months ended June 30, 2005, capital expenditures of $6.5 million were offset by a one-time cash inflow from investing activities of $6.6 million related to the release of restricted cash. We expect to continue to invest in plant and machinery and to use a significant amount of our cash generated from operations to finance capital expenditures. The timing and extent of any capital expenditures in and between periods can have a significant effect on the cash flow available for financing activities. Many of the capital expenditure projects that we undertake have long lead times and are difficult to cancel or defer in the event that our net sales are reduced or if our rate of growth slows, with the result that it would be difficult to defer committed capital expenditures to a later period. Cash used in investing activities was $8.6 million in the year ended December 31, 2005 as compared to $3.9 million in the year ended December 31, 2004 and $0.1 million in the year ended December 31, 2003.

Financing activities. Cash provided by financing activities was $0.4 million in the six months ended June 30, 2006 as compared to $2.8 million in the six months ended June 30, 2005. The primary uses of cash in financing activities in the six months ended June 30, 2006 were for the repayment of long-term debt in Germany, the United States and Russia of $1.9 million, $0.2 million and $0.6 million, respectively, as compared to $0.3 million, $0.2 million and $0.0 million, respectively, in the six months ended June 30, 2005. In the six months ended June 30, 2006, the cash outflows related to the repayment of term debt were offset by net inflows of $2.2 million relating to amounts drawn down against lines of credit and overdraft facilities and proceeds of $0.9 million from the exercise of stock options. In the six months ended June 30, 2005, the cash outflows related to the repayment of term debt were offset by a cash inflow of $2.2 million relating to a new German mortgage used to finance the acquisition of a building and net drawdowns of $0.9 million against lines of credit and overdraft facilities. Cash provided by financing activities was $1.1 million in the year ended December 31, 2005 as compared to cash used in financing activities of $0.4 million in the year ended December 31, 2004 and cash provided by financing activities of $0.4 million in the year ended December 31, 2003.

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We intend to use a portion of the net proceeds from this offering to repurchase the series B warrants and to repay bank debt owed by us. See Use of Proceeds. We believe that the remaining net proceeds from this offering, along with our existing cash balances, our cash flows from operations, and borrowings available under our credit facilities, will provide us with sufficient liquidity to meet our current and anticipated financial obligations, committed capital expenditures, and other liquidity needs through at least the next 12 months. Our future long-term capital requirements will depend on many factors including our rate of net sales growth, the timing and extent of spending to support development efforts, the expansion of our sales and marketing activities, the timing and introductions of new products, the need to ensure access to adequate manufacturing capacity and the continuing market acceptance of our products. We have made no arrangements to obtain additional financing, and there is no assurance that such financing, if required or desired, will be available in amounts or on terms acceptable to us, if at all.

Contractual Obligations

The following table describes our cash commitments, in thousands, to settle contractual obligations as of December 31, 2005.

		Payments Due in			
	Total	Less Than 1 Year	1-3 Years	3-5 Years	More Than 5 Years
Operating lease obligations	$ 3,386	$ 1,094	$ 1,679	$ 613	$
Long-term debt obligations (including interest)	28,573	11,845	12,900	1,346	2,482
Total	$ 31,959	$ 12,939	$ 14,579	$ 1,959	$ 2,482

Of the total long-term debt obligations, $4.6 million were repaid in July 2006, $5.1 million were repaid in August 2006 and we intend to repay an additional $15.9 million with the net proceeds of this offering. In addition, upon completion of this offering, we will issue subordinated notes totaling $20 million in principal amount to the holders of our series B preferred stock. The subordinated notes will be due on the third anniversary of the date of issuance and will bear interest at the greater of the short-term applicable Federal rate or 4% in the first year, 7% in the second year and 10% in the third year.

Quantitative and Qualitative Disclosures about Market Risk

We are exposed to market risk in the ordinary course of business, which consists primarily of interest rate risk associated with our cash and cash equivalents and our debt and foreign exchange rate risk.

Interest rate risk. Our investments have limited exposure to market risk. To minimize this risk, we maintain a portfolio of cash, cash equivalents and short-term investments, consisting primarily of bank deposits, money market funds and short-term government funds. The interest rates are variable and fluctuate with current market conditions. Because of the short-term nature of these instruments, a sudden change in market interest rates would not be expected to have a material impact on our financial condition or results of operations.

Our exposure to market risk also relates to the increase or decrease in the amount of interest expense we must pay on our bank debt and borrowings on our bank credit facilities. The interest rate on our existing bank debt is currently fixed except for our U.S. demand line of credit. The rates on our Euro overdraft facilities in Germany and Italy and our Japanese Yen overdraft facility are fixed for twelve-month periods. Approximately 82% of our outstanding debt has a fixed rate of interest. We do not believe that a 10% change in market interest rates would have a material impact on our financial position or results of operations.

Exchange rates. Due to our international operations, a significant portion of our net sales, cost of sales and operating expenses in 2005 were denominated in currencies other than the U.S. dollar, principally the Euro and the

Japanese Yen. As a result, our international operations give rise to

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transactional market risk associated with exchange rate movements of the U.S. dollar, the Euro and the Japanese Yen. Charges related to losses on foreign exchange transactions are reported as a component of general and administrative expense and totaled $0.1 million, $0.3 million and $0.7 million in 2005, 2004 and 2003, respectively.

Historically, we have not utilized any derivative instruments or other measures to protect us against foreign currency exchange rate fluctuations. We will continue to analyze our exposure to currency exchange rate fluctuations and may engage in financial hedging techniques in the future to attempt to minimize the effect of these potential fluctuations. However, exchange rate fluctuations may adversely affect our financial results in the future.

Recent Accounting Pronouncements

In November 2004, the FASB issued SFAS No. 151, Inventory Costs an Amendment of ARB No. 43, Chapter 4, which revised ARB No. 43, relating to inventory costs. This revision is intended to clarify the accounting for abnormal amounts of idle facility expense, freight, handling costs and wasted material (spoilage). This accounting standard, which is effective for inventory costs for annual periods beginning after January 1, 2006, requires that these items be recorded as a current period charge regardless of whether they meet the criterion specified in ARB No. 43. In addition, this accounting standard requires the allocation of fixed production overheads to the costs of conversion be based on normal capacity of the production facilities. The adoption of SFAS No. 151 did not have a material effect on our financial position or results of operations.

In July 2006, the FASB issued Financial Accounting Standards Interpretation No. 48 (FIN 48), Accounting for Uncertainty in Income Taxes. FIN 48 prescribes a recognition threshold and measurement process for recording in the financial statements uncertain tax positions taken or expected to be taken in a tax return. FIN 48 also provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosures and transitions. FIN 48 will be effective for us beginning January 1, 2007. We are currently analyzing the effects, if any, of the adoption of FIN 48. We do not anticipate that adoption of FIN 48 to have a material impact on our results of operations or financial condition.

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BUSINESS

Our Company

We are the leading developer and manufacturer of a broad line of high-performance fiber lasers and amplifiers for diverse applications in numerous markets. Since our founding in 1990, we have pioneered the development and commercialization of optical fiber-based lasers. Fiber lasers are a new generation of lasers that combine the advantages of semiconductor diodes, such as long life and high efficiency, with the high amplification and precise beam qualities of specialty optical fibers to deliver superior performance, reliability and usability at a lower total cost of ownership compared to conventional lasers. Our products are displacing traditional lasers in many current applications and enabling new applications for lasers. Our vertically integrated operations allow us to rapidly develop and integrate advanced products, protect our proprietary technology and ensure access to critical components while reducing manufacturing costs.

We manufacture and sell an extensive array of fiber lasers and amplifiers across a wide power range to a well-established customer base in numerous applications across diverse industries:

Materials Processing. Our fiber lasers are used in a diverse range of materials processing applications: marking, engraving and printing; welding, cutting, drilling, soldering and hardening; and high precision machining. Examples of such processes using our low and mid-power fiber lasers include razorblade, stent and pacemaker manufacturing, integrated circuit marking and trimming; semiconductor memory repair and trimming; and computer disk manufacturing and texturing. Examples of such processes using our high-power fiber lasers include cutting and welding metal blanks, sheets, frames and transmissions in the automotive industry; welding aluminum and titanium air frames in the aerospace industry; hardening, cutting and welding in heavy industries such as nuclear power, pipelines, ships and rail cars; and drilling and cutting concrete and rock.

Communications. Our fiber amplifiers are used in the deployment of interactive and advanced triple-play broadband services that include video, high-speed internet and telephony services, as well as in wireline transport networks. We also sell integrated transport systems for ultra-long-haul optical dense wavelength multiplexing networks.

Medical. Our lasers are used for applications as components in medical laser systems, driven by aesthetic applications such as skin resurfacing and rejuvenation. Other soft-tissue applications include dentistry, urology, surgery and vision correction.

Advanced Applications. Our fiber lasers and amplifiers are utilized by commercial firms and by academic, government and other institutions worldwide for commercial products and for research in advanced technologies and products. Our products are used in the aerospace, research, scientific and test and measurement markets.

For the six months ended June 30, 2006, materials processing accounted for 72.6% of our net sales and communications, medical and advanced applications accounted for 12.8%, 7.6% and 7.0%, respectively, of our net sales. In addition to these existing applications, we believe that there are numerous prospective uses for our fiber laser and amplifier products.

Our headquarters and manufacturing facilities are located in Oxford, Massachusetts. We have additional manufacturing facilities in Germany, Russia and Italy, and regional sales offices in the United States, Japan, Korea, India and the United Kingdom. We have shipped over 21,000 units and, in 2005, we shipped to more than 300 customers worldwide. For the year ended December 31, 2005, we reported net sales of $96.4 million and net income of $7.4 million, an increase of 59% and 269%, respectively, compared to the year ended December 31, 2004. For the six months ended June 30, 2006, we reported net sales of $64.9 million and net income of $6.1 million, an increase of 56% and 185%, respectively, from the six months ended June 30, 2005.

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Industry Background

Traditional Laser Technologies

Since the laser was invented over 45 years ago, laser technology has revolutionized a broad range of applications and products in various industries, including automotive, medical, research, consumer products, electronics, semiconductors and communications. Lasers provide flexible, non-contact and high-speed ways to process and treat various materials. They are widely used to transmit large volumes of data in optical communications systems, in various medical applications and in test and measurement systems. For a wide variety of applications, lasers provide superior performance and a more cost-effective solution than non-laser technologies.

Lasers emit an intense light beam that can be focused on a small area, causing metals and other materials to melt, vaporize or change their character. These properties are utilized in applications requiring very high-power densities, such as marking, printing, welding, cutting and other materials processing procedures. Lasers are well-suited for imaging and inspection applications, and the ability to confine laser light to narrow wavelengths makes them particularly effective in medical and sensing applications. A laser works by converting electrical energy to optical energy. In a laser, an energy source excites or pumps a lasing medium, which converts the energy from the source into an emission consisting of particles of light, called photons, at a particular wavelength. Lasers are used as an energy or light source for various applications. They are also incorporated into manufacturing, medical and other systems by original equipment manufacturers (OEMs), system integrators and end users.

Historically, CO_2 gas lasers and crystal lasers have been the two principal laser types used in materials processing and many other applications. They are named for the materials used to create the lasing action. A CO_2 laser produces light by electrically stimulating a gas-filled tube. A crystal laser uses an arc lamp, pulsed flash lamp, or diode stack or array to optically pump a special crystal. The most common crystal lasers use YAG crystals infused with neodymium or ytterbium.

Despite the improvements in CO_2 and YAG laser technologies over the past 40 years, these technologies have not kept pace with evolving customer requirements. These traditional lasers have a number of disadvantages and limitations, including low beam quality, low reliability, limited output powers and wavelength choices, high energy consumption, large size, lack of mobility, the need for expensive replacement parts and complex cooling and maintenance requirements. In addition, the operating parameters of traditional lasers are difficult to control precisely. Customers increasingly require systems that allow for precise control of various operating parameters such as output power, are energy efficient and reliable, require little or no maintenance, and have a higher degree of flexibility and ease of use.

Introduction of Fiber Lasers

We believe that fiber lasers represent a disruptive technology that has broad implications for many industries as well as the many processes that use lasers. The worldwide market for laser sources in 2005 was $2.2 billion according to a 2006 report by Laser Focus World, an independent industry publication. Strategies Unlimited, another independent industry publication, estimates that the fiber laser market will grow by a compound annual growth rate of approximately 39%, from $131 million in 2005 to $673 million by 2010. In addition, the 2006 report by Strategies Unlimited states that fiber lasers have demonstrated several advantages over conventional lasers and are therefore expected to grow much faster than the broader laser market.

Fiber lasers use semiconductor diodes as the light source to pump specialty optical fibers, which are infused, with rare earth ions. These fibers are called active fibers and are comparable in diameter to a human hair. The laser emission is created within optical fibers and delivered through a flexible cable. As a result of their different design and components, fiber lasers are more reliable, efficient, robust and portable, and easier to operate than traditional lasers. In addition, fiber lasers free the laser users from fine mechanical adjustments and the high maintenance costs that are typical for conventional lasers.

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Although low-power fiber lasers have existed for approximately four decades, their increased recent adoption has been driven primarily by our improvements in their performance, increases in output power levels and decreased costs. Over the last several years, technological improvements in optical components such as active fibers have increased their power capacities and resulted in overall performance improvements in fiber lasers. Fiber lasers offer output powers that exceed those of conventional lasers in many categories. Also, semiconductor diodes historically have represented the majority of the cost of fiber lasers. The high cost of diodes meant that fiber lasers could not compete with conventional lasers on price and limited their use to high value-added applications. Recently, however, semiconductor diodes have become more affordable and reliable due in part to substantial advancements in semiconductor diode technology and increased production volumes. As a result, the average cost per watt of output power has decreased dramatically over the last decade. Because of these improvements, fiber lasers can now effectively compete with conventional lasers over a wide range of output powers and applications. As a pioneer in the development and commercialization of fiber lasers, we have contributed to many advancements in fiber laser technology and products.

Advantages of Fiber Lasers over Traditional Lasers

We believe that fiber lasers provide a combination of benefits that include:

Superior Performance. Fiber lasers provide high beam quality over the entire power range. In most traditional laser solutions, the beam quality is sensitive to output power, while in fiber lasers, the output beam is virtually non-divergent over a wide power range, meaning the beam can be highly focused to achieve high levels of precision, increased power densities and greater distances over which processing can be completed. The superior beam quality and greater intensity of a fiber laser s beam allow tasks to be accomplished rapidly and with lower-power units than comparable traditional lasers.

Lower Total Cost of Ownership. Fiber lasers offer strong value to customers because of their lower total operating costs due to their lower maintenance costs, high reliability and energy efficiency. The initial purchase price for fiber lasers is generally below that of YAG lasers and comparable to that of CO_2 lasers. Fiber lasers convert electrical energy to optical energy 2 to 3 times more efficiently than diode-pumped YAG lasers, 3 times more efficiently than CO_2 lasers and 15 to 30 times more efficiently than lamp-pumped YAG lasers. Because fiber lasers are much more energy-efficient and place lower levels of thermal stress on their internal components, they have substantially lower cooling requirements compared to conventional lasers and lower or no maintenance costs. For example, single-emitter diodes used in fiber lasers have estimated lives of over 200,000 hours. In contrast, diode bars used in YAG lasers are typically replaced every 10,000 to 20,000 hours and lamps are typically replaced every 1,000 hours, involving substantial costs and lost production time. CO_2 lasers also utilize components that require frequent replacement, such as resonator mirrors, fluids and filters.

Ease of Use. Many features of fiber lasers make them easy to operate, maintain and integrate into laser-based systems, providing a turnkey solution. Unlike traditional solutions that require frequent adjustments, fiber lasers have a monolithic solid-state design that does not require fine mechanical alignment or adjustment of mirrors or other components. An additional benefit is that fiber lasers deliver their energy through an integrated flexible optical fiber that can be up to 100 meters long.

Compact Size and Portability. Fiber lasers are typically smaller and lighter in weight than traditional lasers, saving valuable floor space. While conventional lasers are delicate due to the precise alignment of mirrors, fiber lasers are more durable and able to perform in variable working environments. These qualities permit fiber laser systems to be transported easily. The portability and versatility of fiber lasers also allow them to be used in new laser applications, such as nuclear facility pipe welding and welding on ships.

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Choice of Wavelengths and Precise Control of Beam. The design of fiber lasers generally provides a broad range of wavelength choices, allowing users to select the precise wavelength that best matches their application and materials. Conventional lasers generally have limited wavelength options. In addition, the greater stability of the output and improved control of output beam parameters in fiber lasers, such as beam shape, allow users to more effectively use lasers in their applications.

Fiber amplifiers are similar in design to fiber lasers, use many of the same components, such as semiconductor diodes and specialty optical fibers, and provide many of the same advantages in the applications that require amplification.

Adoption of Fiber Lasers and Amplifiers

As the performance, output power and cost-effectiveness of fiber lasers have improved, their acceptance in both new and existing applications has increased. Fiber lasers have gained market share by replacing traditional lasers (CO_2 and YAG) in existing laser applications and enabling new applications by addressing customer needs that are not met by traditional lasers and non-laser processes. We believe proliferation of fiber lasers will be based on the displacement of traditional lasers in existing applications and the enabling of new applications. This should drive growth that is significantly higher than the growth rate of the overall laser market. Strategies Unlimited estimates the total available market for fiber lasers to be growing at approximately 9% annually from $1.8 billion in 2005 to $2.8 billion by 2010. The penetration of fiber lasers is estimated to grow from 7% to 24% of the total available market for fiber lasers during that time period. As a result, the fiber laser market is expected to grow at a compound annual growth rate of approximately 39% annually.

The major markets served by fiber lasers and fiber amplifiers are described below.

Materials Processing. This segment represents the largest market opportunity for fiber lasers with a total addressable market of approximately $1.3 billion in 2005. Strategies Unlimited estimates that this segment of the market is expected to grow to $1.9 billion by 2010, representing a compound annual growth rate of approximately 10%. The materials processing segment includes various applications such as marking, engraving, printing, other low-power materials processing and high-power materials processing. Prior to 2004, fiber lasers had initial success in low-power and mid-power applications, which require relatively few diode laser pumps, such as marking, engraving, printing, fine cutting, microwelding, texturing and soldering. High-power lasers use hundreds or more diodes, which represent their primary cost component. When we began internally producing pump diodes in 2004, we were able to reduce significantly the cost of this component. This reduction enabled us to penetrate high-power laser applications, such as cutting and welding for automotive manufacturing, because high-power lasers contain a larger number of diodes.

Communications. Fiber amplifiers boost light signals in optical fiber networks and are an essential building block in optical networks. Fiber amplifiers are used predominantly in next-generation communications networks that are being deployed by telephone service providers and cable companies. These next-generation networks are configured for triple-play services that transmit voice, video and data traffic over the same network. The fiber amplifier market was estimated to be $412 million in 2005 and is expected to grow to $540 million in 2009, representing a compound annual growth rate of 7%, according to a report by Frost & Sullivan, an independent industry research firm. As data volume transmitted over networks increases and broadband networks are deployed, fiber amplifiers can help network operators lower capital investment and operating costs by sending signals down longer spans of optical fiber or sending greater data volumes without the need for additional in-line amplification.

Medical. The addressable medical market is the second largest market for fiber lasers and is estimated by Strategies Unlimited to grow from approximately $316 million in 2005 to approximately $565 million by 2010, representing a compound annual growth rate of approximately 12%. This market is in its early stages of development for fiber lasers and we believe that there are significant opportunities for fiber lasers to displace conventional lasers in these applications. Current fiber laser applications within this

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market include aesthetic applications such as skin resurfacing and rejuvenation, and other soft tissue applications such as urology, surgery and dentistry.

Advanced Applications. Fiber lasers and amplifiers are also used in other diverse end markets such as test and measurement, instrumentation, sensing, pollution measurement, government and scientific research and development. These markets are expected by Strategies Unlimited to grow from $233 million in 2005 to approximately $336 million by 2010, representing a compound annual growth rate of approximately 8%.

Our Competitive Strengths

We believe that our competitive strengths position us well to take advantage of the opportunities to displace traditional laser technologies and enable new laser applications. Our key strengths and competitive advantages include the following:

Differentiated Proprietary Technology Platform. At the core of our products is our proprietary pumping technology platform that allows our products to have higher output powers and superior beam quality than are achievable through traditional techniques. Our technology platform is modular, scalable, robust and electrically efficient. It allows us to combine a greater number of diodes, specialty optical fibers and optoelectronic components in parallel into a single beam using our advanced proprietary components and state-of-the-art combining techniques. Another key element of our technology is our ability to side-pump our specialty optical fibers through the cladding with our high-brightness single-emitter multi-mode diodes. In addition, we have developed a wide range of advanced proprietary optical components that contribute to the superior performance and reliability of our products.

Leading Market Position. As a pioneer and technology leader in fiber lasers and amplifiers, we have built leading positions in our various end markets with a large and diverse customer base. Based on our leadership position, we are driving the proliferation of fiber lasers in existing and new applications. As a result, we have established a well-respected and widely recognized brand. We believe that we are the leading provider of low and mid-power fiber lasers and amplifiers, and we believe that we introduced and were the first to commercialize high-power fiber lasers and are the only significant supplier of high-power fiber lasers. For example, we believe that we are the sole supplier of industrial-grade fiber lasers at power levels of 200 watts and above.

Breadth and Depth of Expertise. Since the founding of our company in 1990, our core business has been developing, designing, manufacturing and marketing advanced fiber lasers and amplifiers. We have extensive know-how in materials sciences, which enables us to make our specialty optical fibers, semiconductor diodes and other critical components. We also have expertise in optical, electrical, mechanical and semiconductor engineering which we use to develop and manufacture our products. Our staff includes over 55 scientists that have Ph.D. degrees in physics or engineering. Our expertise allows us to develop the many different types of specialty components used in our finished products expeditiously and to rapidly incorporate them into new products.

Vertically Integrated Development and Manufacturing. We believe that we are the only fiber laser manufacturer that is vertically integrated. We develop and manufacture all of our key specialty components, such as semiconductor diodes, active fibers, passive fibers and specialty optical components. Our proprietary components, which we do not resell, are capable of handling the stress of the high optical powers from our products and we believe they exceed the performance of commercially available components. We own our foundry for high-volume manufacturing of semiconductor diodes, which we process, package and rigorously test in-house. In addition, we make our own specialty optical preforms, draw our own specialty optical fibers from the optical preforms, and make a variety of advanced optical components in addition to assembling and testing our finished products. We believe that our vertical integration enhances our ability to meet customer requirements, accelerate development, manage costs and improve component yields, while maintaining high performance and quality standards.

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Diverse Customer Base, End Markets and Applications. Our diverse customer base, end markets and applications provide us with many growth opportunities. We have shipped more than 21,000 units and, in 2005, we shipped to more than 300 customers worldwide. Our products are used in a variety of applications and end markets worldwide. Our principal end markets and representative applications within those markets include:

We believe that the diversity of our customers, end markets and applications and the flexible architecture of our products, which share many of the same components, help mitigate the impact of fluctuations in demand from any particular customer or industry on our business.

Broad Product Portfolio and Ability to Meet Customer Requirements. We offer a broad range of standard and custom fiber lasers and amplifiers that operate between 1 and 2 microns. Our product portfolio currently includes numerous products ranging in power from one watt to 50 kilowatts. As a result of our modular, scalable technology platform, we are able to easily customize and upgrade our products to meet customer requirements. We often supply custom fiber devices by developing specialized versions of our standard products and, in other cases, by developing new products to meet the specific requirements of our customers. We offer our products in a wide variety of packaging formats for a broad range of

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applications. Our vertically integrated manufacturing and broad technology expertise enable us to rapidly design, prototype and commence high-volume production of our products, allowing our customers to meet their time-to-market requirements.

Our Strategy

We intend to maintain and extend our leadership position by pursuing the following key elements of our strategy:

Leverage Our Technology to Gain Market Share. As the benefits of fiber lasers and amplifiers become more widely recognized, we plan to leverage our brand and position as the leader in developing and commercializing fiber lasers and amplifiers to increase our market share in the broader market. We believe that our fiber lasers will continue to displace traditional lasers in many existing applications due to their superior performance and value. For example, our lasers are displacing traditional lasers in numerous low and mid-power materials processing applications, such as marking, engraving and printing, and our high-power lasers more recently have been penetrating automotive applications that use conventional lasers, such as welding and cutting of parts.

Target New Applications for Lasers. We intend to continue to enable and penetrate additional applications where lasers have not traditionally been used. We believe that fiber laser technology can overcome many of the limitations that have slowed the adoption of traditional lasers. We intend to target applications where higher power, portability, efficiency, size and flexible fiber cable delivery can lead customers to adopt fiber lasers instead of non-laser solutions. New and potential applications include annealing in nuclear reactors, remote welding in the auto industry, on-site welding and cutting of plate steel and aluminum for ships, rail cars, pipelines and fuel storage tanks, portable cladding systems for aircraft turbines and portable paint stripping for ships and aircraft.

Expand Our Product Portfolio. We plan to continue to invest in research and development to add additional wavelengths, power levels and other parameters while also improving beam quality. We intend to use our core technologies to develop new products and complementary products and systems that incorporate fiber lasers and amplifiers to expand our product portfolio.

Optimize Our Manufacturing Capabilities. We plan to seek further increases in the automation of our component manufacturing processes and device assembly to improve component yields and increase the power outputs and capacities of the various components that we make. These initiatives, in addition to maintaining efficient labor costs, are intended to improve margins. We intend to leverage our technology and operations expertise to manufacture additional components in order to reduce costs, ensure component quality and ensure supply.

Expand Global Reach to Attract Customers Worldwide. In 2005, more than 60% of our sales came from international customers. We intend to capitalize on and grow our global customer base by opening new application development centers as well as sales and service offices in Asia, Europe and the United States.

Products

We design and manufacture a broad range of high-performance optical fiber-based lasers and amplifiers. We also make direct diode laser systems and communications systems that utilize our optical fiber-based products. Many of our products are designed to be used as general purpose energy or light sources, making them useful in diverse applications and markets.

Our products are based on a common proprietary technology platform using many of the same core components, such as semiconductor diodes, specialty fibers, beam combiners, isolators, polarizers, splitters and modulators, which we configure to our customers specifications. Our engineers and scientists work closely with OEMs and end users to develop and customize our products for their needs. Because of our flexible and modular product architecture, we offer products in different configurations according to the desired application, including modules, rack-mounted units and tabletop units.

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Lasers

Our laser products include low (1 to 99 watts), medium (100 to 999 watts) and high (1,000 watts and above) output power lasers from 1 to 2 microns in wavelength. These lasers may be either continuous wave or may be modulated at different rates. We offer several different types of lasers, which are defined by the type of gain medium they use. These are ytterbium, erbium, thulium and raman. We also sell fiber coupled direct diode laser systems that use semiconductor diodes rather than optical fibers as their gain medium. In addition, we offer high energy pulsed lasers, multi-wavelength lasers, tunable lasers, single-polarization and single-frequency lasers, as well as other versions of our products.

We believe that we produce the highest power solid-state lasers in the industry. Our ytterbium fiber lasers are capable of reaching power levels over 50,000 watts. We also make single-mode output ytterbium fiber lasers with powers of up to 2,000 watts and single-mode output erbium and thulium fiber lasers with powers of up to 200 watts. Our compact, durable design and integrated fiber optic beam delivery allows us to offer versatile laser energy sources and simple laser integration for complex production processes, without compromising quality, speed or power.

Amplifiers

Our amplifier products range from milliwatts to up to 500 watts of output power from 1 to 2 microns in wavelength. We offer erbium-doped fiber amplifiers, commonly called EDFAs, raman amplifiers and integrated communications systems that incorporate our amplifiers. These products are predominantly deployed in broadband networks and dense wavelength division multiplexing, or DWDM, networks. We also offer ytterbium and thulium specialty fiber amplifiers and broadband light sources that are used in advanced applications. In addition, we sell single-frequency, linearly polarized and polarization-maintaining versions of our amplifier products. As with our fiber lasers, our fiber amplifiers offer some of the highest output power levels and highest number of optical outputs. We believe our line of fiber amplifiers offers the best commercially available output power and performance.

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The following summarizes some of our product offerings by product family, primary markets and representative applications for each product family:

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Materials Processing

The most significant materials processing applications for fiber lasers are marking, printing, welding and cutting. Other applications include micromachining, surface treatment, drilling, soldering, annealing, rapid prototyping and laser-assisted machining.

Marking, Engraving and Printing Applications. With the increasing need for source traceability, component identification and product tracking as a means of reducing product liability and preventing falsification, as well as the demand for modern robotic production systems, industrial manufacturers are increasingly demanding marking systems capable of applying serialized alphanumeric, graphic or bar code identifications directly onto their manufactured components. Laser engraving is similar to marking but forms deeper grooves in the material. In contrast to conventional acid etching and ink-based technologies, lasers can mark a wide variety of metal and non-metal materials, such as ceramic, glass and plastic surfaces, at high speeds and without contact by changing the surface structure of the material or by engraving. Laser marking systems can be easily integrated into a customer s production process and do not subject the item being marked to mechanical stress.

In the semiconductor industry, lasers are typically used to mark wafers and integrated circuits. In the electronics industry, lasers are typically used to mark electrical components such as contactors and relays, printed circuit boards and keyboards. With the increase in marking speed in the past few years, the cost of laser marking has decreased, improving the price and performance characteristics of this technology. The high beam quality, flexible fiber delivery and competitive price of fiber lasers have accelerated the adoption of fiber lasers in this low-power application.

Historically, the printing industry has depended upon silver-halide films and chemicals to engrave printing plates. This chemical engraving process requires several time-consuming steps. In recent years, we have worked closely with OEMs in the printing industry to employ fiber lasers for alternative computer-to-plate, or CTP, processes. As a result, our ytterbium fiber lasers are now widely used for CTP printing, an environmentally friendly process that saves production time by writing directly to plates and greatly reduces chemical waste.

Welding Applications. Laser welding offers several important advantages over conventional welding technology as it is non-contact, easy to automate, provides high process speed and results in narrow-seamed, high quality welds that generally require little or no post-processing machining. Parts can be accurately machined before welding because laser welding does not overly heat or otherwise damage or distort the material being processed. The high beam quality of our fiber lasers coupled with high CW power offers deep penetration welding as well as shallow conduction mode welding. High modulation frequencies offer very high throughput in pulsed applications. Also, fiber lasers can be focused to a small spot with extremely long focal lengths, enabling remote welding on the fly, a flexible method of three-dimensional welding in which the laser beam is positioned by a robot-guided scanner. Such remote welding stations equipped with fiber lasers are used for welding door panels and the multiple welding of spot and lap welds over the entire auto body frame. Typically, mid to high-power ytterbium fiber lasers are used in welding applications.

Cutting Applications. Laser-based cutting technology has several advantages compared to alternative technologies. Laser cutting is fast, flexible, highly precise and can be used to cut complex contours on flat, tubular or three-dimensional materials. The laser source can be easily programmed to process many different kinds of materials such as steel, aluminum, brass, copper, glass, ceramic and plastic at various thicknesses. Laser cutting technology is a non-contact process that is easy to integrate into an automated production line and is not subject to wear of the cutting medium. We sell low, mid and high-power ytterbium fiber lasers for laser cutting. The operating wavelength, multi-kilowatt power, high beam quality, wide operating power range, power stability and small spot size are some of the qualities offered by fiber lasers for most cutting applications.

Emerging Technologies and Applications. Robotic production methods are increasing in use, driven by their lower production costs, flexibility and consistency. Fiber lasers complement the capabilities

of robots with their flexible fiber delivery, high-power beam and low beam divergence. We expect that fiber lasers increasingly will be integrated with robotic systems in applications such as tailored blanks. Another potential application of fiber lasers is in cutting new lightweight and high-strength metal alloys used in automobile manufacturing, which requires the high output power densities that fiber lasers provide.

Communications

We design and manufacture a full range of fiber amplifiers and raman pump lasers with varying output power and wavelengths that enhance data transmission in broadband access and DWDM optical networks.

Broadband Access. The delivery to subscribers of television programming and Internet-based information and communication services is converging, driven by advances in IP technology and by changes in the regulatory and competitive environment. Fiber optic lines offer connection speeds of up to 50 megabits per second, or 50 times faster than digital subscriber lines (DSL) or cable links. We offer a series of specialty multi-port EDFAs and cable TV nodes and transmitters that support different types of passive optical network architectures, enabling high speed data, voice, video on demand and high definition TV. We provide an EDFA that supports up to 32 ports, which allows service providers to support a high number of customers in a small space, reducing overall power consumption and network cost. End users for our products include communications network operators for video wavelength division multiplexing overlay, as well as cable and multiple service operators for video signal and hybrid fiber coaxial cable.

DWDM. DWDM is a technology that expands the capacity of optical networks allowing service providers to extend the life of existing fiber networks and reduce operating and capital costs by maximizing bandwidth capacity. We provide a broad range of high-power products for DWDM applications including EDFAs and raman lasers. We provide a DWDM transport system that offers service providers and private network operators a simple, flexible, optical layer solution optimized for up to eight channels.

Medical

We sell our commercial fiber and diode lasers to OEMs that incorporate our products into their medical laser systems. Continuous wave and pulsed lasers from 1 to 150 watts and diode laser systems can be used in medical and biomedical applications. Aesthetic applications addressed by lasers include skin rejuvenation, skin resurfacing and stretch mark removal. Purchasers use our diode lasers in urological applications and dental procedures. Fiber lasers have the ability to fine-tune optical penetration depth and absorption characteristics and can be used for ear, nose and throat, urology, gynecology and other surgical procedures.

Advanced Applications

Our fiber lasers and amplifiers are utilized by commercial firms and by academic and government institutions worldwide for manufacturing of commercial systems and for research in advanced technologies and products. These markets may use specialty products developed by us or commercial versions of our products.

Obstacle Warning. Our products are used aboard aircraft for obstacle warning and 3-dimensional mapping of earth surfaces.

Special Projects. Due to the high power, compactness, performance, portability, ruggedness and electrical efficiency of our fiber lasers and amplifiers, we sell our commercial products for government research and projects. These include materials testing, ordnance destruction, coherent beam combining, advanced communications and research.

Research and Development. Our products are used in a variety of applications for research and development by scientists and industrial researchers. In addition, our lasers and amplifiers are used to design, test and characterize components and systems in a variety of markets and applications.

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Optical Pumping and Harmonic Generation. Several types of our lasers are used to optically pump other solid-state lasers and for harmonic generation and parametric converters to support research in sensing, medical and other scientific research in the infrared and visible wavelength domains. Our lasers are used as a power source for these other lasers.

Optical Communication. We provide high-power EDFAs and ytterbium fiber amplifiers for deployment in both point-to-point and point-to-multipoint free space optical networks. These networks permit communications between two or more points on land or in the sky without the use of fiber optic lines or radio or microwaves.

Remote Sensing. Our products are used in light detection and ranging, also called LIDAR, a laser technique for remote sensing. Optical fiber can be used as a sensor for measuring changes in temperature, pressure and gas concentration in oil wells, atmospheric and pollution measurements and seismic exploration.

Technology

Our products are based on our proprietary technology platform that we have developed and refined since our formation. The following technologies are key elements in our products.

Specialty Optical Fibers

We have extensive expertise in the disciplines and techniques that form the basis for the multi-clad active and passive optical fibers used in our products. Active optical fibers form the laser cavity or gain medium in which lasing or amplification of light occurs in our products. Passive optical fibers deliver the optical energy created in our products. Our active fibers consist of an inner core that is infused with the appropriate rare earth ion, such as ytterbium, erbium or thulium, and outer cores of un-doped glass having different indices of refraction. We believe that our large portfolio of specialty active and passive optical fibers has a number of advantages as compared to commercially available optical fibers. These include higher concentrations of rare earth ions, fibers that will not degrade at the high power levels over the useful life of the product, high lasing efficiency, ability to withstand high optical energies and temperatures and scalable side-pumping capability. Our ability to quickly optimize our proprietary active and passive optical fibers allow us to provide a variety of innovative fiber devices in customizable configurations.

Semiconductor Diode Laser Processing and Packaging Technologies

Another key element of our technology platform is that we use multiple multi-mode, or broad area, single-emitter diodes rather than diode bars or stacks as a pump source. We believe that multi-mode single-emitter diodes are the most efficient and reliable pumping source presently available, surpassing diode bars and stacks in efficiency, brightness and reliability. Single-emitter diodes have substantially reduced cooling requirements and have estimated lifetimes of more than 200,000 hours at high operating currents, compared to typical lifetimes of 10,000 to 20,000 hours for diode bars.

We developed advanced molecular beam epitaxy techniques to grow alumina indium gallium arsenide wafers for our diodes. This method yields high-quality optoelectronic material for low-defect density and high uniformity of optoelectronic parameters. In addition, we have developed numerous proprietary wafer processes and testing and qualification procedures in order to create a high energy output in a reliable and high-power diode. We package our diodes in hermetically sealed pump modules in which the diodes are combined with an optical fiber output. Characteristics such as the ability of the package to dissipate heat produced by the diode and withstand vibration, shock, high temperature, humidity and other environmental conditions are critical to the reliability and efficiency of the products.

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Specialty Components and Combining Techniques

We have developed a wide range of advanced optical components that are capable of handling high optical power levels and contribute to the superior performance, efficiency, reliability and uniqueness of our products. In addition to fibers and diodes, our optical component portfolio includes fiber gratings, isolators and combiners. We also developed special methods and expertise in splicing fibers together with low optical energy loss and on-line loss testing. We believe that our internal development and manufacturing of key components allows us to lower our manufacturing costs and improve product performance.

Side Pumping of Fibers and Fiber Block Technologies

Our technology platform allows us to efficiently combine a greater number of multi-mode single-emitter semiconductor diodes with our active optical fibers that are used in all of our products. A key element of this technology is that we pump our fiber lasers through the cladding surrounding the active core. We splice our specialty active optical fibers with other optical components and package them in a sealed box, which we call a fiber block. The fiber blocks are compact and eliminate the risk of contamination or misalignment due to mechanical vibrations and shocks as well as temperature or humidity variations. Our design is scalable and modular, permitting us to make products with high output power by coupling a large number of diodes with fiber blocks, which can be combined in parallel and serially.

High-Stress Testing

We employ high-stress techniques in testing components and final products that help increase reliability and accelerate product development. For example, we test all of our diodes with high current and temperatures to accelerate aging. We also have built a large database of diode test results that allows us to predict the estimated lifetime of our diodes. This testing allows us to eliminate defective diodes prior to further assembly and thus increase reliability.

Customers

We sell our products globally to OEMs, system integrators and end users in a wide range of diverse markets who have the in-house engineering capability to integrate our products into their own systems. In 2005, we shipped products to over 300 customers worldwide. Our end markets include materials processing (comprised of general manufacturing, automotive, aerospace, heavy industry, semiconductor, electronics and consumer products customers), communications (comprised of system integrators, utilities and municipalities), medical (medical laser systems manufacturers) and advanced applications (comprised of commercial companies, universities, research entities and government entities). We believe that our customer and end market diversification minimizes dependence on any single industry or group of customers.

Our 15 largest customers for the year ended December 31, 2005 were:

BAE Systems	The Gillette Company	Reliant Technologies Inc.
Daihen Corporation	Harmonic Inc.	Sahajanand Laser Technology
EO TECHNICS	HM Laser Machinery Co., Ltd.	SUNX Limited
Esko-Graphics	Mitsubishi Heavy Industries, Ltd.	Telesis Technologies
German Institute for Materials Processing	Nippon Steel Corporation	TEM Incorporated

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The following table shows the allocation of our net sales among our principal markets:

	Year Ended December 31,						Six Months Ended June 30, 2006	
	2003		2004		2005			
							(unaudited)	
Materials Processing	$ 23,685	70.2%	$ 41,990	69.2%	$ 60,399	62.7%	$ 47,168	72.6%
Communications	$ 5,250	15.6%	$ 9,697	16.0%	$ 15,751	16.3%	$ 8,281	12.8%
Medical	$ 181	0.5%	$ 1,544	2.5%	$ 7,422	7.7%	$ 4,949	7.6%
Advanced Applications	$ 4,624	13.7%	$ 7,476	12.3%	$ 12,813	13.3%	$ 4,529	7.0%
Total	$ 33,740	100.0%	$ 60,707	100.0%	$ 96,385	100.0%	$ 64,927	100.0%

SUNX Limited, a provider of laser marking systems, accounted for 17%, 20%, 13% and 11% of our net sales for the years ended December 31, 2003, 2004, and 2005, and the six months ended June 30, 2006, respectively.

Our net sales (in thousands) were derived from customers in the following geographic regions:

	Year Ended December 31,						Six Months Ended June 30, 2006	
	2003		2004		2005			
							(unaudited)	
North and South America	$ 10,365	30.7%	$ 20,911	34.4%	$ 38,512	40.0%	$ 23,044	35.5%
Europe	$ 12,963	38.4%	$ 19,339	31.9%	$ 23,882	24.8%	$ 18,585	28.6%
Asia and Australia	$ 10,412	30.9%	$ 20,232	33.3%	$ 33,569	34.8%	$ 23,298	35.9%
Rest of World	$	0.0%	$ 225	0.4%	$ 422	0.4%	$	0.0%
Total	$ 33,740	100.0%	$ 60,707	100.0%	$ 96,385	100.0%	$ 64,927	100.0%

Sales, Marketing and Support

We market our products internationally primarily through our direct sales force and also through agreements with independent sales representatives and distributors. We have sales offices in the United States, Germany, Russia, Italy, Japan, Korea, India and the United Kingdom. Our independent sales representatives and distributors are located in the United States, Japan, China, Brazil and other parts of the world. Only one of these arrangements is on an exclusive basis. Foreign sales to customers are generally priced in local currencies and are therefore subject to currency exchange fluctuations.

We maintain a customer support and field service staff in our major markets within the United States, Europe, Russia, Japan and Korea. We work closely with customers, customer groups and independent representatives to service equipment, train customers to use our products and explore additional applications for our technologies. We typically repair products at our facilities or at customer sites. We plan to expand our support and field service, particularly in locations where customer concentration or volume requires local service capabilities.

We typically provide one to three-year parts and service warranties on our lasers and amplifiers. Most of our sales offices provide support to customers in their respective geographic areas. Warranty reserves have generally been sufficient to cover product warranty repair and replacement costs.

Manufacturing

Vertical integration is one of our core business strategies through which we control our proprietary processes and technologies as well as the supply of key components and assemblies. We believe that our vertically integrated business model gives us the following advantages:

maintaining a technological lead over competitors;

reducing component and final product costs as volumes increase;

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ensuring access to critical components, enabling us to better meet customer demands;

controlling performance, quality and consistency; and

enabling rapid development and deployment of new products and technologies.

Our vertically integrated manufacturing operations include optical preform making, specialty fiber drawing, semiconductor wafer growth, diode processing and packaging, specialty optical component manufacturing, fiber block and fiber module assembly for different power units, software and electronics development, final assembly, as well as testing, tool manufacturing and automated production systems. We are currently adding additional production capabilities, including building redundant diode and optical fiber manufacturing in separate facilities, in order to increase our capacity as well as reduce the risks associated with our production process.

We operate our own semiconductor foundry for the production of the multi-mode single-emitter diodes. Diodes are the pumps that are used as the light source in each device we make. We also process, package and extensively test all of our diodes. As pump diodes represent a significant component cost of the final laser or amplifier, we have chosen to develop internal manufacturing capabilities for diodes. As a result of our high volume production levels of pump diodes, proprietary processes and use of limited chip designs, we have been able to increase yields, lower component costs and assure high quality. We also design, manufacture and optimize many of our own test instruments, diode test racks, robotic and automated assembly tools and machines.

We developed these proprietary components, manufacturing tools, equipment and techniques over many years in an effort to address the major issues that had been inhibiting the development of fiber laser technology and to provide products that differentiate us from our competitors. We believe that the proprietary components, manufacturing tools, equipment, techniques and software utilized in all of our product lines provide extensive barriers to potential competitors. Generally, we do not sell our proprietary components to third parties. Using our technology platform, we configure standard products based upon each customer s specifications. Through our vertically integrated manufacturing operations, we can develop, test and produce new products and configurations with higher performance and reliability and in less time than it would take by working with external vendors. We have developed proprietary testing methodologies that allow us to develop higher power components and products in short periods of time, enable us to introduce products to the market more quickly, capitalize on new opportunities and provide superior service to our customers.

Our in-house manufacturing includes only those operations and components that are critical to the protection of our intellectual property, reducing our costs or to the achievement of performance and quality standards. We purchase from vendors common as well as specialized mechanical, electrical and optical parts and raw materials, such as printed circuit boards, wafer substrates and various optical components.

Research and Development

We have extensive research and development experience in laser materials, fiber and optoelectronic components. We have assembled a team of scientists and engineers with specialized experience and extensive knowledge in fiber lasers and amplifiers, critical components, testing and manufacturing process design. Our research and development team includes over 55 scientists who hold Ph.D. degrees and over 30 additional scientists and engineers.

We focus our research and development efforts on designing and introducing new and improved standard and customized products and the mass production of components that go into our products. In addition to our cladding-pumped specialty fiber platform, we have core competencies in high-power multi-mode semiconductor laser diodes, diode packaging, specialty active and passive optical fibers, high-performance optical components, fiber gain blocks and fiber modules, as well as splicing and combining techniques and high-stress test methods. Our research and development efforts are aided by our vertical integration and our proprietary high-stress testing techniques that result in accelerated development cycles. The strategy of developing our proprietary components has allowed us to leverage our optical experience

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and large volume requirements to lower the cost of our products. We concentrate our research and development efforts on advancements in performance as well as capacity to hold and produce higher optical power levels.

Our research and development efforts are also directed at expanding our product line by increasing power levels, improving beam quality and electrical efficiency, decreasing size and lowering the cost per watt. Our team of experienced scientists and engineers work closely with many of our customers to develop and introduce custom products that address specific applications and performance requirements.

We incurred research and development costs of approximately $5.8 million in 2005, $4.8 million in 2004 and $10.1 million in 2003. The decrease from 2003 to 2004 was primarily due to the commencement of commercial production of our diodes early in 2004. Costs related to the diode production were recorded as research and development costs in 2003 and transferred to cost of sales in 2004. We plan to continue our commitment to research and development and to introduce new products, systems and complementary products that would allow us to maintain our competitive position. See Management s Discussion and Analysis of Financial Condition of Results of Operations.

Intellectual Property

We seek to protect our proprietary technology primarily through U.S. and foreign laws affording protection for trade secrets, and to seek U.S. and foreign patent, copyright and trademark protection of our products and processes where appropriate. We rely primarily on trade secrets, technical know-how and other unpatented proprietary information relating to our product development and manufacturing activities. We seek to protect our trade secrets and proprietary information, in part, by requiring our employees to enter into agreements providing for the maintenance of confidentiality and the assignment to us of rights to inventions that they make while we employ them. We also enter into non-disclosure agreements with our consultants and suppliers to protect confidential information delivered to them. We believe that our vertical integration, including our long experience in making a wide range of specialty and high-power capacity components, as well as our technology platform make it difficult for others to reverse engineer our products. Intellectual property rights, including those that we own and those of others, involve significant risks. See Risk Factors Risks Related to Our Business Our Inability to Protect Our Intellectual Property and Proprietary Technologies Could Result in the Unauthorized Use of Our Technologies by Third Parties, Hurt Our Competitive Position and Adversely Affect Our Operating Results.

Competition

Our markets are competitive and characterized by rapidly changing technology. We believe that the primary competitive factors in our markets are:

- product performance and reliability;
- quality and service support;
- price and value to the customer;
- ability to manufacture and deliver products on a timely basis;
- ability to achieve qualification for and integration into OEM systems;
- ability to meet customer specifications; and
- ability to respond quickly to market demand and technological developments.

We believe we compete favorably on the basis of these criteria. In the materials processing market, the competition is fragmented and includes a large number of competitors. We compete with makers of high-power conventional CO_2 and solid-state lasers, including Lasag Ltd., Rofin-Sinar Technologies, Inc., and Trumpf Inc., and makers of mid and low-power conventional CO_2 and solid-state lasers such as Coherent, Inc., GSI Group Inc., Newport Corporation and Rofin-Sinar Technologies, Inc. We also compete with fiber laser makers including Keopsys

SA, Mitsubishi Cable Industries, Ltd.,

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Miyachi Unitek Corporation, MPB Communications Inc. and SPI Lasers plc for low and mid-power lasers. We compete in the materials processing, medical and advanced applications markets with end users who produce their own solid-state and gas lasers. We also compete with manufacturers of non-laser methods and tools in these markets, such as resistance welding in the materials processing market and scalpels in the medical market.

In the communications market, our principal competitors are manufacturers of high-power fiber amplifiers and DWDM systems, such as Avanex Corporation, Bookham Inc., the Scientific-Atlanta division of Cisco Systems, Inc. (Scientific-Atlanta), Emcore Corporation, JDS Uniphase Corporation and MPB Communications Inc.

Employees

As of June 30, 2006, we had approximately 900 full-time employees, including approximately 80 in research and development, 710 in manufacturing operations, 40 in sales and marketing, and 70 in general and administrative functions. Of our total full-time employees at our principal facilities, approximately 265 were in the United States, 320 were in Germany, 265 were in Russia and 12 were in Italy. We have never experienced a work stoppage and none of our employees is subject to a collective bargaining agreement. We believe that our current relations with our employees are good.

Facilities

Our main facilities include the following:

Location	Owned or Leased	Lease Expiration	Approximate Size (sq. ft.)	Primary Activity
Oxford, Massachusetts	Owned		123,000	Diodes, components, complete device manufacturing, administration
Burbach, Germany	Owned		137,000	Optical fiber, components, final assembly, complete device manufacturing, administration
Fryazino, Russia	Leased	April 2007	55,000	Components, complete device manufacturing, administration
Legnano, Italy	Leased	March 2012	12,000	Complete device manufacturing, administration

We are expanding our facilities in Massachusetts and Germany by adding approximately 82,000 square feet of property that we own. These additional facilities will be used primarily for manufacturing and we plan to finance this expansion using a portion of the proceeds of this offering.

We maintain our corporate headquarters in Oxford, Massachusetts, and conduct research and development in Oxford, Massachusetts, Burbach, Germany and Fryazino, Russia. We operate four manufacturing facilities for lasers, amplifiers and components in the United States, Germany, Russia and Italy. We also manufacture certain optical components in India. We are committed to meeting internationally recognized manufacturing standards. Our facilities in the United States and Germany are ISO 9001 certified and we have ISO certification in Russia for specific products. We have sales personnel at each of our manufacturing facilities and at leased offices in Wixom, Michigan; London, England; Tokyo, Japan; Daejeon, South Korea; and Bangalore, India.

We believe that our existing facilities are adequate to meet our current needs and that we will be able to obtain additional commercial space as needed.

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Legal Proceedings

From time to time, we are party to various legal proceedings incidental to our business, including those described below.

We are a defendant in an action by Scientific-Atlanta filed in April 2005 in the United States District Court for the District of Massachusetts. The plaintiff alleges that certain of our optical fiber amplifier products infringe one U.S. patent allegedly owned by it and seeks damages in an unspecified amount, treble damages and injunctive relief. Simultaneous with filing the complaint, Scientific-Atlanta requested that the U.S. Patent and Trademark Office reexamine its patent to consider certain prior art. Scientific-Atlanta also presented narrowing amendments to many of the issued patent claims and added several new claims. The Patent Office granted Scientific-Atlanta s request to reexamine the patent, finding that the new prior art raised a substantial new question of patentability. The District Court stayed the litigation until the conclusion of the Patent Office reexamination and we are awaiting the outcome of the reexamination. The patent claims in the issued patent relate generally to silicic optical fiber containing certain concentrations of erbium and ytterbium together with phosphate. The patent expires in January 2011. While we believe we have meritorious defenses and intend to vigorously contest the claims against us, we cannot predict the outcome of either the Patent Office reexamination or the litigation proceeding.

We are a defendant in an action by the Spectra-Physics division of Newport Corporation filed in June 2006 in the United States District Court for the Northern District of California. The plaintiff alleges that certain of our optical fiber laser and amplifier products infringe one U.S. patent allegedly owned by it and seeks damages of over $20.0 million, treble damages and injunctive relief. The patent claims relate generally to laser diode pumping of a single mode fiber core of laser material through the use of a surrounding multi-mode pump cavity. The patent expires in June 2007. While we believe we have meritorious defenses and intend to vigorously contest the claims against us, we cannot predict the outcome of the proceeding.

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MANAGEMENT

Executive Officers and Directors

The following table sets forth information with respect to our executive officers and members of our board of directors as of June 30, 2006:

Name	Age	Position(s)
Valentin P. Gapontsev, Ph.D.	67	Chief Executive Officer and Chairman of the Board
Eugene Shcherbakov, Ph.D.	59	Managing Director of IPG Laser and Director
Timothy P.V. Mammen	36	Chief Financial Officer and Vice President
Angelo P. Lopresti	42	General Counsel, Secretary and Vice President
Denis Gapontsev, Ph.D.	34	Vice President-Research & Development
George BuAbbud, Ph.D.	51	Vice President-Telecommunications Products
Alex Ovtchinnikov, Ph.D.	43	Vice President-Components
Igor Samartsev	43	Acting General Manager of NTO IRE-Polus and Director
Robert A. Blair(1)(2)	60	Director
Michael C. Child(1)(3)	51	Director
John H. Dalton	64	Director
Henry E. Gauthier(1)(3)	65	Director
William S. Hurley(2)(3)	62	Director
William F. Krupke, Ph.D.(2)	69	Director

(1) Member of the compensation committee.

(2) Member of the nominating and corporate governance committee.

(3) Member of the audit committee.

Valentin P. Gapontsev, Ph.D., founded IPG in 1990 and has been our Chief Executive Officer and Chairman of our Board of Directors since our inception. Prior to that time, he served as senior scientist in laser material physics and head of the laboratory at the Soviet Academy of Science s Institute of Radio Engineering and Electronics in Moscow. He has over thirty years of academic research experience in the fields of solid state laser materials, laser spectroscopy and non-radiative energy transfer between rare earth ions and is the author of many scientific publications and several international patents. Dr. Gapontsev holds a Ph.D. in Physics from the Moscow Institute of Physics and Technology. In 2006, he was awarded the Ernst & Young® Entrepreneur of the Year Award for Industrial Products and Services in New England. He is the father of Denis Gapontsev.

Eugene Shcherbakov, Ph.D., has served as the Managing Director of IPG Laser, our German subsidiary, since August 2000 and has been a member of our Board of Directors since September 2000. Dr. Shcherbakov served as the Technical Director of IPG Laser from 1995 to August 2000. From 1983 to 1995, Dr. Shcherbakov was a senior scientist in fiber optics and head of the optical communications laboratory at the General Physics Institute, Russian Academy of Science in Moscow. Dr. Shcherbakov graduated from the Moscow Physics and Technology Institute with an M.S. in Physics. In addition, Dr. Shcherbakov attended the Russian Academy of Science in Moscow, where he received a Ph.D. in Quantum Electronics from its Lebedev Physics Institute and a Dr.Sci. degree in Laser Physics from its General Physics Institute.

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Timothy P.V. Mammen has served as our Chief Financial Officer since July 2000 and a Vice President since November 2000. Between May 1999 and July 2000, Mr. Mammen served as the Group Finance Director and General Manager of the United Kingdom operations for IPFD. Mr. Mammen was Finance Director and General Manager of United Partners Plc, a commodities trading firm, from 1995 to 1999 and prior to that he worked in the finance department of E.I. du Pont de Nemours and Company. Mr. Mammen holds an Upper Second B.Sc. Honours degree in International Trade and Development from the London School of Economics and Political Science and is a Chartered Accountant and a member of the Institute of Chartered Accountants of Scotland.

Angelo P. Lopresti has served as our General Counsel and Secretary and one of our Vice Presidents since February 2001. Prior to joining us, Mr. Lopresti was a partner at the law firm of Winston & Strawn from 1999 to 2001. Prior to that, he was a partner at the law firm of Hertzog, Calamari & Gleason from 1998 to 1999 and an associate there from 1991 to 1998. Mr. Lopresti holds a B.A. in Economics from Trinity College and a J.D. from the New York University School of Law.

Denis Gapontsev, Ph.D., has served as our Vice President of Research and Development since August 2000. From 2000 until 2005, he was also a member of our Board of Directors. From 1994 to 1996, Dr. Gapontsev worked as a scientist at NTO IRE-Polus. He worked at IPFD from 1996 to 1998 and at IPG Laser from 1999 to 2000, where he researched fiber lasers and raman fiber lasers. Dr. Gapontsev holds a B.S. and an M.S. in Physics from the Moscow Physics and Technology Institute and a Ph.D. from the University of London. He is the son of Dr. Valentin P. Gapontsev.

George H. BuAbbud, Ph.D., has served as our Vice President, Telecommunications Products, since July 2002. Prior to joining us, Dr. BuAbbud was Vice President and Chief Technical Officer for the Access Network Systems division of Marconi Communications, Inc., a maker of broadband access communications systems, from 1999 to 2002. He holds a B.E. in Electrical Engineering from the American University of Beirut and an M.S. and a Ph.D. in Electrical Engineering from the University of Nebraska.

Alexander Ovtchinnikov, Ph.D., has served as our Vice President, Components, since September 2005 and as Director of Material Sciences from October 2001 to September 2005. Prior to joining us, Dr. Ovtchinnikov was Material Science Manager of Lasertel, Inc., a maker of high-power semiconductor lasers, from 1999 to 2001. For 15 years prior to joining Lasertel, Inc., he worked on the development and commercialization of high power diode pump technology at the Ioffe Institute, Tampere University of Technology, Coherent, Inc. and Spectra-Physics Corporation. He holds an M.S. in Electrical Engineering from the Electrotechnical University of St. Petersburg, Russia, and a Ph.D. from Ioffe Institute of the Russian Academy of Sciences.

Igor Samartsev has been the acting General Manager of NTO IRE-Polus since 2005. He served as the Technical Director of NTO IRE-Polus from 2000 to April 2005 and, from 1993 to 2001, he was the Deputy Director of NTO IRE-Polus. Mr. Samartsev holds an M.S. in Physics from the Moscow Institute of Physics and Technology.

Robert A. Blair has served as a member of our Board of Directors since September 2000. Since January 1999, Mr. Blair has been the President of the Blair Law Firm P.C. Mr. Blair was a senior partner at the law firm of Manatt, Phelps & Phillips from 1995 to 1999. He was the managing partner of the law firm of Anderson, Hibey, Nauheim & Blair from 1981 to 1995. He is a trustee under Winkler Trusts, previously the primary sources of equity for, and owners of, real estate ventures developed by The Mark Winkler Company. Mr. Blair is managing partner of several real estate partnerships, has been a manager/principal in cellular telephone ventures and assisted in the launch of a VoIP business. Mr. Blair holds a B.A. in Mathematics from the College of William & Mary, where he serves on its governing Board of Visitors, and a J.D. from the University of Virginia School of Law.

Michael C. Child has served as a member of our Board of Directors since September 2000. Since July 1982, Mr. Child has been employed by TA Associates, Inc., a private equity investment firm, where he currently serves as a Managing Director. Mr. Child holds a B.S. in Electrical Engineering from the

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University of California at Davis and an M.B.A. from the Stanford University Graduate School of Business. He is on the Board of Directors of Eagle Test Systems, Inc.

John H. Dalton has served as a member of our Board of Directors since September 2000. Since 2005, he has been President of the Housing Policy Council of The Financial Services Roundtable. From September 2000 to December 2004, Mr. Dalton served as our President. He was appointed Secretary of the Navy by President Clinton in 1993 and served in that capacity until 1998. Mr. Dalton was nominated by President Carter to be President of the Government National Mortgage Association and to the Federal Home Loan Bank Board, where he served as Chairman. He serves as Chairman of the board of directors of Breeze-Eastern Corp. and he is a member of the boards of directors of Fresh Del Monte Produce Inc. and eSpeed Inc. Mr. Dalton graduated with distinction from the United States Naval Academy and holds an M.B.A. from the Wharton School of Finance and Commerce of the University of Pennsylvania.

Henry E. Gauthier has served as a member of our Board of Directors since April 2006. Mr. Gauthier was President of Reliant Technologies, Inc., a manufacturer of medical laser systems, from February to May 2005 and has served as Chairman of the board of directors of Reliant Technologies since May 2005. Reliant Technologies is one of our customers. He also serves as a consultant to Reliant Technologies. See Certain Relationships and Related Party Transactions. He served as Vice Chairman of the board of directors of Coherent, Inc., a manufacturer of photonic products, from October 2002 to March 2005. He served as Chairman of the board of directors of Coherent, Inc. from February 1997 to October 2002 and was its President from 1983 to 1996. Since July 1996, Mr. Gauthier has served as a principal at Gauthier Consulting. He has been a member of the board of directors of Alara, Inc. since 1997. Mr. Gauthier attended the United States Coast Guard Academy, San Jose State University, and the Executive Institute of the Stanford University Graduate Business School.

William S. Hurley has served as a member of our Board of Directors since April 2006. Since April 2006, he has been principal of W.S. Hurley Financial Consulting LLC, which provides supplemental chief financial officer services. From 2002 to April 2006, he was a partner with Tatum LLC, a nationwide executive services and consulting firm. He was Senior Vice President and Chief Financial Officer at Applied Science & Technology, a developer, manufacturer and supporter of semiconductor capital equipment, from 1999 until 2001. He served as Vice President and Chief Financial Officer at Cybex International, Inc., a designer, manufacturer and distributor of fitness equipment, from 1996 to 1999. From 1992 to 1995, he was Vice President-Controller and Chief Accounting Officer at BBN Corporation, formerly known as Bolt, Beranek & Newman, Inc., a high technology company. Mr. Hurley holds a B.S. in Accounting from Boston College and an M.B.A. in Finance from Columbia University Graduate School of Business. Mr. Hurley is a certified public accountant.

William F. Krupke, Ph.D., has served as a member of our Board of Directors since February 2001. Since 1999, Dr. Krupke has been President of a laser technology and applications consulting firm (now WFK Lasers, LLC). From 1972 to 1999, Dr. Krupke worked at the Lawrence Livermore National Laboratory, which provides research and development services to various U.S. government departments, serving for the last twenty of such years as Deputy Associate Director of the Laser Programs Directorate. He has over forty years of experience in the fields of solid-state lasers and innovative laser materials. Dr. Krupke holds a B.S. degree in Physics from Rensselaer Polytechnic Institute and M.A. and Ph.D. degrees in Physics from the University of California at Los Angeles.

Board of Directors

Our certificate of incorporation that will be in effect upon completion of this offering authorizes a board of directors consisting of at least one, but no more than eleven, members. We currently have nine directors. One of our directors, Mr. Child, was nominated and elected as a director pursuant to certain board composition provisions contained in a stockholders agreement that we entered into with the holders of our series B preferred stock and certain of our other stockholders and pursuant to board composition provisions of our current certificate of incorporation. The board composition provisions of the stockholders agreement and our certificate of incorporation will be terminated upon the closing of this offering. This

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stockholders agreement is described below under Certain Relationships and Related Party Transactions Series B Preferred Stockholders. Following the completion of this offering, there will be no further contractual obligations with respect to the election of our directors. Our directors hold office until their successors have been elected and qualified or until their earlier resignation or removal.

The members of our board of directors are elected annually at our annual meeting of stockholders. At the first annual meeting following the date that any stockholder that beneficially owned 25% or more of the total voting power of our company on the effective date of our certificate of incorporation that will be in effect upon completion of this offering ceases to own at least 25% of the total voting power, our board of directors will be divided into three classes with members of each class serving staggered three-year terms. The creation of a classified board could have the effect of making it more difficult for a third party to acquire control of us.

A majority of our directors are independent within the meaning of the applicable rules of the Nasdaq Global Market. Our board of directors has determined that each of Messrs. Blair, Child, Gauthier, Hurley and Krupke is an independent director.

Committees of the Board of Directors

Our board of directors has established an audit committee, a compensation committee and a nominating and corporate governance committee. The composition and functioning of all of our committees complies with the rules of the SEC and the Nasdaq Global Market that are currently applicable to us, and we intend to comply with additional requirements to the extent they become applicable to us.

Audit Committee. The current members of our audit committee are Mr. Hurley, who serves as Chairman, Mr. Child and Mr. Gauthier, each of whom is independent for audit committee purposes under the applicable rules of the Nasdaq Global Market and the SEC. The board of directors has determined that Mr. Hurley qualifies as an audit committee financial expert, as defined under the Securities Exchange Act of 1934 and the applicable rules of the Nasdaq Global Market. The audit committee, among other things:

- appoints, approves the compensation of, and assesses the independence of our independent registered public accounting firm;
- reviews the audit committee charter periodically and recommends any necessary amendments to such charter to our board of directors;
- oversees the work of our independent auditor, which includes the receipt and consideration of certain reports from the independent registered public accounting firm;
- resolves disagreements between management and our independent registered public accounting firm;
- pre-approves auditing and permissible non-audit services, and the terms of such services, to be provided by our independent registered public accounting firm;
- reviews and discusses with management and the independent registered public accounting firm our annual and quarterly financial statements and related disclosures;
- coordinates the oversight of our internal and external controls over financial reporting, disclosure controls and procedures and code of business conduct and ethics;
- establishes, reviews and updates our code of business conduct and ethics;
- reviews and approves all related-party transactions;
- establishes procedures for the receipt of accounting-related complaints and concerns;

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meets independently with our independent registered public accounting firm and management; and

will prepare the audit committee report required by SEC rules to be included in our proxy statements.

Compensation Committee. The current members of our compensation committee are Mr. Blair, who serves as Chairman, Mr. Child and Mr. Gauthier, each of whom is an independent director. The compensation committee, among other things:

annually reviews base salary and incentive compensation for our chief executive officer and other executive officers;

approves corporate goals and objectives relevant to compensation of our chief executive officer and other executive officers;

evaluates the performance of our chief executive officer in light of our corporate goals and objectives and determines the compensation of our chief executive officer;

reviews and makes recommendations to the board of directors with respect to the compensation of our other executive officers; and

periodically reviews our incentive-based compensation plans and stock-based plans and makes recommendations to the board of directors with respect to such plans.

Nominating and Corporate Governance Committee. The current members of our nominating and corporate governance committee are Dr. Krupke, who serves as Chairman, Mr. Blair and Mr. Hurley, each of whom is an independent director. The nominating and corporate governance committee, among other things:

develops and recommends to the board of directors criteria for board membership;

recommends to the board of directors changes that the committee believes to be desirable with regard to the appropriate size, functions and needs of the board of directors;

identifies and evaluates director candidates, including nominees recommended by our stockholders;

identifies individuals qualified to fill vacancies on any committee of the board of directors;

reviews procedures for stockholders to submit recommendations for director candidates;

recommends to the board of directors the persons to be nominated for election as directors and to each of the board s committees;

reviews the performance of the committee and evaluates its charter periodically; and

develops and recommends to the board of directors a set of corporate governance guidelines.

Director Compensation

Directors who are also our employees receive no additional compensation for their service as directors. Our non-employee directors receive an annual retainer from us of $30,000 and do not receive separate fees for attending meetings of the board of directors, committees or stockholders. The chairman of our audit committee receives an additional annual retainer of $20,000 and the other members of the audit committee each receive an additional annual retainer of $10,000. The chairman of our compensation committee receives an additional annual retainer of $15,000 and the other members of the compensation committee each receive an additional annual retainer of $7,500. The chairman of our nominating and corporate governance committee receives an additional annual retainer of $10,000 and all other members of the nominating and corporate governance committee each receive an additional annual

retainer of $5,000. The chairman of any other committee will receive an additional annual retainer of $5,000 and all

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other members of such committees each will receive an additional annual retainer of $2,500. In addition, commencing in 2007, the non-employee directors continuing in office after the date of our annual meeting of stockholders will receive immediately following that date, a grant of stock options to purchase 10,000 shares of our common stock vesting in four equal annual installments. Upon initial election to the board of directors, new non-employee directors will receive a grant of stock options to purchase 30,000 shares of our common stock vesting in four equal annual installments. The exercise price of these stock options will not be less than the fair market value of our common stock on the date of grant. Non-employee directors also are reimbursed for reasonable expenses incurred in connection with attending board and committee meetings.

Since January 1, 2005, we have granted the following options to purchase common stock to our non-employee directors for their service on the board of directors:

- We granted options to purchase 30,000 shares of common stock to each of Messrs. Blair, Child and Dalton and Dr. Krupke on June 12, 2005, at an exercise price of $1.00 per share;

- We granted options to purchase 30,000 shares of common stock to each of Messrs. Gauthier and Hurley on April 18, 2006, at an exercise price of $3.58 per share; and

- We granted options to purchase 10,000 shares of common stock to each of Messrs. Blair, Child and Dalton and Dr. Krupke on June 21, 2006, at an exercise price of $4.30 per share.

Each of the stock options vests in four equal annual installments.

Compensation Committee Interlocks and Insider Participation

None of our executive officers serves as a member of the board of directors or compensation committee, or other committee serving an equivalent function, of any other entity that has one or more of its executive officers serving as a member of our board of directors or compensation committee.

Executive Compensation

The following table sets forth the compensation of our chief executive officer and each of our other most highly compensated executive officers during the year ended December 31, 2005. We refer to these officers as the named executive officers.

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Summary Compensation Table

Name and Principal Position	Annual Compensation			Long-Term Compensation Awards	All Other Compensation ($)(3)
	Salary($)	Bonus ($)(1)	Other Annual Compensation ($)(2)	Securities Underlying Options(#)	
Valentin P. Gapontsev Chief Executive Officer and Chairman of the Board(4)(5)	$ 383,284	$ 604,243			$ 2,945
Eugene Shcherbakov Managing Director and Director(4)(5)	256,515	138,935			
Angelo P. Lopresti Vice President, General Counsel and Secretary	254,248	147,567		20,000	8,913(6)
Timothy P.V. Mammen Vice President and Chief Financial Officer	200,000	142,500		20,000	8,550(7)
Denis Gapontsev Vice President, Research and Development(5)	227,479	94,250			470

(1) The bonuses paid in 2005 include an annual performance bonus for the achievement of certain performance objectives which were met during 2005. Bonuses paid in 2005 also include a one-time, non-recurring loyalty bonus intended to reward officers for their long-term contributions to us in the following amounts: Dr. V. Gapontsev, $368,823; Dr. Shcherbakov, $72,236; Mr. Lopresti, $68,750; Mr. Mammen, $82,500; and Dr. D. Gapontsev, $29,750.

(2) We have concluded that the aggregate amount of perquisites and other personal benefits paid to each of the named executive officers for fiscal year 2005 did not exceed the lesser of 10% of such named executive officer s total annual salary and bonus for 2005 or $50,000; such amounts are not included in the table.

(3) All Other Compensation consists of our matching contributions to retirement accounts under our 401(k) plan and our payment of premiums on group term life insurance on behalf of our employees. The group term life insurance does not have a cash surrender value and premiums paid are not refunded upon termination.

(4) A portion of the amounts paid to Dr. Shcherbakov and Dr. V. Gapontsev were denominated in Euros. These amounts are translated into U.S. dollars at the exchange rate as of December 30, 2005.

(5) A portion of the amounts paid to Dr. Shcherbakov, Dr. V. Gapontsev and Dr. D. Gapontsev were denominated in Rubles. These amounts are translated into U.S. dollars at the exchange rate as of December 30, 2005.

(6) Reflects our contribution of $8,430 to Mr. Lopresti s retirement account under our 401(k) plan and payment of $483 of premiums on Mr. Lopresti s group term life insurance.

(7) Reflects our contribution of $8,294 to Mr. Mammen s retirement account under our 401(k) plan and payment of $256 of premiums on Mr. Mammen s group term life insurance.

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Stock Option Grants in the Last Fiscal Year

The following table sets forth certain information concerning grants of stock options to purchase shares of our common stock to each of our named executive officers during the fiscal year ended December 31, 2005. The percentage of total options set forth below is based on an aggregate of 1,252,000 shares of our common stock underlying options granted to employees and directors during the fiscal year ended December 31, 2005. All options were granted under our 2000 Incentive Compensation Plan and have an exercise price equal to the fair market value of our common stock on the date of grant as determined by our board of directors. These options will vest over four years in four equal installments from the date of grant.

Name	Securities Underlying Options Granted (#)	% of Total Options Granted to Employees in Fiscal Year	Exercise Price Per Share	Expiration Date	Value at Assumed Annual Rates of Stock Price Appreciation for Option Term (1) 5%	10%
Valentin P. Gapontsev						
Eugene Shcherbakov						
Angelo P. Lopresti	20,000	1.60	$ 1.25	September 22, 2015		
Timothy P.V. Mammen	20,000	1.60	$ 1.25	September 22, 2015		
Denis Gapontsev						

(1) Potential realizable values are net of exercise price, but before any taxes associated with exercise. The assumed rates of stock price appreciation are provided in accordance with SEC rules based upon an assumed initial public offering price of $ per share, and do not represent our estimate of our future stock price.

Aggregated Stock Option Exercises in Last Fiscal Year and Fiscal Year-End Option Values

The following table provides information regarding exercisable and unexercisable options held on December 31, 2005 by each of the named executive officers.

Name	Shares Acquired on Exercise (#)	Value Realized ($)	Number of Securities Underlying Unexercised Options at Fiscal Year-End (#) Exercisable	Unexercisable	Value at Assumed Annual Rates of Stock Price Appreciation for Option Term (1) Exercisable	Unexercisable

Valentin P. Gapontsev		355,876	
Eugene Shcherbakov	55,215	34,776	
Angelo P. Lopresti	75,000	283,708	36,666
Timothy P.V. Mammen	50,000	271,259	36,666
Denis Gapontsev		70,019	16,666

(1) There was no public trading market for our common stock as of December 31, 2005. Accordingly, the value of unexercised in-the-money options is based on an assumed initial public offering price of $ per share, minus the per share exercise price, multiplied by the number of shares underlying the option.

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Benefit Plans

2000 Incentive Compensation Plan, 2006 Incentive Compensation Plan and Non-Employee Directors Stock Plan

In April 2000, our board of directors adopted our 2000 Incentive Compensation Plan, or 2000 plan, and in February 2006, our board of directors adopted our 2006 Incentive Compensation Plan, or 2006 plan. The 2000 plan was approved by our stockholders and we plan to seek stockholder approval of the 2006 plan before the completion of this offering. We reserved 8,750,000 shares under the 2000 plan and 6,000,000 shares under the 2006 plan for the issuance of awards under the plans. Other than the number of shares reserved, the plans are substantially identical. Each plan will terminate ten years after its adoption, unless terminated earlier by our board of directors.

The 2000 plan and the 2006 plan are administered by the compensation committee of our board of directors. The committee approves awards under the plans, including the exercise price and other terms of each award, subject to the provisions of the plans and has general authority to administer the plan, including to accelerate the vesting of awards and grant awards in replacement of previously granted awards.

Each plan authorizes the grant of options to purchase common stock intended to qualify as incentive stock options, as defined in Section 422 of the Internal Revenue Code, and nonstatutory stock options. The plans also provide for awards of restricted stock, stock units, performance shares, performance units, stock appreciation rights and cash awards. The 2000 plan also provides for awards of unrestricted stock.

Our officers, directors, employees, consultants and advisors are eligible to receive awards under the plans. No participant may receive awards for over 2,000,000 shares of common stock in any calendar year under the 2000 plan, or over 2,500,000 shares of common stock in any calendar year under the 2006 plan.

Incentive stock options may be granted under each plan to our employees and employees of our affiliates as described in Treasury Regulation Section 1.421(h), including our officers, as well as officers and directors of our affiliates who are also employees. The exercise price of incentive stock options granted under each plan must be at least equal to the fair market value of our common stock on the date of grant. The exercise price of incentive stock options granted to an optionee who owns stock possessing more than 10% of the voting power of our outstanding capital stock must be at least equal to 110% of the fair market value of the common stock on the date of grant. This type of optionee must exercise his or her incentive stock option within five years from the date of grant.

Under the terms of the 2000 plan and the 2006 plan, we may grant nonstatutory stock options to our officers and other employees, our directors and other individuals providing services to us at an exercise price at least equal to the fair market value of our common stock on the date of grant, unless the compensation committee in its sole discretion and due to special circumstances determines otherwise on the date of grant.

In June 2006, our board of directors adopted our Non-Employee Directors Stock Plan (the non-employee director plan). We plan to seek stockholder approval of this plan before the completion of this offering. Only our non-employee directors are eligible to receive awards under the plan. We reserved 250,000 shares for issuance under the non-employee director plan. The maximum number of shares that may be issued or transferred under the plan equals 0.75% of the number of shares of our company outstanding (on a fully diluted basis) at the end of the plan year preceding the then-current plan year, or on January 1, 2006, whichever is greater, up to a maximum of 250,000 shares. The plan will terminate ten years after its adoption, unless terminated earlier by our board of directors.

The non-employee director plan is administered by our compensation committee. The committee approves awards under the plan, including the exercise price and other terms of each award, subject to the provisions of the plan and has general authority to administer the plan, including to grant awards in

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replacement of other awards. The exercise price must be at least equal to the fair market value of our common stock on the date of grant.

The non-employee director plan authorizes the grant of options to purchase common stock that are not intended to qualify as incentive stock options, as defined in Section 422 of the Internal Revenue Code. The plan also provides for awards of stock appreciation rights, stock units, stock awards and cash awards.

Each of the 2000 plan and the 2006 plan provides that, upon a change of control of our company, the compensation committee may, in its sole discretion:

- accelerate the time for exercise or payout of all outstanding awards;
- cancel the award after notice to the holder of an outstanding award as long as the holder receives a payment equal to the difference between the fair market value of the award on the date of the change of control and the exercise price per share, if any, of such award; or
- provide that all outstanding awards will be assumed by the entity that acquires control or substituted for similar awards by such entity.

In addition, in the event that the 2000 plan or 2006 plan is terminated due to a merger or acquisition of our company, the compensation committee has the right, but not the obligation, to direct the repurchase of outstanding stock options at a price equal to the fair market value of the shares subject to the repurchased options less the exercise price per share.

The non-employee director plan provides that awards accelerate upon a change in control.

For these purposes, a change of control means the occurrence of any of the following:

- any person becomes a beneficial owner of our securities representing at least 50% of the combined voting power of our then-outstanding securities;
- persons who, at the beginning of any period of two consecutive years, were members of the board of directors cease to constitute a majority of the board of directors unless the election or nomination for election by the stockholders of each new director during that two-year period is approved by at least two-thirds of the incumbent directors then still in office;
- the occurrence of a merger, sale of all or substantially all of our assets, cash tender or exchange offer, contested election or other business combination under circumstances in which our stockholders immediately prior to such merger or other such transaction do not, after such transaction, own shares representing at least a majority of our voting power or the surviving or resulting corporation, as the case may be; or
- our stockholders approve a complete liquidation.

401(k) Plan

We adopted an employee savings and retirement plan qualified under Section 401 of the Internal Revenue Code and covering all of our employees in the United States. Employees may elect to reduce their current compensation by up to 15% of their eligible compensation per payroll period, but not in excess of the statutorily prescribed annual limit and have the amount of the reduction contributed to the 401(k) plan. We currently make matching contributions equal to 50% of each employee s contribution to the 401(k) plan, subject to a maximum contribution of 6% of such employee s annual compensation.

Senior Executive Short-Term Incentive Plan

Employees who are at the level of vice president or employee-director or at a more senior level are eligible to receive awards under our Senior Executive Short-Term Incentive Plan (short-term plan). The short-term plan is administered by a committee appointed by our board of directors. No later than ninety days after the start of each fiscal year, the committee must determine who is eligible to receive

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awards under the short-term plan, establish performance goals and objectives for those eligible employees, establish target awards for each participant of up to 200% of the participant s aggregated base salary and deferred compensation for the relevant performance period, and determine what percentage of the target award should be allocated to the achievement of each of the chosen performance targets.

As soon as practicable after the end of the relevant performance period, the committee must certify the amount of the award for each participant, after the committee has determined the performance results for each performance goal and objective and the amount to which each participant is entitled based on his or her percentage allocation. The committee has the discretion to reduce the amount of any award to reflect its assessment of an individual s performance during the relevant performance period or for other reasons. Awards are paid to participants as soon as practicable after the awards are determined, but in no event later than two and a half months after the end of the relevant performance period. A participant must be employed at the end of the relevant performance period in order to receive an award subject to certain specified exceptions.

In the event that any recapitalization, reorganization, merger, acquisition, divestiture, consolidation, spin-off, combination, liquidation, dissolution, sale of assets or other similar corporate transaction or any other extraordinary item or event not foreseen at the time of the grant of the award or other event that distorts the applicable performance goals and objectives, the committee is required to adjust the chosen performance targets to the extent necessary to prevent reduction or enlargement of participants awards under the short-term plan.

In the event of a change of control, we are required to pay each eligible employee a fraction of either the amount of the award granted to such employee in the prior performance period or the amount of such employee s current target award. This payment does not discharge the obligation to make a final payment under the short-term plan, but the payment will be offset against any later award required under the short-term plan for the calendar year in which the change of control occurs. For purposes of the short-term plan, a change of control means the occurrence of any of the following:

- any person becomes a beneficial owner of our securities representing at least 50% of the combined voting power of our then-outstanding securities; or

- our stockholders approve a reorganization, merger or consolidation, or a sale or other disposition of all or substantially all of the assets of our company.

Agreements with Executive Officers

Employment Agreements

On March 1, 2006, we entered into employment agreements with Dr. Valentin Gapontsev, Dr. Shcherbakov, Messrs. Mammen and Lopresti, and Dr. Denis Gapontsev. These agreements are for a two-year term of employment, except that the term of Dr. Valentin Gapontsev s agreement is three years. All of these agreements are automatically renewed upon the completion of their initial terms for successive one-year periods until either we or the executive officer gives 180 days prior written notice of their intent not to extend the agreement. The annual base salaries for these officers are as follows: Dr. Valentin Gapontsev, $360,000; Dr. Shcherbakov, $280,000; Mr. Mammen, $270,000; Mr. Lopresti, $270,000; and Dr. Denis Gapontsev, $240,000. The agreements entitle these executive officers to participate in any bonus plans, standard insurance plans, such as life, accidental death and dismemberment, short-term disability and long-term disability insurance, and retirement benefits, such as the 401(k) plan and stock option plans described earlier, on similar terms and on a similar basis as such benefits are available to executives at similar levels within the organization. The agreements for Dr. Valentin Gapontsev, Dr. Eugene Shcherbakov and Dr. Denis Gapontsev require each of them to refrain from competing with us for a period of one year following the termination of their employment with us for any reason, and from hiring our employees or soliciting our customers for a period ending on the later of March 1, 2008 or eighteen months following the termination of their employment with us for any reason. These employment agreements also provide for payment of any unpaid bonus award to the respective executive officer in the

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event his employment with us is terminated as a result of his disability or to his estate if his employment is terminated as a result of his death. In addition, each of these agreements, other than the agreement with Dr. Valentin Gapontsev, provide that in the case of termination by an officer for good reason, or by us without cause, the officer will receive 100% of his salary, for a period of one year from the date of termination. In the event that Dr. Valentin Gapontsev terminates his employment for good reason, he will receive 100% salary continuation for the longer of one year or the remaining term of his agreement, but in no event longer than two years.

Limitation of Liability and Indemnification

Our certificate of incorporation that will be in effect upon completion of this offering limits the personal liability of our directors for breach of fiduciary duty as our director to the maximum extent permitted by the Delaware General Corporation Law. Our certificate of incorporation provides that no director will have personal liability to us or to our stockholders for monetary damages for any such breach of fiduciary duty as a director. However, these provisions do not eliminate or limit the liability of any of our directors or officers for:

- any breach of the director s duty of loyalty to us or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- any unlawful payments related to dividends or unlawful stock repurchases, redemptions or other distributions; or
- any transaction from which the director or officer derived an improper personal benefit.

These limitations of liability do not alter director liability under the federal securities laws and do not affect the availability of equitable remedies such as an injunction or rescission.

Our certificate of incorporation and by-laws that will be in effect upon completion of this offering provide that we will indemnify our directors and officers to the maximum extent permitted by law, and that we will advance expenses, including attorney s fees, to our directors and officers in connection with legal proceedings, subject to very limited exceptions.

In addition to the indemnification provisions of our certificate of incorporation and by-laws, we have entered into indemnification agreements with each of our directors and our executive officers. These agreements provide that we will indemnify each of our directors and executive officers to the fullest extent permitted by law and advance expenses to each indemnitee in connection with any proceeding in which indemnification is available.

We also maintain general liability insurance which covers certain liabilities of our directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers, including liabilities under the Securities Act. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers, or persons controlling us pursuant to the foregoing provisions, we have been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

These provisions may discourage stockholders from bringing a lawsuit against our directors for breach of their fiduciary duty. These provisions may also have the effect of reducing the likelihood of derivative litigation against directors and officers, even though such an action, if successful, might otherwise benefit us and our stockholders. Furthermore, a stockholder s investment may be adversely affected to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions. We believe that these provisions, the indemnification agreements and the insurance are necessary to attract and retain qualified and experienced directors and officers.

At present, there is no pending litigation or proceeding involving any of our directors or officers where indemnification may be required or permitted. We are not aware of any threatened litigation or proceeding that might result in a claim for such indemnification.

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PRINCIPAL AND SELLING STOCKHOLDERS

The following table provides information about the beneficial ownership of our common stock as of June 30, 2006 by:

- each person or group of affiliated persons known by us to own beneficially more than 5% of our common stock;
- each of our named executive officers;
- each of our directors;
- all of our executive officers and directors as a group; and
- each selling stockholder.

In accordance with SEC rules, beneficial ownership includes any shares for which a person or group of affiliated persons has sole or shared voting power or investment power and any shares for which the person or entity has the right to acquire beneficial ownership within 60 days through the exercise of any option or otherwise. Except as noted below, we believe that the persons named in the table have sole voting and investment power with respect to the shares of common stock set forth opposite their names. Except as otherwise indicated, the address of each of the persons in this table is in care of IPG Photonics Corporation, 50 Old Webster Road, Oxford, Massachusetts 01540.

The percentages of beneficial ownership are based on 48,574,763 shares of common stock outstanding as of June 30, 2006, shares of common stock outstanding on a pro forma basis and shares of common stock that will be outstanding after completion of this offering, assuming no exercise of the underwriters overallotment option. The number of shares and percentages of our common stock beneficially owned prior to this offering are calculated assuming that each share of preferred stock converts into common stock at the conversion rates now in effect. The pro forma beneficial ownership prior to the offering gives effect to the conversion of each share of preferred stock into common stock at the adjusted conversion rates for our preferred stock to be in effect at the closing of the offering that will be based upon the public offering price. The series B warrants that are currently outstanding will be repurchased at the closing of this offering and accordingly have been excluded from this table for all purposes. See Certain Relationships and Related Party Transactions.

	Beneficial Ownership Prior to Offering		Pro Forma Beneficial Ownership Prior to Offering			Beneficial Ownership After Offering	
Name of Beneficial Owner	**Number**	**Percentage**	**Number**	**Percentage**	**Shares Being Offered**	**Number**	**Percentage**
Valentin P. Gapontsev(1)	30,398,876	62.6%					
IP Fibre Devices (UK) Ltd.(1)	11,150,000	23.0%			0		
TA Associates Funds(2)	2,352,941	4.8%			0		
JDS Uniphase Corporation(3)	2,684,211	5.5%			0		
Denis Gapontsev(4)	2,578,352	5.3%			0		
Robert A. Blair	547,500	1.1%					
John H. Dalton(5)	496,933	1.0%					
Igor Samartsev(6)	503,445	1.0%			0		
Eugene Shcherbakov(7)	389,991	*			0		
Timothy P.V. Mammen(8)	417,592	*			0		

Angelo P. Lopresti(9)	417,042	*	0
William F. Krupke(10)	157,500	*	0
Michael C. Child(11)	2,460,441	5.1%	0
Henry E. Gauthier	0		0
William S. Hurley	0		0
All executive officers and directors as a group (12 persons)	38,367,672	77.8%	

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* Less than 1.0%.

(1) Includes shares beneficially owned by IPFD, of which Dr. Valentin Gapontsev is the managing director. Dr. Valentin Gapontsev has voting and investment power with respect to the shares held of record by IPFD and is the father of Dr. Denis Gapontsev. Dr. Valentin Gapontsev has a 53% economic interest in IPFD.

(2) Amounts shown reflect the aggregate number of shares of common stock held by TA IX L.P., TA/Atlantic and Pacific IV L.P., TA/Advent VIII L.P., TA Executives Fund LLC, and TA Investors LLC (collectively, the TA Associates Funds), assuming the conversion of 2,000,000 shares of our series B preferred stock. Investment and voting control of the TA Associates Funds is held by TA Associates, Inc. No stockholder, director or officer of TA Associates, Inc. has voting or investment power with respect to our shares of common stock held by the TA Associates Funds. Voting and investment power with respect to such shares is vested in a four-person investment committee consisting of the following employees of TA Associates: Messrs. Michael C. Child, Jonathan M. Goldstein, C. Kevin Landry and Kenneth T. Schiciano. Mr. Child is a Managing Director of TA Associates, Inc., the manager of the general partner of TA IX L.P. and TA/Advent VIII L.P.; the manager of TA Investors LLC and TA Executives Fund LLC; and the general partner of the general partner of TA/Atlantic and Pacific IV L.P. Mr. Child has been a member of our board of directors since November 2000. See note 11 below. The address of TA Associates, Inc. is John Hancock Tower, 56th Floor, 200 Clarendon Street, Boston, Massachusetts 02116.

(3) Amounts shown reflect the aggregate number of shares of common stock held by JDS Uniphase Corporation, assuming the conversion of 2,684,211 shares of our series D preferred stock. Does not include a convertible note that was convertible into an aggregate of 2,684,211 shares of our series D preferred stock at our option, which note was repaid in August 2006. The address of JDS Uniphase is 1768 Automation Parkway, San Jose, California 95131.

(4) Includes 78,352 shares of common stock issuable upon exercise of options. Does not include shares held by IPFD. Dr. Denis Gapontsev has a 15% economic interest in IPFD but does not possess voting or investment power with respect to such interest.

(5) Includes 7,500 shares of common stock issuable upon exercise of options.

(6) Includes 3,445 shares of common stock issuable upon exercise of options. Does not include shares held by IPFD. Mr. Samartsev has an 8% economic interest in IPFD but does not possess voting or investment power with respect to such interest.

(7) Does not include shares held by IPFD. Dr. Shcherbakov has an 8% economic interest in IPFD but does not possess voting or investment power.

(8) Includes 279,592 shares of common stock issuable upon exercise of options.

(9) Includes 267,042 shares of common stock issuable upon exercise of options.

(10) Includes 7,500 shares of common stock issuable upon exercise of options.

(11) Includes 107,500 shares of common stock issuable upon exercise of options. Mr. Child is a managing director of TA Associates, Inc. and may be considered to have beneficial ownership of TA Associates, Inc. s interest in us. Mr. Child disclaims beneficial ownership of all such shares. Mr. Child has been a member of our board of directors since September 2000. See note 2 above.

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CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Transactions with IP Fibre Devices

We currently do not have any loans due to IPFD or due from Dr. Valentin P. Gapontsev, our chief executive officer and chairman of the board.

Dr. Valentin P. Gapontsev, Dr. Denis Gapontsev, our Vice President, Research and Development, Dr. Eugene Shcherbakov, a member of our board of directors and Managing Director of IPG Laser, and Igor Samartsev, a member of our board of directors and Managing Director of NTO IRE-Polus, own 53%, 15%, 8% and 8%, respectively, of IPFD, which owns 11,150,000 shares of our common stock, which will represent % of our outstanding common stock upon completion of this offering. IPFD is a company organized to hold financial and other assets and does not engage in any business that is competitive to ours. Until July 31, 2006, we maintained a revolving credit line with available principal of up to $4.6 million with IPFD. Borrowings under the credit facility bore interest at a rate equal to the three-month LIBOR rate in effect on the date of drawdown plus 2%. The weighted average annual rate was 3.5% at December 31, 2005. Interest under this credit line totaled $106,000, $156,000 and $161,000 for 2003, 2004 and 2005, respectively. The credit facility was secured by certain of our inventory and equipment located in the United States. The credit line was established in August 2002 with an initial borrowing availability of $3.0 million and increased to $4.6 million in April 2003.

On July 31, 2006, IPFD purchased 1,156,005 shares of our common stock from Dr. Valentin P. Gapontsev in exchange for $357,000 in cash and $4.6 million in the form of the assignment of amounts due under our credit line with IPFD. Simultaneously, we exchanged with Dr. Valentin P. Gapontsev the note to us due from him described below with a remaining amount due of $5.0 million for $357,000 in cash and $4.6 million in the form of the assignment of amounts due under our credit line.

NTO IRE-Polus, one of our subsidiaries, borrowed $560,000 from IPFD in January 2002 at an interest rate of 4.5% annually. NTO IRE-Polus paid interest on the loan of $30,000, $20,000 and $25,000 in 2003, 2004 and 2005, respectively. The loan was repaid in full in May 2006.

We sublease office space in London, UK from IPFD and reimburse IPFD for general and administrative expenses. The costs related to the sublease and shared services totaled $115,000, $148,000 and $116,000 in 2003, 2004 and 2005, respectively. During 2004, IPFD sold optical components to us with an aggregate value of $297,000, and in 2003, it sold equipment and optical components to us with an aggregate value of $819,000 and $16,000, respectively.

Transactions with NTO IRE-Polus

We own 51% of NTO IRE-Polus, our Russian subsidiary. Dr. Valentin P. Gapontsev and Igor Samartsev own 26.7% and 4.9%, respectively, of NTO IRE-Polus. The remaining 17.1% of NTO IRE-Polus is owned by certain of NTO IRE-Polus s other current and former employees and unaffiliated third parties. NTO IRE-Polus provides us with research and development and low-cost contract manufacturing capacity, and sells products to customers in Russia and neighboring countries. We acquired our majority ownership interest directly from NTO IRE-Polus in 2001. At such time, we agreed to invest up to $5.0 million in NTO IRE-Polus, of which $2.5 million has been invested. Our investment obligation is subject to and in accordance with the business plan of NTO IRE-Polus, which is subject to our approval. The proceeds of our investment were and are to be used by NTO IRE-Polus solely for equipment purchases and the development of additional manufacturing capacity. There have been no distributions to shareholders of NTO-IRE Polus since we purchased our majority interest. In the ordinary course of business, we sell components to NTO IRE-Polus. NTO IRE-Polus also sells us components, tools and equipment that we use in our production and testing.

In August 2000, we entered into an agreement regarding intellectual property with NTO IRE-Polus. Pursuant to the agreement, NTO IRE-Polus provides us and our subsidiaries, on an exclusive basis, with research and development services relating to fiber amplifiers, fiber lasers and other associated

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products as well as all intellectual property incorporated in or relating to these products. Under this agreement, we are required to pay NTO IRE-Polus s direct and overhead costs, plus a fee of 10% for its research and development services.

Transactions between us and NTO IRE-Polus generated approximately $7.8 million and $5.8 million of revenues for NTO IRE-Polus for the year ended December 31, 2005 and the six months ended June 30, 2006, respectively. Dr. Gapontsev s significant ownership interest in this entity creates the possibility of a conflict of interest since, by having an ownership interest in both our company and NTO IRE-Polus, his economic interests may be affected by transactions between the two entities. To address potential or perceived conflicts of interest, we intend to implement the following procedures:

- we intend to adopt a board policy that the audit committee of our board of directors will review and approve any distributions and dividends to stockholders of NTO IRE-Polus;

- Dr. Valentin P. Gapontsev and Mr. Samartsev intend to grant a proxy to us to vote their shares with respect to NTO IRE-Polus, giving us the ability to vote 82.6% of its total shares and allowing us to have sufficient votes to elect the general manager of NTO IRE-Polus and approve other changes that require the approval of $66^2/3\%$ of NTO IRE-Polus s stockholders; and

- Dr. Valentin P. Gapontsev and Mr. Samartsev intend to grant a right of first refusal to us on any sale of their shares of NTO IRE-Polus to existing stockholders of NTO IRE-Polus at a price equal to the lesser of the per-share fair value or book value of NTO IRE-Polus as of June 30, 2006. The charter documents of NTO IRE-Polus and applicable Russian law also provide that existing stockholders, including us, have a right of first refusal up to their respective pro rata interests with respect to transfers of shares of NTO IRE-Polus to third parties.

Additionally, in accordance with the applicable rules of the Nasdaq Global Market, we will conduct an appropriate review of all related party transactions for potential conflict of interest situations on an ongoing basis and all such transactions will be approved by our audit committee. See Risk Factors Risks Related to This Offering Dr. Valentin P. Gapontsev, Our Chairman, Chief Executive Officer and Principal Stockholder, Owns a Material Portion of One of Our Operating Subsidiaries, Which Creates the Possibility of a Conflict of Interest.

Transactions with Dr. Valentin P. Gapontsev

In March 2001, Dr. Valentin P. Gapontsev, our Chief Executive Officer and Chairman of the Board, borrowed $5.8 million at an annual interest rate of 5.86% from us to pay personal income taxes related to a restructuring of our company in 2000. He pledged 696,000 shares of our common stock owned by him to secure the loan. In April 2003, we amended the note to make it a non-recourse note and lowered the annual interest rate to 1.46%, the applicable Federal rate at that time, in consideration for Dr. Gapontsev (i) causing his affiliate, IPFD, to increase its credit line to our company to $4.6 million from $3.0 million (as described above under Transactions with IP Fibre Devices), (ii) pledging an additional 5,104,000 shares of our common stock and (iii) agreeing to apply any tax refunds that he received relating to our restructuring towards prepayment of the note. In July 2003, Dr. Gapontsev repaid approximately $1.7 million in principal and interest on the loan. In April 2005, we extended the maturity date of the loan from December 31, 2004 to the earlier of December 31, 2006 or one year following our initial public offering. This loan was repaid in July 2006 as described above.

In November 2004, Dr. Valentin P. Gapontsev provided a personal guarantee relating to a bank line of credit for us in the principal amount of up to $3.0 million. In consideration of the personal guarantee, we agreed to pay him a fee equal to the interest on his loan from us (to be adjusted to account for any adverse tax effects) for each quarter that his loan was outstanding. We paid $16,000 and $136,000 in 2004 and 2005, respectively, to Dr. Gapontsev for this guarantee. His loan has been repaid. The credit line guarantee amount has increased to $7.0 million. Dr. Gapontsev has also provided a personal guarantee

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relating to a Euro-denominated note with a principal balance of $2.1 million, as well as partial guarantees with respect to our overdraft facility with available principal of Euro 4.4 million (approximately $5.2 million at December 31, 2005) and our Euro construction loan. We did not compensate Dr. Gapontsev for these guarantees.

Director and Officer Loans

The notes described below from Messrs. Robert A. Blair and John H. Dalton were repaid in full in August 2006.

In 2000, Mr. Blair, one of our directors, borrowed $440,000 from us under two notes to exercise options to purchase shares of our common stock. One of the notes, in the principal amount of $190,000, was non-recourse and was secured by a pledge of 190,000 shares of our common stock and then bore interest at 6.8%. The other note, in the principal amount of $250,000, was recourse and then bore interest at 6.0%. We amended the notes in 2003 to (i) lower the interest rate to 1.68%, the applicable Federal rate at that time, for the $190,000 note and 1.52%, the applicable Federal rate at that time, for the $250,000 note, (ii) extend the maturity dates to March 2005 for the $190,000 note and November 2005 for the $250,000 note, and (iii) convert the $250,000 note to a non-recourse obligation. Mr. Blair also pledged an additional 300,000 shares of our common stock to secure both notes. In April 2005, we extended the maturity dates of the notes to the earlier of December 31, 2006 or one year following our initial public offering.

In April 2001, Mr. Dalton, one of our directors, borrowed $150,000 from us under a note bearing interest at an annual rate of 5.86%. The note was secured by a pledge of 75,000 shares of our common stock. We amended the note in September 2003 to lower the interest rate to 1.52% per year, the applicable Federal rate at that time, and to extend the maturity date to December 31, 2004. In July 2004, we extended the maturity date to the earlier of December 31, 2006 or one year following our initial public offering.

In December 2004, Mr. Dalton exercised non-qualified options to purchase 100,000 shares of our common stock at an exercise price of $1.00 per share for a total purchase price of $100,000. Mr. Dalton paid the exercise price in the form of 10,000 shares of our series A preferred stock that he owned that had an aggregate liquidation preference of $100,000.

In November 2003, we made a loan to Dr. Denis Gapontsev in the amount of $175,000. The loan was secured by real property owned by Dr. Denis Gapontsev. In 2004, he repaid $103,000 of the outstanding principal amount and, in 2005, he repaid the remaining outstanding principal amount of $72,000.

Series B Preferred Stockholders

General. In 2000, we sold 3,800,000 shares of our series B preferred stock and warrants to purchase common stock to a group of investors for a total purchase price of $95.0 million. Of these investors, TA Associates Inc., together with its affiliated entities, purchased an aggregate of 2,000,000 shares of our series B preferred stock and related warrants for a total purchase price of $50.0 million. Michael C. Child, one of our directors, is a managing director of TA Associates. Holders of series B preferred stock are entitled to elect a director to our board of directors and they have the right to require us to redeem their series B preferred stock starting on April 15, 2007. Upon completion of this offering, the series B preferred stock, including the 2,000,000 shares of series B preferred stock held by TA Associates and its affiliates, will convert into shares of our common stock, assuming an offering price of $ per share, and, pursuant to the terms of the series B preferred stock, as amended, we will issue to the holders of the series B preferred stock subordinated notes in the principal amount of $20.0 million, including an aggregate principal amount of $10.5 million of such notes which will be issued to TA Associates and its affiliates. Also, we intend to purchase with a portion of the proceeds of this offering the warrants held by the holders of the series B preferred stock for an aggregate purchase price of

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$22.1 million, including an aggregate of $11.6 million which we will pay for the warrants held by TA Associates and its affiliates.

Series B Preferred Stock. In December 2005, we amended the terms of our series B preferred stock. Pursuant to this amendment, the right of the holders of our series B preferred stock to require us to redeem an aggregate of 33[1]/3% of the originally issued and outstanding series B preferred stock then held by such holders was deferred from August 25, 2006 to April 15, 2007. We also agreed to automatically convert the series B preferred stock into a combination of common stock and subordinated debt upon the occurrence of a qualified public offering at initial offering prices below $25 per share, which was the minimum conversion price of the series B preferred stock at the time of the amendment. Under the terms of the series B preferred stock, a qualified public offering is one: (i) that generates gross proceeds to us of at least $75 million, (ii) that offers the shares of our common stock at or above a price of $3.00 per share, (iii) that is listed for trading on the New York Stock Exchange or quoted on the Nasdaq Global Market, and (iv) in which either we repurchase all of the warrants to purchase our common stock that were granted to the holders of our series B preferred stock or the holders of warrants are permitted to exercise them and sell the common stock acquired upon exercise in the offering. We further amended the terms of the series B preferred stock to provide that in a qualified public offering, the holders of series B preferred stock will receive value equal to the greater of (A) what such holders would have received if we were sold to a third party using the public offering price to compute the total sale price and (B) what such holders would have received if the series B preferred stock were converted upon the public offering at the following per share conversion prices: (x) $10.00, if (as described under Warrants below) the price to the public is equal to or greater than $3.00 and less than $25.00; (y) the price to the public divided by a factor of 2.5, if the offering price per share is equal to or greater than $25.00 and less than $62.50; and (z) $25.00, if the price to the public in the qualified public offering is equal to or greater than $62.50. The value that the holders of series B preferred stock will receive upon a qualified public offering consists of subordinated three-year notes totaling $20.0 million in principal amount and the remainder in the form of our common stock. The subordinated notes will bear interest at the greater of the short-term applicable Federal rate or 4% in the first year, 7% in the second year and 10% in the third year.

Warrants. There are warrants outstanding entitling the holders to purchase shares of our common stock. We granted the warrants in 2000 to a group of private investors in connection with the sale of our series B preferred stock. The warrants entitle the holders to acquire shares of our common stock valued at $47.5 million, or shares, assuming an offering price of $, at an exercise price equal to 50% of the public offering price. The warrants are exercisable only upon the merger or liquidation of our company, the sale of all of our assets or stock or an underwritten initial public offering of our common stock. In December 2005, we extended the expiration date of all of the warrants from August 30, 2007 to April 15, 2008. We also obtained the option to purchase the warrants for an aggregate price of $22.1 million at the conclusion of our initial public offering. We intend to purchase all of the warrants upon the completion of this offering using a portion of the proceeds from the sale of our common stock.

Series D Preferred Stockholder

In August 2003, we settled a contract dispute and related litigation with JDS Uniphase Corporation (JDSU), one of our component suppliers. Under the terms of the settlement: (i) we issued a three-year secured promissory note in the principal amount of $6.4 million payable to JDSU, bearing interest at a rate of 4% per year, in payment for previously shipped product; (ii) we entered into two new supply agreements to sell specified laser products to JDSU at discounted amounts and to purchase from JDSU certain percentages of our external requirements, if any, for specified components; (iii) we issued to JDSU (A) 2,684,211 shares of our series D preferred stock having a liquidation preference of $5.1 million and (B) a $5.1 million non-interest bearing three-year note, convertible into an additional 2,684,211 shares of our series D preferred stock at a conversion price of $1.90 per share; and (iv) we terminated an earlier purchase agreement with JDSU. The interest we paid to JDSU under the interest-bearing note totaled $91,000, $187,000 and $45,000 in 2003, 2004 and 2005, respectively. We repaid all amounts under the interest-bearing note in May 2005 and we repaid all amounts under the convertible note in August 2006.

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We sold products to JDSU for an aggregate sale price of $38,000, $189,000 and $119,000 in 2003, 2004 and 2005, respectively.

Holders of our series D preferred stock have a number of rights superior to those of our common stock and series A preferred stock relating to liquidation and sale preference, voting rights, redemption rights and required approvals of certain transactions. Upon completion of this offering, 2,684,211 shares of series D preferred stock held by JDSU will automatically convert into shares of our common stock.

Stockholders Agreement

In connection with the investment in us by the holders of our series B preferred stock, including TA Associates, we entered into a stockholders agreement, dated as of August 30, 2000, with the holders of the series B preferred stock, IPFD, Drs. Valentin P. Gapontsev, Denis Gapontsev and Eugene Shcherbakov, Igor Samartsev and our other founders. The stockholders agreement contains rights of last refusal and co-sale, preemptive rights and voting rights. JDSU obtained pre-emptive and co-sale rights under a stockholders agreement, dated as of August 13, 2003, in connection with the issuance of our series D preferred stock. These provisions, as well as most other provisions, of the stockholders agreements, will terminate upon the closing of this offering. One of the surviving provisions is our covenant to indemnify the holders of our series B preferred stock, subject to exceptions, for damages, expenses or losses arising out of, based upon or by reason of any third-party or governmental claims relating to their status as a security holder, creditor, director, agent, representative or controlling person of us, or otherwise relating to their involvement with us. This covenant continues until the expiration of the applicable statute of limitations.

Registration Rights Agreements

In connection with the issuance of our series B preferred stock, we entered into a registration rights agreement in August 2000 with the holders of our series B preferred stock. We also entered into a registration rights agreement in August 2003 with JDSU in connection with the issuance of our series D preferred stock and the convertible note to JDSU. Pursuant to these agreements, under certain circumstances these stockholders are entitled to require us to register their shares of common stock under the U.S. federal securities laws for resale. See Description of Capital Stock Registration Rights for a description of these and other registration rights agreements.

Reliant Technologies

In April 2006, Henry E. Gauthier joined our board of directors. Mr. Gauthier serves as the non-executive Chairman of the board of directors of, and a consultant to, Reliant Technologies, Inc., one of our customers. Our total sales to Reliant were $180,000, $1.5 million, and $7.0 million in 2003, 2004 and 2005, respectively.

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DESCRIPTION OF CAPITAL STOCK

General

Upon completion of this offering, our authorized capital stock will consist of 175,000,000 shares of common stock, par value $0.0001 per share, and 5,000,000 shares of preferred stock, par value $0.0001 per share. We refer in this section to our amended and restated certificate of incorporation and our amended and restated by-laws that will be in effect upon the closing of this offering. The following description of our capital stock is intended as a summary only and is qualified by reference to our amended and restated certificate of incorporation and our amended and restated by-laws which have been filed as exhibits to the registration statement of which this prospectus is a part.

As of June 30, 2006, there were 40,883,700 shares of our common stock outstanding held by approximately 120 stockholders of record, 488,000 shares of our series A preferred stock outstanding held by 45 stockholders of record, 3,800,000 shares of our series B preferred stock held by 15 stockholders of record and 2,684,211 shares of our series D preferred stock held by one stockholder of record. In addition, options to purchase 6,655,960 shares of our common stock under our stock option plans were outstanding as of the same date. Immediately prior to the closing of this offering, each share of our currently outstanding series A preferred stock will be converted into shares of common stock, each share of our currently outstanding series B preferred stock will be converted into shares of common stock and $20.0 million principal amount of subordinated promissory notes to be issued at the closing of this offering, and each share of our currently outstanding series D preferred stock will be converted into shares of common stock.

Common Stock

The holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of the stockholders. The holders of our common stock do not have any cumulative voting rights. Holders of our common stock are entitled to receive proportionally any dividends declared by our board of directors, subject to any preferential dividend rights of any outstanding preferred stock.

In the event of our liquidation or dissolution, holders of our common stock are entitled to share ratably in all assets remaining after payment of all debts and other liabilities, subject to the prior rights of any outstanding preferred stock. Holders of our common stock have no preemptive, subscription, redemption or conversion rights.

Preferred Stock

Upon completion of this offering, no shares of preferred stock will be designated or outstanding and our board of directors will be authorized, without action by the stockholders, to designate and issue up to 5,000,000 shares of preferred stock in one or more series. The board of directors can fix the rights, preferences and privileges of the shares of each series and any of its qualifications, limitations or restrictions. Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of common stock. The issuance of preferred stock, while providing flexibility in connection with possible future financings and acquisitions and other corporate purposes could, under certain circumstances, have the effect of delaying, deferring or preventing a change in control of our company and might harm the market price of our common stock.

Our board of directors will make any determination to issue such shares based on its judgment as to our company s best interests and the best interests of our stockholders. We have no current plans to issue any shares of preferred stock.

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Registration Rights

We have entered into agreements with holders of our preferred stock and certain holders of our common stock that give certain registration rights to such holders. These rights are described below. Following the conversion of our preferred stock into shares of our common stock, there will be shares of our common stock subject to such registration rights.

Piggyback Registration Rights. If we propose to register any securities under the Securities Act, either for our own account or for the account of other security holders exercising registration rights, the holders of registration rights are entitled to notice of the registration and are entitled to include their shares of common stock in the registration. We are required to use our commercially reasonable best efforts to effect the registrations, subject to conditions and limitations, including the right of the underwriters in an offering to limit the number of shares included in the registration.

Demand Registration Rights. At any time more than 180 days after the effective date of this offering, subject to exceptions, holders of registration rights have a right to demand that we file a registration statement covering the offer and sale of our common stock held by them and their affiliates. After the completion of this offering, the holders of such registration rights will own shares of our common stock. If we are eligible to file a registration statement on Form S-3, parties to three of these agreements have the right to demand that we file a registration statement on Form S-3 so long as the aggregate value of securities to be sold under the registration statement exceeds $500,000. We have the ability to delay the filing of a registration statement under specified conditions, such as for a period of time following the effective date of a prior registration statement or if we are in possession of material nonpublic information that it would not be in our best interests to disclose. We are not obligated by any of the registration rights agreements to file a registration statement on Form S-1 on more than two occasions. This offering will not count toward this limit.

Expenses of Registration. We will pay all registration expenses, other than underwriting discounts and commissions, related to any demand or piggyback registration.

Indemnification. The registration rights agreements contain customary cross-indemnification provisions, pursuant to which we are obligated to indemnify the selling stockholders in the event of material misstatements or omissions in the registration statement attributable to us, and they are obligated to indemnify us for material misstatements or omissions attributable to them.

Anti-Takeover Effects of Provisions in Our Certificate of Incorporation and By-laws

Our certificate of incorporation and by-laws will, upon completion of this offering, include a number of provisions that may have the effect of delaying, deferring or discouraging another party from acquiring control of us and encouraging persons considering unsolicited tender offers or other unilateral takeover proposals to negotiate with our board of directors rather than pursue non-negotiated takeover attempts. Further, these provisions will protect against an unsolicited proposal for our takeover that may affect the long-term value of our stock or that may otherwise be unfair to our stockholders. These provisions include the items described below.

Board Composition and Filling Vacancies. In accordance with our certificate of incorporation, after Dr. Valentin Gapontsev (together with his affiliates and associates) ceases to beneficially own 25% or more of the total voting power of the outstanding shares of all classes of stock entitled to vote generally for the election of our directors, our directors, other than those elected by any preferred stockholders, will be divided into three classes serving staggered three-year terms, with one class being elected each year. The classification of directors will have the effect of making it more difficult for stockholders to change the composition of our board. Our certificate of incorporation also provides that, after Dr. Valentin Gapontsev (together with his affiliates and associates) ceases to beneficially own 25% or more of the total voting power, directors may be removed only for cause by the affirmative vote of the holders of a majority in voting power of the shares then entitled to vote at an election of directors. Furthermore, any vacancy on our board of directors, however occurring, including a vacancy resulting from an increase in the size of our

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board, may be filled by the affirmative vote of a majority of our directors then in office even if such majority is less than a quorum.

No Written Consent of Stockholders. Our certificate of incorporation provides that, after Dr. Valentin Gapontsev (together with his affiliates and associates) ceases to beneficially own 25% or more of the total voting power of the outstanding shares of all classes of stock entitled to vote generally for the election of our directors, stockholders may not take any action by written consent in lieu of a meeting. This provision may lengthen the amount of time required to take stockholder actions and would prevent the amendment of our by-laws or removal of directors by our stockholders without a meeting of stockholders.

Meetings of Stockholders. Our certificate of incorporation provides that only a majority of the members of our board of directors then in office may call special meetings of stockholders and only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders. Our certificate of incorporation and by-laws limit the business that may be conducted at an annual meeting of stockholders to those matters properly brought before the meeting.

Advance Notice Requirements. Our by-laws establish advance notice procedures with regard to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders. These procedures provide that notice of stockholder proposals must be timely given in writing to our corporate secretary prior to the meeting at which the action is to be taken. Generally, to be timely, notice must be received at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary date of the annual meeting for the preceding year. The notice must contain certain information specified in the by-laws. These provisions may impede the stockholders ability to bring matters before an annual meeting of stockholders or make nominations for directors at an annual meeting of stockholders.

Amendment to By-laws and Certificate of Incorporation. As required by the Delaware General Corporation Law, any amendment of our certificate of incorporation must first be approved by a majority of our board of directors, and if required by law or our certificate of incorporation, thereafter be approved by 66^2/3% of the outstanding shares of our capital stock entitled to vote on the amendment, and a majority of the outstanding shares of each class entitled to vote thereon as a class. Our by-laws may be amended by the affirmative vote of a majority vote of the directors then in office, subject to any limitations set forth in the by-laws, or by the affirmative vote of at least 66^2/3% of the outstanding shares of our capital stock entitled to vote on the amendment.

Undesignated Preferred Stock. Our certificate of incorporation provides for 5,000,000 authorized shares of preferred stock. The issuance of preferred stock, while providing desirable flexibility in connection with possible acquisitions and other corporate purposes, could make it more difficult for a third party to, or discourage an attempt to, obtain control of us by means of a merger, tender offer, proxy contest or otherwise. For example, if in the due exercise of its fiduciary obligations, our board of directors were to determine that a takeover proposal is not in the best interests of us or our stockholders, our board of directors could cause shares of preferred stock to be issued without stockholder approval in one or more private offerings or other transactions that might dilute the voting or other rights of the proposed acquirer or insurgent stockholder or stockholder group. The issuance of shares of preferred stock could decrease the amount of earnings and assets available for distribution to holders of shares of common stock.

Section 203 of the Delaware General Corporation Law

In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a business combination with an interested stockholder for a three-year period following the time that the stockholder becomes an interested stockholder, unless the business combination or transaction in which the person became an interested stockholder is approved in a prescribed manner. A business combination includes, among other things, a merger, asset or stock sale or other transaction resulting in a financial benefit to the interested stockholder. An interested stockholder is a person who, together with affiliates and associates, owns, or did own within three years prior to the determination of interested stockholder

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status, 15% or more of the corporation s voting stock. Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions:

- before the stockholder became an interested stockholder, the board of directors approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;

- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding, for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers and some employee stock plans; or

- at or after the time the stockholder became an interested stockholder, the business combination was approved by the board of directors of the corporation and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock that is not owned by the interested stockholder.

We have expressly elected in Article XI of our amended and restated certificate of incorporation not to be subject to Section 203. Section 203 will apply to us following such time as it would apply to us on its own terms and Dr. Valentin Gapontsev (together with his affiliates and associates) ceases to beneficially own 25% or more of the total voting power of our outstanding shares.

Nasdaq Global Market Listing

We have applied for the approval of our common stock for quotation on the Nasdaq Global Market under the trading symbol IPGP.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A. Its address is 250 Royall Street, Canton, MA 02021.

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SHARES ELIGIBLE FOR FUTURE SALE

Before this offering, there has been no public market for our common stock. We cannot predict the effect, if any, that sales of shares of common stock to the public or the availability of shares for sale to the public will have on the market price of the common stock prevailing from time to time. Nevertheless, if a significant number of shares of common stock are sold in the public market, or if people believe that such sales may occur, the prevailing market price of our common stock could decline and could impair our future ability to raise capital through the sale of our equity securities.

Upon completion of this offering, we will have outstanding shares of common stock, assuming no exercise of outstanding options after June 30, 2006. Of these shares, the shares sold in this offering will be freely tradable without restriction under the Securities Act, except for any shares purchased by our affiliates , as that term is defined in Rule 144 under the Securities Act.

The remaining shares of common stock held by existing stockholders were issued and sold by us in reliance on exemptions from the registration requirements of the Securities Act and are restricted securities as defined in Rule 144. Of these shares, a total of shares are subject to lock-up agreements with the underwriters in this offering that provide that the holders of those shares may not dispose of or hedge any common stock or securities convertible into or exchangeable for shares of common stock. The restrictions imposed by the lock-up agreements will be in effect for a period of at least 180 days after the date of this prospectus, subject to extension under certain circumstances for an additional period of up to 18 days, as described under Lock-up Agreements below. At any time and without notice, Merrill Lynch and Lehman Brothers Inc. may, in their sole discretion, release some or all of the securities from these lock-up agreements. Subject to the lock-up agreements described below and the provisions of Rule 144 and 144(k) under the Securities Act and assuming that the underwriters do not exercise their overallotment option, additional shares will be available for sale in the public market as follows:

Number of Shares Eligible for Future Sale	Date
	Immediately after the date of this prospectus
	After 90 days from the date of this prospectus
	After 180 days from the date of this prospectus

Rule 144

In general, under Rule 144, an affiliate of ours, or any person or persons whose shares are required to be aggregated, who has beneficially owned restricted shares for at least one year will be entitled to sell in any three-month period a number of shares that does not exceed the greater of:

- one percent of the then-outstanding shares of common stock (approximately shares immediately after this offering); or
- the average weekly trading volume on the Nasdaq Global Market during the four calendar weeks before the date on which the seller files a notice of the proposed sale with the SEC.

Sales under Rule 144 must also comply with manner-of-sale provisions and notice requirements and current information about us must be publicly available.

Rule 144(k)

Under Rule 144(k), a person who has not been an affiliate of ours at any time during the three months before a sale, and who has beneficially owned the shares proposed to be sold for at least two years, generally including the

holding period of any prior owner other than an affiliate from whom the holder acquired the shares for value, is entitled to sell those shares without complying with the manner of sale,

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notice filing, volume limitation or public information requirements of Rule 144. Therefore, unless otherwise restricted, shares eligible for sale under Rule 144(k) may be sold immediately upon the completion of this offering.

Rule 701

Certain of our employees, officers, directors or consultants who purchased shares pursuant to a written compensatory plan or contract may be entitled to rely on the resale provision of Rule 701 under the Securities Act. Rule 701 permits affiliates to sell their Rule 701 shares under Rule 144 without complying with the holding period requirements of Rule 144. Rule 701 further provides that non-affiliates may sell these shares in reliance on Rule 144 without having to comply with the holding period, public information, volume limitation or notice requirements of Rule 144. All holders of Rule 701 shares are required to wait until 90 days after the date of this prospectus before selling those shares. A total of of the Rule 701 shares are subject to lock-up agreements and will only become eligible for sale at the earlier of (1) the expiration of the 180-day lock-up agreements and (2) no sooner than 90 days after this offering upon obtaining the prior written consent of Merrill Lynch and Lehman Brothers Inc.

Registration of Shares in Connection with Compensatory Benefit Plans

We are unable to estimate the number of shares that will be sold under Rules 144, 144(k) or 701 because that number will depend on the market price for the common stock, the personal circumstances of the sellers and other factors. After the closing of this offering, we intend to file a registration statement on Form S-8 under the Securities Act covering, among other things, shares of common stock covered by outstanding options under our stock plans. Based on the number of shares covered by outstanding options as of June 30, 2006 and currently reserved for issuance under our stock plans, the registration statement would cover approximately shares. The registration statement will become effective upon filing. Accordingly, shares registered under the registration statement on Form S-8 will be available for sale in the open market immediately, after complying with Rule 144 volume limitations applicable to affiliates, with applicable lock-up agreements and with the vesting requirements and restrictions on transfer affecting any shares that are subject to restricted stock awards.

Lock-up Agreements

We have agreed that we will not offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant for the sale of, or otherwise dispose of or transfer, any shares of our common stock or any securities convertible into or exchangeable or exercisable for our common stock, or file with the SEC a registration statement under the Securities Act relating to any shares of our common stock or securities convertible into or exchangeable or exercisable for any shares of our common stock, or enter into any transaction, swap, hedge or other arrangement relating to any shares of our common stock, without the prior written consent of Merrill Lynch and Lehman Brothers Inc. for a period of 180 days after the date of this offering, subject to extension in certain cases.

Our officers and directors and certain of our stockholders have agreed that they will not offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant for the sale of, or otherwise dispose of or transfer, enter into any transaction, any shares of our common stock or any securities convertible into or exchangeable or exercisable for our common stock, or file with the SEC a registration statement under the Securities Act relating to any shares of our common stock or securities convertible into or exchangeable or exercisable for any shares of our common stock, or enter into any transaction, swap, hedge or other arrangement relating to any shares of our common stock, without the prior written consent of Merrill Lynch and Lehman Brothers Inc. for a period of 180 days after the date of this offering, subject to extension in certain cases. Merrill Lynch and Lehman Brothers Inc. may, in their sole discretion at any time without notice, release all or any portion of the shares of the common stock subject to these lock-up agreements.

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Registration Rights

After the completion of this offering, holders of shares of common stock will be entitled to specific rights to register those shares for sale in the public market. See Description of Capital Stock Registration Rights. Registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act, except for shares purchased by affiliates, immediately upon the effectiveness of the registration statement relating to such shares.

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CERTAIN MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following summary describes certain material U.S. federal income tax consequences of the ownership and disposition of common stock by a Non-U.S. Holder (as defined below) holding shares of our common stock as capital assets (i.e., generally for investment) as of the date of this prospectus. This discussion does not address all aspects of U.S. federal income taxation and does not deal with estate, gift, foreign, state and local tax consequences that may be relevant to such Non-U.S. Holders in light of their personal circumstances. Special U.S. tax rules may apply to certain Non-U.S. Holders, such as controlled foreign corporations, passive foreign investment companies, corporations that accumulate earnings to avoid U.S. federal income tax, investors in partnerships or other pass-through entities for U.S. federal income tax purposes, dealers in securities, holders of securities held as part of a straddle, hedge, conversion transaction or other risk reduction transaction, and certain former citizens or long-term residents of the United States that are subject to special treatment under the Code. Such entities and persons should consult their own tax advisors to determine the U.S. federal, state, local and other tax consequences that may be relevant to them. Furthermore, the discussion below is based upon the provisions of the Code, and Treasury regulations promulgated thereunder, rulings and judicial decisions thereunder as of the date hereof, and such authorities may be repealed, revoked or modified with or without retroactive effect so as to result in U.S. federal income tax consequences different from those discussed below.

If a partnership or other pass-through entity holds our common stock, the tax treatment of a partner in the partnership or an owner of the entity generally will depend on the status of the partner or owner and the activities of the partnership or entity. Persons who are partners in partnerships or owners of pass-through entities holding our common stock should consult their own tax advisors.

The authorities on which this summary is based are subject to various interpretations, and any views expressed within this summary are not binding on the Internal Revenue Service (which we also refer to as the IRS) or the courts. No assurance can be given that the IRS or the courts will agree with the tax consequences described in this prospectus.

As used herein, a Non-U.S. Holder means a beneficial owner of our common stock that is not any of the following for U.S. federal income tax purposes:

- a citizen or resident of the United States;
- a corporation, or other entity treated as a corporation for U.S. federal income tax purposes, created or organized in or under the laws of the United States, any state thereof or the District of Columbia;
- an estate the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust (i) which is subject to primary supervision by a court situated within the United States and as to which one or more U.S. persons have the authority to control all substantial decisions of the trust, or (ii) that has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person.

Prospective purchasers are urged to consult their own tax advisors regarding the U.S. federal income tax consequences, as well as other U.S. federal, state, and local income and estate tax consequences, and non-U.S. tax consequences, to them of acquiring, owning, and disposing of our common stock.

Dividends

If we make distributions on our common stock, such distributions paid to a Non-U.S. Holder generally will constitute dividends for U.S. federal income tax purposes to the extent such distributions are paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax

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principles. If a distribution exceeds our current and accumulated earnings and profits, the excess will be treated as a tax-free return of the Non-U.S. Holder s investment to the extent of the Non-U.S. Holder s adjusted tax basis in our common stock. Any remaining excess will be treated as capital gain. See Gain on Disposition of Common Stock for additional information.

Dividends paid to a Non-U.S. Holder generally will be subject to withholding of United States federal income tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. A Non-U.S. Holder of common stock who wishes to claim the benefit of an applicable treaty rate for dividends generally will be required to complete IRS Form W-8BEN (or other applicable form) and certify, under penalty of perjury, that such holder is not a U.S. person and is eligible for the benefits with respect to dividends allowed by such treaty. Special certification requirements apply to certain Non-U.S. Holders that are pass-through entities for U.S. federal income tax purposes. A Non-U.S. Holder eligible for a reduced rate of U.S. withholding tax pursuant to an income tax treaty generally may obtain a refund of any excess amounts withheld from the IRS by timely filing an appropriate claim for refund with the IRS.

This U.S. withholding tax generally will not apply to dividends that are effectively connected with the conduct of a trade or business by the Non-U.S. Holder within the United States, and, if a treaty applies, attributable to a United States permanent establishment or fixed base of the Non-U.S. Holder. Dividends effectively connected with the conduct of a trade or business, as well as those attributable to a United States permanent establishment or fixed base of the Non-U.S. Holder under an applicable treaty, are subject to U.S. federal income tax generally in the same manner as if the Non-U.S. Holder were a U.S. person, as defined under the Code. Certain IRS certification and disclosure requirements must be complied with in order for effectively connected dividends to be exempt from withholding. Any such effectively connected dividends received by a Non-U.S. Holder that is a foreign corporation may, under certain circumstances, be subject to an additional branch profits tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty.

Gain on Disposition of Common Stock

A Non-U.S. Holder generally will not be subject to U.S. federal income tax (or any withholding thereof) with respect to gain recognized on a sale or other disposition of common stock unless:

- the gain is effectively connected with a trade or business of the Non-U.S. Holder in the United States and, where a tax treaty applies, is attributable to a United States permanent establishment or fixed base of the Non-U.S. Holder;
- the Non-U.S. Holder is an individual who is present in the United States for 183 or more days during the taxable year of disposition and meets certain other requirements; or
- we are or have been a U.S. real property holding corporation within the meaning of Section 897(c)(2) of the Code, also referred to as a USRPHC, for United States federal income tax purposes at any time within the five-year period preceding the disposition (or, if shorter, the Non-U.S. Holder s holding period for the common stock).

Gain recognized on the sale or other disposition of common stock and effectively connected with a U.S. trade or business, or attributable to a U.S. permanent establishment or fixed base of the Non-U.S. Holder under an applicable treaty, is subject to U.S. federal income tax on a net income basis generally in the same manner as if the Non-U.S. Holder were a U.S. person, as defined under the Code. Any such effectively connected gain from the sale or disposition of common stock received by a Non-U.S. Holder that is a foreign corporation may, under certain circumstances, be subject to an additional branch profits tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty.

An individual Non-U.S. Holder who is present in the United States for 183 or more days during the taxable year of disposition generally will be subject to a 30% tax imposed on the gain derived from the

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sale or disposition of our common stock, which may be offset by U.S. source capital losses realized in the same taxable year.

In general, a corporation is a USRPHC if the fair market value of its U.S. real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide (domestic and foreign) real property interest and its other assets used or held for use in a trade or business. For this purpose, real property interests include land, improvements and associated personal property.

We believe that we currently are not a USRPHC. In addition, based on these financial statements and current expectations regarding the value and nature of our assets and other relevant data, we do not anticipate becoming a USRPHC.

If we become a USRPHC, a Non-U.S. Holder nevertheless will not be subject to United States federal income tax if our common stock is regularly traded on an established securities market, within the meaning of applicable Treasury regulations, and the Non-U.S. Holder holds no more than five percent of our outstanding common stock, directly or indirectly, during the applicable testing period. We intend to apply for our common stock to be approved for quotation on the Nasdaq Global Market and we expect that our common stock may be regularly traded on an established securities market in the United States so long as it is so quoted.

Information Reporting and Backup Withholding

We must report annually to the IRS and to each Non-U.S. Holder the amount of dividends paid to such holder and the tax withheld with respect to such dividends, regardless of whether withholding was required. Copies of the information returns reporting such dividends and withholding may also be made available to the tax authorities in the country in which the Non-U.S. Holder resides under the provisions of an applicable income tax treaty.

The United States imposes a backup withholding tax on dividends and certain other types of payments to U.S. persons (currently at a rate of 28%) of the gross amount. Dividends paid to a Non-U.S. Holder generally will not be subject to backup withholding if proper certification of foreign status (usually on an IRS Form W-8BEN) is provided, and the payor does not have actual knowledge or reason to know that the beneficial owner is a U.S. person, or the holder is a corporation or one of several types of entities and organizations that qualify for exemption.

Any amounts withheld under the backup withholding rules generally may be allowed as a refund from the IRS or a credit against such holder s U.S. federal income tax liability provided the required information is timely furnished to the IRS.

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UNDERWRITING

Merrill Lynch, Pierce, Fenner & Smith Incorporated and Lehman Brothers Inc. are acting as representatives of each of the underwriters named below and joint book-running managers for this offering. Subject to the terms and conditions set forth in an underwriting agreement among us, the selling stockholders and the underwriters, we and the selling stockholders have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us and the selling stockholders, the number of shares of common stock set forth opposite its name below.

Underwriter	Number of Shares
Merrill Lynch, Pierce, Fenner & Smith Incorporated	
Lehman Brothers Inc.	
Needham & Company, LLC	
Jefferies & Company Inc.	
Thomas Weisel Partners LLC	
Total	

Subject to the terms and conditions set forth in the underwriting agreement, the underwriters have agreed, severally and not jointly, to purchase all of the shares sold under the underwriting agreement if any of these shares are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the non-defaulting underwriters may be increased or the underwriting agreement may be terminated.

We have agreed to indemnify the underwriters against certain liabilities, including certain liabilities under the Securities Act, or to contribute to payments the underwriters may be required to make in respect of those liabilities.

The underwriters are offering the shares, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel, including the validity of the shares, and other conditions contained in the underwriting agreement, such as the receipt by the underwriters of officers certificates and legal opinions. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Commissions and Discounts

The underwriters have advised us that they propose initially to offer the shares to the public at the public offering price set forth on the cover page of this prospectus and to dealers at that price less a concession not in excess of $ per share. The underwriters may allow, and the dealers may reallow, a discount not in excess of $ per share to other dealers. After the initial public offering, the public offering price, concession and discount may be changed.

The following table shows the public offering price, underwriting discount and proceeds, before expenses to us. The information assumes either no exercise or full exercise by the underwriters of their overallotment options.

	Per Share	Without Option	With Option
Public offering price	$	$	$
Underwriting discount	$	$	$
Proceeds, before expenses, to IPG Photonics	$	$	$
Proceeds, before expenses, to the selling stockholders	$	$	$

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The expenses of the offering, not including the underwriting discount, are estimated at $ and are payable by us.

Overallotment Option

We have granted an option to the underwriters to purchase up to additional shares at the public offering price, less the underwriting discount. The underwriters may exercise their option for 30 days from the date of this prospectus solely to cover any overallotments. If the underwriters exercise their option, each will be obligated, subject to conditions contained in the underwriting agreement, to purchase a number of additional shares proportionate to that underwriter s initial amount reflected in the above table.

No Sales of Similar Securities

We, our executive officers and directors and certain of our other existing holders of our outstanding common stock have agreed, subject to certain exceptions, not to sell or transfer any common stock or securities convertible into, exchangeable for, exercisable for, or repayable with common stock, for 180 days after the date of this prospectus without first obtaining the written consent of Merrill Lynch and Lehman Brothers Inc. Specifically, we and these other persons have agreed not to directly or indirectly:

- offer, pledge, sell or contract to sell any common stock;
- sell any option or contract to purchase any common stock;
- purchase any option or contract to sell any common stock;
- grant any option, right or warrant for the sale of any common stock;
- lend or otherwise dispose of or transfer any common stock;
- enter into any swap or other agreement that transfers, in whole or in part, the economic consequences of ownership of any common stock whether any such swap or transaction is to be settled by delivery of shares or other securities, in cash or otherwise; or
- publicly announce any of the foregoing.

The 180-day restricted period described in the preceding paragraph will be extended if:

- during the last 17 days of the 180-day restricted period, we issue an earnings release or material news or a material event relating to us occurs; or
- prior to the expiration of the 180-day restricted period, we announce that we will release earnings results during the 16-day period beginning on the last day of the 180-day period,

in which case the restrictions described in the preceding paragraph will continue to apply until the expiration of the 18-day period beginning on the issuance of the earnings release or the announcement of the material news or occurrence of a material event, unless such extension is waived in writing by Merrill Lynch and Lehman Brothers Inc.

Merrill Lynch and Lehman Brothers Inc., in their sole discretion, may release the common stock and other securities subject to the lock-up agreements described above in whole or in part at any time with or without notice. When determining whether or not to release common stock and other securities from lock-up agreements, Merrill Lynch and Lehman Brothers Inc. will consider, among other factors, the holder s reasons for requesting the release, the number of shares of common stock and other securities for which the release is being requested and market conditions at the time.

Quotation on the Nasdaq Global Market

We intend to apply for the shares to be approved for quotation on the Nasdaq Global Market under the symbol IPGP.

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Offering Price Determination

Before this offering, there has been no public market for our common stock. The initial public offering price will be determined through negotiations among us, the selling stockholders and the underwriters. In addition to prevailing market conditions, the factors to be considered in determining the initial public offering price are:

- the valuation multiples of publicly traded companies that the underwriters believe to be comparable to us;
- our financial information;
- the history of, and the prospects for, our company and the industry in which we compete;
- an assessment of our management, its past and present operations, and the prospects for, and timing of, our future revenues;
- the present state of our development; and
- the above factors in relation to market values and various valuation measures of other companies engaged in activities similar to ours.

An active trading market for the shares may not develop. It is also possible that after the offering the shares will not trade in the public market at or above the initial public offering price.

Discretionary Sales

The underwriters do not expect to sell more than 5% of the shares in the aggregate to accounts over which they exercise discretionary authority.

Stamp Taxes

If you purchase shares of common stock offered in this prospectus, you may be required to pay stamp taxes and other charges under the laws and practices of the country of purchase, in addition to the offering price listed on the cover page of this prospectus.

Certain Relationships

Merrill Lynch KECALP L.P. 1999, KECALP Inc., as Nominee for Merrill Lynch KECALP International L.P. 1999, Merrill Lynch Taurus Fund 2000, L.P., ML IBK Positions, Inc. and Merrill Lynch Ventures L.P. 2001, beneficially own an aggregate of 600,000 shares of our series B preferred stock, which will convert upon the completion of this offering into (a) shares of common stock and (b) subordinated notes having an aggregate principal amount of approximately $3.1 million. In addition, we intend to use a portion of the proceeds from this offering to purchase warrants to purchase common stock held by these entities for approximately $3.5 million. The Merrill Lynch entities acquired these shares and warrants pursuant to a stock purchase agreement in 2000. The Merrill Lynch entities may be deemed to be affiliates of Merrill Lynch, Pierce, Fenner & Smith Incorporated, which is acting as a joint book-running manager of this offering.

Price Stabilization, Short Positions and Penalty Bids

Until the distribution of the shares is completed, SEC rules may limit underwriters and selling group members from bidding for and purchasing our common stock. However, the representatives may engage in transactions that stabilize the price of the common stock, such as bids or purchases to peg, fix or maintain that price.

The underwriters may purchase and sell our common stock in the open market. These transactions may include short sales, stabilizing transactions and purchases to cover positions created by short sales. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering. Covered short sales are sales made in an amount not greater than the

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underwriters option to purchase additional shares in the offering. The underwriters may close out any covered short position by either exercising their option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the overallotment option. Naked short sales are any sales in excess of such option. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of shares of common stock made by the underwriters in the open market prior to the completion of the offering.

Similar to other purchase transactions, the underwriters purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of the common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market.

The representatives may also impose a penalty bid on underwriters and selling group members. This means that if the representatives purchase shares in the open market to reduce the underwriters short position or to stabilize the price of such shares, they may reclaim the amount of the selling concession from the underwriters and selling group members who sold those shares. The imposition of a penalty bid may also affect the price of the shares in that it discourages resales of those shares.

Neither we nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. In addition, neither we nor any of the representatives make any representation that the representatives will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

Electronic Offer, Sale and Distribution of Shares

A prospectus in electronic format may be made available on the Internet sites or through other online services maintained by one or more of the underwriters and/or selling group members participating in this offering, or by their affiliates. In those cases, prospective investors may view offering terms online and, depending upon the particular underwriter or selling group member, prospective investors may be allowed to place orders online. The underwriters may agree with us to allocate a specific number of shares for sale to online brokerage account holders. Any such allocation for online distributions will be made by the representatives on the same basis as other allocations.

Other than the prospectus in electronic format, the information on any underwriter s or selling group member s web site and any information contained in any other web site maintained by an underwriter or selling group member is not part of the prospectus or the registration statement of which this prospectus forms a part, has not been approved and/or endorsed by us or any underwriter or selling group member in its capacity as underwriter or selling group member and should not be relied upon by investors.

United Kingdom

This document is only being distributed to and is only directed at (i) persons who are outside the United Kingdom or (ii) to investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (Order) or (iii) high net worth entities, and other persons to whom it may lawfully be communicated, falling within Article 49(2)(a) to (e) of the Order (all such persons together being referred to as relevant persons). The shares of common stock are only available to, and any invitation, offer or agreement to subscribe, purchase or otherwise acquire such common stock will be engaged in only with, relevant persons. Any person who is not a relevant person should not act or rely on this document or any of its contents.

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Each of the underwriters has represented and agreed that:

- it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000, or FSMA) received by it in connection with the issue or sale of the shares in circumstances in which Section 21(1) of the FSMA does not apply to us; and

- it has complied with, and will comply with, all applicable provisions of the FSMA with respect to anything done by it in relation to the shares in, from or otherwise involving the United Kingdom.

European Economic Area

To the extent that the offer of the common stock is made in any Member State of the European Economic Area that has implemented the Prospectus Directive before the date of publication of a prospectus in relation to the common stock which has been approved by the competent authority in the Member State in accordance with the Prospectus Directive (or, where appropriate, published in accordance with the Prospectus Directive and notified to the competent authority in the Member State in accordance with the Prospectus Directive), the offer (including any offer pursuant to this document) is only addressed to qualified investors in that Member State within the meaning of the Prospectus Directive or has been or will be made otherwise in circumstances that do not require us to publish a prospectus pursuant to the Prospectus Directive.

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a Relevant Member State), each underwriter has represented and agreed that with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State (the Relevant Implementation Date) it has not made and will not make an offer of shares to the public in that Relevant Member State prior to the publication of a prospectus in relation to the shares which has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member State, all in accordance with the Prospectus Directive, except that it may, with effect from and including the Relevant Implementation Date, make an offer of shares to the public in that Relevant Member State at any time:

- to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;

- to any legal entity which has two or more of (1) an average of at least 250 employees during the last financial year, (2) a total balance sheet of more than 43,000,000 and (3) an annual net turnover of more than 50,000,000, as shown in its last annual or consolidated accounts; or

- in any other circumstances which do not require the publication by us of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an offer of shares to the public in relation to any shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the shares to be offered so as to enable an investor to decide to purchase or subscribe the shares, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State and the expression Prospectus Directive means Directive 2003/71/ EC and includes any relevant implementing measure in each Relevant Member State.

The EEA selling restriction is in addition to any other selling restrictions set out herein. In relation to each Relevant Member State, each purchaser of shares of common stock (other than the underwriters) will be deemed to have represented, acknowledged and agreed that it will not make an offer

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of shares of common stock to the public in any Relevant Member State, except that it may, with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State, make an offer of shares of common stock to the public in that Relevant Member State at any time in any circumstances which do not require the publication by us of a prospectus pursuant to Article 3 of the Prospectus Directive, provided that such purchaser agrees that it has not and will not make an offer of any shares of common stock in reliance or purported reliance on Article 3(2)(b) of the Prospectus Directive. For the purposes of this provision, the expression an offer of shares to the public in relation to any shares of common stock in any Relevant Member State has the same meaning as in the preceding paragraph.

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LEGAL MATTERS

The validity of the shares offered in this prospectus and certain other legal matters will be passed upon for us by Winston & Strawn LLP, New York, New York. Legal matters relating to this offering will be passed upon for the underwriters by Wilson Sonsini Goodrich & Rosati, Professional Corporation, Palo Alto, California and New York, New York.

EXPERTS

The consolidated financial statements of IPG Photonics Corporation as of December 31, 2004 and 2005 and for each of the three years in the period ended December 31, 2005 included in this prospectus have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report appearing herein, and have been so included in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1 with respect to the shares of common stock that we and the selling stockholders are offering by this prospectus. In addition, upon completion of the offering, we will be required to file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy the registration statement and any other documents we have filed at the SEC s Public Reference Room at 100 F Street, N.E., Room 1580, Washington D.C. 20549. You may also obtain copies of the documents at prescribed rates by writing to the Public Reference Section of the SEC at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facilities. Our SEC filings are also available to the public at the SEC s website at http://www.sec.gov.

This prospectus is part of the registration statement and does not contain all of the information included in the registration statement. Whenever a reference is made in this prospectus to any of our contracts or other documents, the reference may not be complete and, for a copy of the contract or document, you should refer to the exhibits that are a part of the registration statement.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of
IPG Photonics Corporation
Oxford, Massachusetts

We have audited the accompanying consolidated balance sheets of IPG Photonics Corporation and subsidiaries (the Company) as of December 31, 2004 and 2005, and the related consolidated statements of operations, convertible redeemable preferred stock and stockholders deficit, and cash flows for each of the three years in the period ended December 31, 2005. These financial statements are the responsibility of the Company s management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company s internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of IPG Photonics Corporation and subsidiaries as of December 31, 2004 and 2005, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2005, in conformity with accounting principles generally accepted in the United States of America.

/s/ Deloitte & Touche LLP
Boston, Massachusetts
July 5, 2006

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IPG PHOTONICS CORPORATION
CONSOLIDATED BALANCE SHEETS

	December 31,			
	2004	2005	June 30, 2006	Pro Forma June 30, 2006
			(unaudited)	(unaudited)
	(in thousands, except share and per share data)			
ASSETS				
CURRENT ASSETS:				
Cash and cash equivalents	$ 2,548	$ 8,361	$ 11,282	
Accounts receivable, net of allowance of $172, $198, and $189 as of December 31, 2004 and 2005 and June 30, 2006, respectively	10,806	15,434	18,131	
Inventories net	29,577	28,588	34,759	
Prepaid expenses and other current assets	2,072	2,482	4,141	
Deferred income taxes	1,648	3,005	168	
Total current assets	46,651	57,870	68,481	
RESTRICTED CASH	6,607	36	38	
DEFERRED INCOME TAXES	4,761			
PROPERTY, PLANT, AND EQUIPMENT Net	45,982	50,995	57,545	
EMPLOYEE AND STOCKHOLDER LOANS	6,265	6,339	5,303	
OTHER ASSETS	279	241	629	
TOTAL	$ 110,545	$ 115,481	$ 131,996	
LIABILITIES AND STOCKHOLDERS (DEFICIT) EQUITY				
CURRENT LIABILITIES:				
Revolving line-of-credit facilities	$ 8,259	$ 8,746	$ 11,011	
Current portion of long-term debt	5,995	10,438	15,301	
Accounts payable	3,240	5,164	6,231	
Accrued expenses and other liabilities	7,174	9,907	11,248	
Income taxes payable	1,049	65	1,969	
Total current liabilities	25,717	34,320	45,760	
DEFERRED INCOME TAXES		82	223	
LONG-TERM DEBT	25,459	15,643	8,967	$ 28,967
SERIES B WARRANTS	13,899	14,644	16,863	
COMMITMENTS AND CONTINGENCIES (Notes 6, 10 and 13)				
MINORITY INTERESTS	511	948	1,343	

CONVERTIBLE REDEEMABLE PREFERRED STOCK, $0.0001 par value:				
Series B designated, issued, and outstanding, 3,800,000 shares; liquidation and redemption value, $95,000	88,897	91,248	92,285	
Series D designated, 5,400,000 shares; issued and outstanding, 2,684,211 shares; liquidation and redemption values, $5,100	5,100	5,100	5,100	
STOCKHOLDERS (DEFICIT) EQUITY:				
Preferred stock, $0.0001 par value authorized, 15,000,000 shares; Series A designated, 500,000 shares; issued and outstanding, 488,000 shares; liquidation value, $4,880	4,880	4,880	4,880	
Common stock, $0.0001 par value authorized, 70,000,000 shares; issued and outstanding, 38,987,494, 39,988,948 and 40,883,700 shares at December 31, 2004 and 2005 and June 30, 2006, respectively	4	4	4	4
Additional paid-in capital	96,261	95,029	94,912	177,177
Notes receivable from stockholders	(463)	(463)	(463)	(463)
Deferred compensation		(111)		
Accumulated deficit	(157,052)	(149,625)	(143,507)	(143,507)
Accumulated other comprehensive income	7,332	3,782	5,629	5,629
Total stockholders (deficit) equity	(49,038)	(46,504)	(38,545)	38,840
TOTAL	$ 110,545	$ 115,481	$ 131,996	

See notes to consolidated financial statements.

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IPG PHOTONICS CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS

	Years Ended December 31,			Six Months Ended June 30,	
	2003	2004	2005	2005	2006
				(unaudited)	(unaudited)
	(in thousands except per share data)				
NET SALES	$ 33,740	$ 60,707	$ 96,385	$ 41,630	$ 64,927
COST OF SALES	38,583	42,274	62,481	28,437	39,119
GROSS (LOSS) PROFIT	(4,843)	18,433	33,904	13,193	25,808
OPERATING EXPENSES:					
Sales and marketing	2,110	2,363	3,236	1,538	2,343
Research and development	10,063	4,831	5,788	2,873	2,622
General and administrative	9,998	8,179	10,598	4,352	5,813
Total operating expenses	22,171	15,373	19,622	8,763	10,778
OPERATING (LOSS) INCOME	(27,014)	3,060	14,282	4,430	15,030
OTHER (EXPENSE) INCOME Net:					
Interest expense net	(1,505)	(2,150)	(1,840)	(969)	(709)
Fair value adjustment to Series B Warrants	(3,664)	(615)	(745)	(314)	(2,219)
Other income net	1,647	196	236	141	12
Total other expense	(3,522)	(2,569)	(2,349)	(1,142)	(2,916)
(LOSS) INCOME BEFORE BENEFIT FROM (PROVISION FOR) INCOME TAXES AND MINORITY INTERESTS IN CONSOLIDATED SUBSIDIARIES	(30,536)	491	11,933	3,288	12,114
BENEFIT FROM (PROVISION FOR) INCOME TAXES	2,205	1,601	(4,080)	(1,219)	(5,598)
MINORITY INTERESTS IN CONSOLIDATED SUBSIDIARIES	121	(80)	(426)	81	(398)
NET (LOSS) INCOME	$ (28,210)	$ 2,012	$ 7,427	$ 2,150	$ 6,118
NET (LOSS) INCOME PER SHARE:					
Basic	$ (0.93)	$ (0.01)	$ 0.11	$ 0.02	$ 0.11
Diluted	$ (0.93)	$ (0.01)	$ 0.11	$ 0.02	$ 0.10
WEIGHTED AVERAGE SHARES OUTSTANDING:					
Basic	38,302	38,547	39,348	39,008	40,385
Diluted	38,302	38,547	45,252	44,912	49,584

Stock-based compensation is included in the following financial statement captions as follows:

				Six Months Ended June 30,	
	2003	2004	2005	2005	2006
Cost of sales	$ 577	$ 218	$ 4	$	$ 37
Sales and marketing	18	6	1		11
Research and development	1,062	669	1		3
General and administrative	546	10	1		75
Total	$ 2,203	$ 903	$ 7	$	$ 126

See notes to consolidated financial statements.

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IPG PHOTONICS CORPORATION
CONSOLIDATED STATEMENTS OF CONVERTIBLE REDEEMABLE PREFERRED STOCK AND STOCKHOLDERS DEFICIT

Convertible Redeemable Preferred Stock				Convertible Preferred Stock								
Series B		Series D		Series A		Common Stock			Note Receivable			Accumulated Other
Shares	Amount	Shares	Amount	Shares	Amount	Shares	Par Value	Additional Paid-In Capital	From Stockholders	Deferred Compensation	Accumulated Deficit	Comprehensi Income
(In thousands, except share and per-share data)												
,800,000	$ 84,194		$	500,000	$ 5,000	37,940,668	$ 4	$ 100,076	$ (463)	$ (2,613)	$ (130,854)	$ 747
											(28,210)	
												4,508
		2,684,211	5,100									
	(4,991)				(251)			5,242				
	7,343				251			(7,594)				
						500,000		5				
								496		(496)		
										2,203		
						2,375		2				
,800,000	86,546	2,684,211	5,100	500,000	5,000	38,443,043	4	98,227	(463)	(906)	(159,064)	5,255

											2,012	
												2,077
	2,351							(2,351)				
						99,000						
								(3)		3		
										903		
				(12,000)	(120)	445,451		388				
,800,000	88,897	2,684,211	5,100	488,000	4,880	38,987,494	4	96,261	(463)		(157,052)	7,332
											7,427	
												(3,550)
	2,351							(2,351)				
								118		(118)		
										7		
						1,001,454		1,001				
,800,000	91,248	2,684,211	5,100	488,000	4,880	39,988,948	4	95,029	(463)	(111)	(149,625)	3,782

										6,118		
											1,847	
							(111)	111				
	1,037						(1,037)					
							126					
						894,752	905					
,800,000	$ 92,285	2,684,211	$ 5,100	488,000	$ 4,880	40,883,700	$ 4	$ 94,912	$ (463)	$	$ (143,507)	$ 5,629

See notes to consolidated financial statements.

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IPG PHOTONICS CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS

				Six Months Ended	
	2003	2004	2005	2005	2006
				(unaudited)	(unaudited)
			(in thousands)		
CASH FLOWS FROM OPERATING ACTIVITIES:					
Net (loss) income	$ (28,210)	$ 2,012	$ 7,427	$ 2,150	$ 6,118
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:					
Depreciation and amortization	7,759	7,154	7,583	3,567	3,754
Deferred income taxes	(2,536)	(462)	2,732	1,084	3,063
Stock-based compensation	2,203	903	7		126
Interest accretion of convertible note	86	235	247	121	127
(Gain) loss on sale of investment and fixed assets	(484)	(14)	(238)	56	69
Inventory provisions	8,321		2,370	923	
Fair value adjustment to Series B Warrants	3,664	615	745	314	2,219
Minority interests in consolidated subsidiaries	(121)	80	426	(81)	398
Changes in assets and liabilities that provided (used) cash:					
Accounts receivable	(2,101)	(2,791)	(5,599)	(3,064)	(2,281)
Due from affiliates net	(1,174)	(40)	236	162	21
Inventories	10,970	1,176	(4,011)	(1,174)	(6,091)
Prepaid expenses and other current assets	(324)	(55)	(312)	(539)	(1,212)
Accounts payable	(1,209)	(1,460)	(1,030)	(2,005)	871
Accrued expenses and other liabilities	1,955	207	4,088	(27)	983
Income and other taxes payable	53	(1,312)	(1,086)	61	2,143
Net cash provided by (used in) operating activities	(1,148)	6,248	13,585	1,548	10,308
CASH FLOWS FROM INVESTING ACTIVITIES:					
Purchases of property, plant, and equipment	(2,588)	(4,037)	(15,989)	(6,451)	(9,054)
Proceeds from sale of property, plant, and equipment		80	782	132	20
Proceeds on sale of investment	502				
Employee and shareholder loans repaid	1,719				1,071
	313	87	6,566	6,566	

Restricted cash released to support construction loan					
Net cash used in investing activities	(54)	(3,870)	(8,641)	247	(7,963)
CASH FLOWS FROM FINANCING ACTIVITIES:					
Proceeds from line-of-credit facilities	5,204	3,456	9,561	1,710	8,517
Payments on line-of-credit facilities	(2,493)	(2,638)	(9,384)	(772)	(6,325)
Principal payments on long-term borrowings	(2,351)	(1,654)	(2,263)	(449)	(2,688)
Proceeds from long-term borrowings			2,209	2,239	
Issuance of common stock and exercise of employee stock options	7	268	1,001	79	905
Minority interest capital contribution		142	11	11	
Net cash provided by (used in) financing activities	367	(426)	1,135	2,818	409
EFFECT OF CHANGES IN EXCHANGE RATES ON CASH AND CASH EQUIVALENTS	(8)	60	(266)	(147)	167
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(843)	2,012	5,813	4,466	2,921
CASH AND CASH EQUIVALENTS Beginning of period	1,379	536	2,548	2,548	8,361
CASH AND CASH EQUIVALENTS End of period	$ 536	$ 2,548	$ 8,361	$ 7,014	$ 11,282
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:					
Cash paid for interest	$ 1,565	$ 1,780	$ 2,046	$ 999	$ 716
Income taxes paid	$	$ 59	$ 1,989	$	$ 781
Non-cash transactions:					
Stock-for-stock swap on options	$	$ 120	$	$	$
Issuance of Series D Preferred Stock in satisfaction of accrued contract settlement	$ 5,100				
Issuance of convertible note in satisfaction of accrued contract settlement	$ 4,374				

See notes to consolidated financial statements.

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IPG PHOTONICS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. NATURE OF BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature of Business IPG Photonics Corporation (the Company) designs and manufactures a broad line of high-performance fiber lasers and fiber amplifiers for diverse applications in numerous markets, such as materials processing, communications, medical and advanced applications. The Company s administrative and manufacturing facilities in the United States are located in Oxford, Massachusetts; and European operations are located in Burbach, Germany; Milan, Italy; London, England; and Fryazino, Russia. In 2004, the Company opened sales and service centers in Tokyo, Japan and Bangalore, India. In 2005, the Company opened a sales and service center in Seoul, Korea.

Principles of Consolidation The Company was incorporated as a Delaware corporation in December 1998. The accompanying financial statements include the accounts of the Company and its subsidiaries. All intercompany accounts and transactions have been eliminated.

Unaudited Pro Forma Presentation The unaudited pro forma balance sheet data presented as of June 30, 2006 reflects the conversion of all outstanding shares of preferred stock as of that date into common stock and the issuance of a long-term note payable totaling $20,000,000, which will occur upon closing of the proposed initial public offering.

Unaudited Interim Financial Information The accompanying unaudited interim financial statements as of June 30, 2006 and for the six month periods ended June 30, 2005 and 2006 have been prepared by the Company pursuant to the rules and regulations of the Securities and Exchange Commission regarding interim financial reporting. As a result, certain footnote and other disclosure required by accounting principles generally accepted in the United States of America have been omitted. The reader is encouraged to read the interim financial statements together with the audited consolidated financial statements for the years ended December 31, 2003, 2004 and 2005. The interim financial statements have been prepared on the same basis as the audited consolidated financial statements, except that the financial statements as of and for the six months ended June 30, 2006 reflect the Company s adoption of the fair value provisions of SFAS 123(R) with respect to recording stock-based compensation discussed in Note 2. The interim financial statements include all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of the interim periods presented. The operating results for the interim periods presented are not necessarily indicative of the results that could be expected for the full year.

Use of Estimates The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

Foreign Currency The financial information for entities outside the United States is measured using local currencies as the functional currency. Assets and liabilities are translated into U.S. dollars at the exchange rate in effect on the respective balance sheet dates. Income and expenses are translated into U.S. dollars based on the average rate of exchange for the corresponding period. Exchange rate differences resulting from translation adjustments are accounted for directly as a component of accumulated other comprehensive income. Gains or losses from foreign currency transactions are reflected in the consolidated statements of operations.

Cash and Cash Equivalents Cash and cash equivalents consist primarily of highly liquid investments, such as bank deposits, with insignificant interest rate risk and original maturities of three months or less at the date of acquisition.

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IPG PHOTONICS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Inventories Inventories are stated at the lower of cost or market on a first-in, first-out basis. Inventories include parts and components that may be specialized in nature and subject to rapid obsolescence. The Company periodically reviews the quantities and carrying values of inventories to assess whether the inventories are recoverable. The costs associated with provisions for excess quantities, technological obsolescence, or component rejection are charged to cost of sales as incurred.

Property, Plant, and Equipment Property, plant, and equipment are stated at cost, less accumulated depreciation. Depreciation is determined using the straight-line method based on the estimated useful lives of the related assets. In the case of leasehold improvements, the estimated useful lives of the related assets do not exceed the remaining terms of the corresponding leases. The following table presents the assigned economic useful lives of property, plant, and equipment:

Category	Economic Useful Life
Buildings	30 years
Machinery and equipment	3-5 years
Office furniture and fixtures	3-5 years
Other assets	3-5 years

Expenditures for maintenance and repairs are charged to operations. Interest expense associated with significant capital projects is capitalized as a cost of the project. The Company capitalized $0, $0, $239,000 and $76,405 of interest expense in 2003, 2004, 2005 and the six months ended June 30, 2006, respectively.

Impairment of Long-Lived Assets Long-lived assets, which consist primarily of property, plant, and equipment, are reviewed by management for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. In cases in which undiscounted expected future cash flows are less than the carrying value, an impairment loss is recorded equal to the amount by which the carrying value exceeds the fair value of assets.

Revenue Recognition The Company recognizes revenue in accordance with SEC Accounting Bulletin, or SAB, No. 104, Revenue Recognition. SAB No. 104 requires that four basic criteria be met before revenue can be recognized: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the fee is fixed and determinable; and (4) collectibility is reasonably assured. Revenue from the sale of the Company s products is generally recognized upon shipment, provided that the other revenue recognition criteria have been met. The Company has no obligation to provide upgrades, enhancements or customer support subsequent to the sale.

Revenue from orders with multiple deliverables is divided into separate units of accounting when certain criteria are met. The consideration for the arrangement is then allocated to the separate units of accounting based on their relative fair values. The Company defers revenue on multiple element arrangements if the fair values of all deliverables are not known or if customer acceptance is contingent on delivery of specified items or performance conditions. Applicable revenue recognition criteria are then applied separately for each separate unit of accounting.

Returns and customer credits are infrequent and are recorded as a reduction to revenue. Rights of return are generally not included in sales arrangements. Generally, the Company receives a customer purchase order as evidence of an arrangement and product shipment terms are free on board (F.O.B.) shipping point.

Allowance for Doubtful Accounts The Company maintains an allowance for doubtful accounts to provide for the estimated amount of accounts receivable that will not be collected. The allowance is based upon an assessment of customer creditworthiness, historical payment experience and the age of outstanding receivables.

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IPG PHOTONICS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Activity related to the allowance for doubtful accounts was as follows (in thousands):

Balance at January 1, 2003	$ 278
Provision for bad debts	172
Uncollectible accounts written off	(153)
Foreign currency translation	25
Balance at December 31, 2003	322
Provision for bad debts	35
Uncollectible accounts written off	(185)
Balance at December 31, 2004	172
Provision for bad debts	43
Uncollectible accounts written off	(24)
Foreign currency translation	7
Balance at December 31, 2005	$ 198

Warranties In general, the Company s products carry a warranty against defect for a period of one to three years, depending upon the product type and customer negotiations. The expected cost associated with these warranty obligations is recorded when the revenue is recognized. Warranty costs and related accrued warranty costs were not significant for the periods presented.

Advertising Expense The cost of advertising is expensed as incurred. The Company conducts substantially all of its sales and marketing efforts through trade shows, professional and technical conferences, direct sales and use of its website. The Company s advertising costs were not significant for the periods presented.

Research and Development Research and development costs are expensed as incurred.

Income Taxes Deferred tax assets and liabilities are recognized for the future tax consequences of temporary differences between the financial statement carrying amounts and tax bases of assets and liabilities and net operating loss carryforwards and credits using enacted rates in effect when those differences are expected to reverse. Valuation allowances are provided against deferred tax assets that are not deemed to be recoverable.

Stock-Based Compensation Statement of Financial Accounting Standards (SFAS) No. 123, *Accounting for Stock-Based Compensation* (SFAS No. 123), encourages, but does not require, companies to record compensation cost for stock-based employee compensation plans at fair value. As permitted by SFAS No. 123, the Company has elected to account for stock-based compensation awarded to employees using the intrinsic value method prescribed in Accounting Principles Board (APB) Opinion No. 25, *Accounting for Stock Issued to Employees,* and related interpretations and has adopted the disclosure-only provisions of SFAS No. 123. Accordingly, for financial reporting purposes, compensation cost for stock options granted to employees and directors is measured as the excess, if any, of the estimated fair market value of the Company s stock at the deemed measurement date over the amount an employee or director must pay to acquire the stock.

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IPG PHOTONICS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

If the compensation costs for options awarded to employees and directors had been determined using the fair value amortized to expense over the vesting period of the awards, the recorded net income would have been as follows (in thousands):

	2003	2004	2005
Reported net income	$ (28,210)	$ 2,012	$ 7,427
Add stock-based employee compensation expense included in net income net of taxes	2,203	903	7
Deduct stock-based employee compensation expense determined using the fair value for all awards net of taxes	(2,241)	(915)	(22)
Pro forma net income	$ (28,248)	$ 2,000	$ 7,412

The Company s pro forma calculations for 2003, 2004, and 2005 were made using the minimum value method with the following weighted-average assumptions: expected life of four years; stock volatility of 0%; risk-free interest rate of 3.5% in 2003 and 2004 and 4.5% in 2005; and no dividend payments during the expected term. Forfeitures are recognized as they occur.

Effective January 1, 2006, the Company adopted the provisions of SFAS No. 123 (revised 2004), *Share-Based Payment* (SFAS No. 123(R)). SFAS No. 123(R) establishes accounting for stock-based awards exchanged for employee services and other stock-based transactions. Stock-based compensation cost is measured at the grant date, based on the fair value of the award, and is recorded as compensation cost over the requisite service period. The Company elected to adopt the modified prospective application method provided by SFAS No. 123(R) as discussed in Note 2.

Concentration of Credit Risk Financial instruments that potentially subject the Company to credit risk consist primarily of cash and cash equivalents and accounts receivable. The Company maintains substantially all of its cash in two financial institutions, which are believed to be high-credit, quality financial institutions. The Company grants credit to customers in the ordinary course of business and provides a reserve for potential credit losses. Such losses historically have been within management s expectations (see discussion related to significant customers in Note 14).

Fair Value of Financial Instruments The Company s financial instruments consist of accounts receivable, accounts payable, and long-term debt. The current carrying amounts of such instruments are considered reasonable estimates of their fair market value, due to the short maturity of these instruments or as a result of the competitive market interest rates, which have been negotiated.

Comprehensive Income (Loss) Comprehensive income (loss) includes charges and credits to equity that are not the result of transactions with stockholders. Included in other comprehensive income (loss) for the Company is the cumulative translation adjustment. These adjustments are accumulated within the consolidated statements of convertible redeemable preferred stock and stockholders deficit under accumulated other comprehensive income.

Derivative Instruments The Company has entered into financial instruments that constitute freestanding derivative instruments. The Company accounts for these arrangements in accordance with SFAS No. 133, *Accounting for Derivative Instruments and Hedging Activities* (SFAS No. 133), as well as related interpretations. Derivative instruments are recognized as either assets or liabilities in the balance sheets and are measured at fair value with gains or losses recognized in earnings or other comprehensive income depending on the nature of the derivative. The Company determines the fair value of derivative instruments based on available market data using appropriate valuation models, giving consideration to all of the rights and obligations of each instrument.

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IPG PHOTONICS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Beneficial Conversion When the Company issues debt or equity that is convertible into common stock at a discount from the common stock fair value at the date the debt or equity is issued, a beneficial conversion feature for the difference between the fair value and the conversion price multiplied by the number of shares issuable upon conversion is recorded as a beneficial conversion charge or deemed dividend. The beneficial conversion feature is presented as a discount to the related debt or a deemed dividend to the related equity holders, with an offsetting amount increasing additional paid-in capital.

Business Segment Information The Financial Accounting Standards Board (FASB) Statement of Financial Accounting Standards No. 131, *Disclosures about Segments of an Enterprise and Related Information* (SFAS No. 131), establishes standards for reporting information about operating segments. The Company is structured with eight distinct legal entities in eight different countries; however, the Company operates in one segment as each of its legal entities have similar economic characteristics and each meets the criteria for aggregation as defined in SFAS No. 131. All of the Company s operations involve the design, development, production and distribution of fiber lasers, fiber amplifiers and related optical components. As disclosed in Note 14, the Company monitors and maintains information on the sale of its products into its various end markets, including (i) materials processing, (ii) telecommunications, (iii) medical and (iv) advanced applications, but the Company does not maintain separate operating financial information for these end markets or on any other basis. The Company s product lines, customer base and manufacturing processes are similar throughout the world, with little distinction between legal entity or product end market. The Company has a single, company-wide management team that administers all properties as a whole rather than as discrete operating segments. The chief decisionmaker measures financial performance as a single enterprise and not on legal entity or end-market basis. Throughout the year, the chief decisionmaker allocates capital resources on a project-by-project basis across the Company s entire asset base to maximize profitability without regard to legal entity or end-market basis.

Recent Accounting Pronouncements In November 2004, the FASB issued SFAS No. 151, *Inventory Costs an amendment of ARB No. 43, Chapter 4* (SFAS No. 151), relating to inventory costs. This revision is to clarify the accounting for abnormal amounts of idle facility expense, freight, handling costs and wasted material (spoilage). This statement requires that these items be recorded as a current period charge regardless of whether they meet the criterion specified in ARB No. 43. In addition, this Statement requires the allocation of fixed production overheads to the costs of conversion be based on normal capacity of the production facilities. SFAS No. 151 is effective for the Company for inventory costs incurred beginning after January 1, 2006. The adoption of SFAS No. 151 did not have a material effect on the Company s consolidated financial statements.

In July 2006, the FASB issued Financial Accounting Standards Interpretation No. 48, *Accounting for Uncertainty in Income Taxes* (FIN 48). FIN 48 prescribes a recognition threshold and measurement process for recording in the financial statements uncertain tax positions taken or expected to be taken in a tax return. FIN 48 also provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosures and transitions. FIN 48 will be effective for the Company beginning January 1, 2007. The Company is currently analyzing the effects, if any, of the adoption of FIN 48, but does not anticipate that the results of adoption will have a material impact on its reported results of operations or financial condition.

2. STOCK-BASED COMPENSATION (UNAUDITED)

The Company adopted SFAS 123(R) using the prospective transition method. Under this method, compensation costs recorded during the six months ended June 30, 2006 include: (a) compensation costs for all share-based payment awards granted prior to, but not yet vested as of January 1, 2006, based on the intrinsic value in accordance with the original provisions of APB 25 and

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IPG PHOTONICS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(b) compensation costs for all share-based payment awards granted subsequent to January 1, 2006, based on the grant-date fair value estimated in accordance with the provisions of SFAS 123(R). The Company allocates and records stock-based compensation expense on a straight-line basis over the requisite service period.

Under SFAS No. 123(R), the Company calculates the fair value of stock option grants using the Black-Scholes option-pricing model. Determining the appropriate fair value model and calculating the fair value of stock-based payment awards require the use of highly subjective assumptions, including the expected life of the stock-based payment awards and stock price volatility. The assumptions used in calculating the fair value of stock-based payment awards represent management s best estimates, but the estimates involve inherent uncertainties and the application of management judgment. As a result, if factors change and the Company uses different assumptions, the Company s stock-based compensation expense could be materially different in the future. The weighted average assumptions used in the Black-Scholes model were 6.25 years for the expected term, 65% for the expected volatility, 4.75% for the risk-free rate and 0% for dividend yield for the six months ended June 30, 2006.

The weighted-average grant-date fair values of options granted during the six months ended June 30, 2006 were $2.02 per option. The intrinsic value of the options exercised during the six months ended June 30, 2006 was $1,029,000.

The weighted average expected option term for 2006 reflects the application of the simplified method set forth in Securities and Exchange Commission Staff Accounting Bulletin, or SAB, No. 107, which was issued in March 2005. The simplified method defines the life as the average of the contractual term of the options and the weighted average vesting period for all option tranches.

For the calculation of expected volatility, because there is currently no public market for the Company s common stock, and therefore a lack of company-specific historical and implied volatility information, the Company based its estimate of expected volatility on the expected volatility of similar entities whose share prices are publicly available. The Company used the following factors to identify similar public entities: industry, stage of life cycle, size and profitability. The Company intends to continue to consistently apply this process using the same or similar entities until a sufficient amount of historical information regarding the volatility of its own share price becomes available, or unless circumstances change such that the identified entities are no longer similar to the Company. In this latter case, more suitable, similar entities whose share prices are publicly available, would be utilized in the calculation.

As stock-based compensation expense recorded in the Company s statement of operations for the six months ended June 30, 2006 is based on options ultimately expected to vest, it has been reduced for estimated forfeitures. SFAS 123(R) requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. The stock-based compensation recorded for the six months ended June 30, 2006 reflects an estimated forfeiture rate of 5%. For the purposes of preparing the pro forma information required under SFAS 123 for the periods prior to fiscal 2006, the Company accounted for forfeitures as they occurred.

In accordance with the prospective transition method, the Company s financial statements for prior periods have not been restated to reflect, and do not include, the impact of SFAS 123(R). Total employee stock-based compensation expense recorded under SFAS 123(R) for the six months ended June 30, 2006 was $126,000.

Incentive Plans In April 2000, our board of directors adopted the 2000 Incentive Compensation Plan, or 2000 plan, and in February 2006, our board of directors adopted the 2006 Incentive Compensation Plan, or 2006 plan, which provide for the issuance of stock options and other stock and non-stock based awards to the Company s directors, employees, consultants and advisors. The Company reserved 8,750,000 shares under the 2000 plan and 6,000,000 shares under the 2006 plan for the issuance of awards

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IPG PHOTONICS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

under the plans. In June 2006, our board of directors adopted the Non-Employee Directors Stock Plan, or the directors plan. Only non-employee directors are eligible to receive awards under the directors plan. The Company reserved 250,000 shares for issuance under the director plan. Under the three plans, the Company may grant nonstatutory stock options at an exercise price at least equal to the fair market value of our common stock on the date of grant, unless the board of directors or compensation committee determines otherwise on the date of grant. Incentive stock options may be granted under the 2000 plan and the 2006 plans at exercise prices equal to or exceeding the fair market value of the common stock on the date of grant. Options generally become exercisable over periods of two to five years and expire seven to ten years from the date of the grant. The awards under the 2000 plan and the 2006 plans may become exercisable earlier upon the occurrence of certain change of control events at the election of the board of directors or compensation committee, and all awards under the directors plan automatically become exercisable upon a change-of-control. At June 30, 2006, 4,790,034 shares were available for future grant under the option plans.

Stock Options A summary of option activity during the six months ended June 30, 2006 is presented below:

	Number of Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (In Years)
Outstanding January 1, 2006	5,879,578	$ 1.06	7.52
Granted	1,696,425	3.60	
Exercised	894,752	1.01	
Cancelled			
Forfeited	25,291	1.72	
Outstanding June 30, 2006	6,655,960	1.71	7.76
Exercisable June 30, 2006	3,248,762	$ 1.03	6.19

The aggregate intrinsic value of vested and exercisable stock options was $9,000,000 at June 30, 2006.

The total compensation cost related to nonvested awards not yet recorded at June 30, 2006 was $3,400,000 which is expected to be recognized over 4.5 years on a weighted average basis.

3. INVENTORIES

Inventories consist of the following (in thousands):

	December 31,		June 30,
	2004	2005	2006
			(unaudited)
Components and raw materials	$ 15,473	$ 9,985	$ 14,637
Work-in-process	5,900	10,010	8,872
Finished goods	8,204	8,593	11,250
Total	$ 29,577	$ 28,588	$ 34,759

The Company recorded inventory provisions totaling $8,321,000, $0 and $2,370,000 in 2003, 2004 and 2005, respectively. These provisions were recorded as a result of the changes in market prices of certain components, the realizable value of those inventories through finished product sales and

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IPG PHOTONICS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

uncertainties related to the recoverability of the value of inventories due to technological changes and excess quantities. These provisions are reported as a reduction to components and raw materials and finished goods.

4. PROPERTY, PLANT, AND EQUIPMENT

Property, plant, and equipment consist of the following (in thousands):

	December 31,		June 30,
	2004	2005	2006
			(unaudited)
Land	$ 4,284	$ 5,817	$ 6,281
Buildings	27,212	35,397	38,010
Machinery and equipment	42,023	43,783	48,797
Office equipment and fixtures	4,875	5,625	6,664
Construction-in-progress	4,182	1,084	3,350
Total property, plant, and equipment	82,576	91,706	103,102
Accumulated depreciation	(36,594)	(40,711)	(45,557)
Total property, plant, and equipment net	$ 45,982	$ 50,995	$ 57,545

5. ACCRUED EXPENSES AND OTHER LIABILITIES

Accrued expenses and other liabilities consist of the following (in thousands):

	December 31,		June 30,
	2004	2005	2006
			(unaudited)
Accrued compensation	$ 2,562	$ 4,248	$ 3,666
Customer deposits and deferred revenue	2,166	2,078	3,899
Accrued warranty	593	1,065	1,149
Other	1,853	2,516	2,534
	$ 7,174	$ 9,907	$ 11,248

6. FINANCING ARRANGEMENTS

The Company s existing borrowings under financing arrangements consist of the following (in thousands):

	December 31,		June 30,
	2004	2005	2006
			(unaudited)
Revolving Line-of-Credit Facilities:			

Euro Overdraft Facility	$ 3,259	$ 3,060	$ 4,870
U.S. Demand Line of Credit	400	1,000	1,500
IPFD Credit Facility (related party)	4,600	4,686	4,641
Total	$ 8,259	$ 8,746	$ 11,011

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IPG PHOTONICS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

	December 31, 2004	December 31, 2005	June 30, 2006 (unaudited)
Term Debt:			
U.S. Construction Loan	$ 6,347	$ 5,983	$ 5,790
Note Payable to Supplier	3,350		
Convertible Supplier Note	4,695	4,942	5,069
Euro Construction Loan	10,232	7,588	6,274
NTO Note Payable to IPFD (related party)	651	595	
Other term debt	6,179	6,973	7,135
Total term debt	31,454	26,081	24,268
Less current portion	(5,995)	(10,438)	(15,301)
Long-term debt	$ 25,459	$ 15,643	$ 8,967

Principal maturities of long-term debt as of December 31, 2005 are as follows (in thousands):

2006	$ 10,438
2007	8,306
2008	1,994
2009	1,866
2010	1,134
2011 and thereafter	2,343
Total	$ 26,081

Revolving Line-of-Credit Facilities:

Euro Overdraft Facility The Company maintains a syndicated overdraft facility with available principal of Euro 4,395,500 (approximately $5,205,000 at December 31, 2005). Of the total amount, Euro 2,395,500 (approximately $2,837,000 at December 31, 2005) is available through March 2010 and Euro 2,000,000 (approximately $2,369,000 at December 31, 2005) is available through September 2006. This facility bears interest at market rates that vary depending upon the principal outstanding (from 7.5% to 8.0% at December 31, 2005). This facility and the Euro Construction Loan are collateralized by a common pool of the assets of the German entity. A portion of this loan is partially guaranteed by the Company s largest stockholder. At December 31, 2005, the remaining availability under the Euro Overdraft Facility totaled $2,145,000.

U.S. Demand Line of Credit The Company maintains a credit line with available principal of 75% of eligible receivables, up to $3,000,000, on a revolving basis. This facility bears interest at a variable rate of LIBOR plus 4.0% (8.37% at December 31, 2005). The facility is payable upon demand, and collateralized by all the assets held by the U.S. parent company (including cross-collaterization by the assets securing the U.S. Construction Loan) and is senior to the IPFD Credit Facility and the Convertible Supplier Note, which is no longer outstanding. At December 31, 2005, the remaining availability under the U.S. Demand Line of Credit totaled $2,000,000.

Japanese Line of Credit In September 2005, the Company negotiated a credit line with available principal of 100% of eligible receivables, up to JPY 700,000,000 (approximately $5,939,000 at December 31, 2005), on a revolving basis. This facility bears interest at a fixed rate of 1.88% at

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December 31, 2005. The facility is renewable annually and collateralized by accounts receivable and inventory in Japan. There is no outstanding balance on the credit line at December 31, 2005.

IPFD Credit Facility The Company maintains a credit line with available principal of $4,600,000 on a revolving basis with its affiliate and stockholder, IPFD. Principal drawn under the facility bears interest at a rate equal to the three-month LIBOR rate in effect on the date of the drawdown plus 2%. The facility bears interest at a weighted-average rate of 3.5% at December 31, 2005. The commitment period ended in March 2006, and the outstanding principal is payable in 24 equal monthly installments with the first installment commencing January 1, 2007. The credit facility is secured by certain inventory and equipment in the U.S. At December 31, 2005, there was no remaining availability under the IPFD Credit Facility, and the outstanding balance included $86,000 of accrued interest, which was paid in January 2006. On July 31, 2006, the IPFD Credit Facility was paid down and terminated.

Term Debt:

U.S. Construction Loan Outstanding principal under the U.S. Construction Loan bears interest at a fixed rate of 7.9% and is collateralized by the real estate and building housing the Company s U.S. operations. The outstanding principal is being repaid on a monthly basis based upon a 20-year amortization schedule with a balloon payment due in January 2007. The U.S. Construction Loan contains certain covenants, including maintenance of specific financial ratios. Compliance with the financial covenants has been waived if the Company maintains cash on deposit with the bank equal to the principal amount of the loan. At December 31, 2004, the Company maintained with the bank, in a restricted cash account, an amount equal to the principal amount of the loan, totaling $6,348,000. As a result of a return to compliance with the financial covenants, the cash held in the restricted account was released in May 2005.

Note Payable to Supplier In connection with a settlement with a component supplier, who subsequently became a stockholder, the Company converted outstanding trade payables into a three-year note payable, bearing interest at 4.0%. The Company repaid the note in May 2005.

Convertible Supplier Note In connection with a settlement with a component supplier, who subsequently became a stockholder, the Company issued a note with a face value totaling $5,100,000. The note does not require any interest payments. Upon issuance in 2003, the Company recorded a discount totaling $726,000, reflecting imputed interest. During the years ended December 31, 2004 and 2005, imputed interest expense totaling $235,000 and $247,000, respectively, was accreted to the carrying value of the note. The Company can settle the note prior to August 2006 for cash totaling $5,100,000 or by issuing 2,684,211 shares of Series D preferred stock. Only upon a change in control of the Company or other events of default, the note can, at the option of the holder, be converted to 2,684,211 shares of Series D or immediately settled in cash. In August 2006, the note was fully settled in cash.

Euro Construction Loan The Company maintains a financing agreement with a syndicate of banks used to finance construction of a manufacturing facility in Germany and to meet the working capital needs of the German operation. Principal and interest payments are due semiannually through March 2010. Interest accrues at 5.25%. A portion of this loan is personally guaranteed by the Company s largest stockholder.

NTO Note Payable to IPFD At December 31, 2004 and 2005, there was an unsecured $560,000 note payable to IPFD, maturing in January 2006. Interest accrues at 4.4% annually. The principal balance includes $91,000 and $35,000 of accrued interest at December 31, 2004 and 2005, respectively. The note was repaid in May 2006.

Other Term Debt Other term debt consists principally of Euro-denominated notes payable with fixed and variable rates ranging from 4.2% to 6.5% and various maturities ranging from 2006 to 2019. At

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December 31, 2005, the amount includes a new Euro 1,780,000 (approximately $2,108,000 at December 31, 2005) mortgage negotiated in 2005 to finance part of the acquisition costs of a new building in Germany. These notes are collateralized by property, plant, and equipment in Germany. A portion of one loan, with a principal balance of $2,059,000, is personally guaranteed by the Company s largest stockholder.

7. CONVERTIBLE REDEEMABLE PREFERRED STOCK, PREFERRED STOCK AND WARRANTS

Preferred Stock The Company has authorized 15,000,000 shares of preferred stock, par value of $0.0001, of which 500,000 shares have been designated as Series A convertible preferred stock (the Series A), 3,800,000 shares have been designated as Series B convertible redeemable preferred stock (the Series B), and 5,400,000 shares have been designated as Series D convertible redeemable preferred stock (the Series D).

The rights and preferences of the outstanding preferred stock are as follows:

Dividends The holders of the Series A, Series B, and Series D are entitled to receive cumulative dividends at the rate paid on the common shares.

Liquidation In the event of any voluntary or involuntary liquidation or dissolution of the Company, each holder of the Series A, Series B, and Series D is entitled to be paid, before any distributions are made to the common stockholders or other junior stockholders, a liquidation preference. The holders of the Series A, Series B, and Series D also are entitled to receive their preference values in a merger of the Company. The holders of the Series A, Series B, and Series D are entitled to be paid an amount equal to the preference value of $10.00, $25.00 and $1.90 per share, respectively, plus, in each case, accrued and unpaid dividends. If the assets of the Company are not sufficient to generate cash sufficient to pay, in full, the Series A, Series B, and Series D preference values, the holders of the Series A, Series B, and Series D will be entitled to share ratably in any distribution of cash generated by assets in accordance with the respective amounts that would have been payable in such distribution if the amounts to which the holders of the Series A, Series B, and Series D are entitled were paid in full. After such distributions, the holders of the Series A and Series D do not participate in any further distributions. The holders of the Series B participate in further distributions available for the common shares in the amount that would have been payable per share if the Series B had been converted to common shares. If the total payout to the stockholders of the Series B exceeds $100.00 per share, the preference amount declines linearly from $25.00 per share to $0 as the participation amount payout increases from $100.00 to $125.00.

Voting Rights The holders of the Series A and Series D are entitled to vote as separate classes with respect to the matters regarding the respective rights and preferences of their class of shares. The holders of Series A are not entitled to vote on any other matters. The holders of the Series B and Series D are entitled to vote on matters with holders of common shares in an amount equal to the number of common shares into which the Series B and Series D are then convertible. The holders of Series B are also entitled to vote together as a separate class to elect one director of the Company. In addition, without approval of the majority of the Series B stockholders, the Company is restricted from issuing any equity security or convertible securities with equity participation ranking senior to the Series B, changing the nature of the Company s business, altering the Company s certificate of incorporation or by-laws with the effect of altering the rights of the Series B, increasing the authorized shares of Series B or, with certain exceptions, redeeming capital stock, or declaring or paying dividends, or making distributions of the Company s assets.

Redemption At the election of the holders of a majority of the outstanding Series B, the Company is obligated to redeem up to 33.3% after April 15, 2007, up to 66.7% after August 25, 2007, and

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up to 100% after August 25, 2008, of the outstanding Series B at a redemption price equal to $25.00 per share, plus accrued but unpaid dividends. In the event that the Company has insufficient funds to redeem the shares, the Series B will accrue interest at an annual rate equal to the prime rate, plus 3%, until redeemed. In the event that the holders of Series B exercise their redemption rights, the Series D holders are entitled to redeem their shares at a redemption price of $1.90 per share upon the same conditions and restrictions as the holders of Series B and at the same time as the holders of Series B.

The Series B is being accreted to its redemption value through the redemption dates. Accretion totaled $2,352,000, $2,351,000, and $2,351,000 for each of the years ended December 31, 2003, 2004, and 2005, respectively.

Conversion The Series A, Series B and Series D are convertible into the number of shares of common stock of the Company as is determined by dividing their respective preference values by their respective conversion values then in effect. As of December 31, 2005, the preference values of the Series A, Series B, and Series D are $10.00, $25.00 and $1.90 per share, respectively, and the conversion values are $9.10, $21.91 and $1.90 per share, respectively. Given the repayment of the Convertible Supplier Note in August 2006, the conversion prices of the preferred stock will be adjusted pursuant to the terms of the preferred stock (see Note 6). As of December 31, 2005, the Series A, Series B, and Series D are convertible at the holder s option at any time. In December 2005 and January 2006, the conversion rights and obligations of the Series B and Series A, respectively, were amended to modify their automatic conversion right into common shares upon public offerings which meet specific conditions.

Upon a public offering generating gross proceeds to the Company of at least $35,000,000, at or above $3.00 per share, and if the common shares are listed on the New York Stock Exchange or the NASDAQ National Market, all Series A automatically convert into common stock at the lower of the conversion price then in effect or the offering price to the public. Upon a qualified public offering, all of the Series B automatically converts into subordinated debt and common shares. A qualified public offering is one (i) that generates gross proceeds to the Company of at least $75,000,000, (ii) that offers the shares at or above a $3.00 per share price, (iii) that is listed for trading on the New York Stock Exchange or the NASDAQ National Market, and (iv) in which all of the Series B Warrants are repurchased by the Company or the holders of the Series B Warrants are permitted to net exercise and sell the underlying shares in the offering. In a qualified public offering, the Series B receive value equal to the greater of (A) what the Series B would have received if the Company were sold at the public offering price, and (B) what the Series B would have received if it converted upon the public offering at these conversion prices (x) if the offering price per share is between $3.00 and $25.00, the conversion price is $10.00; (y) if the offering price per share is between $25.01 and $62.49, the conversion price is the price to the public divided by a factor of 2.5, and (z) if the price to the public is more than $62.50, the conversion price is $25.00. The value that the Series B receive upon a qualified public offering consists of subordinated three-year notes totaling $20,000,000 in principal amount and the remainder in common stock. The notes bear interest at the greater of the short-term applicable federal rate or 4% in the first year, 7% in the second year, and 10% in the third year.

With respect to the Series D, upon (i) a public offering at a share price at or above $1.90 per share or a merger or sale of the Company in which the holders of the Series D would be entitled to $1.90 per share or more, in each case, or such lesser amount approved by the Series A and Series B holders, provided that those holders convert or receive a lesser amount in such transaction, or (ii) the conversion of all of the Series A and Series B, all Series D then outstanding automatically converts into common stock.

At December 31, 2005, the Series A, Series B, and Series D were convertible into 536,264, 4,335,920, and 2,684,211 shares of common stock, respectively.

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The issuance of certain shares of common stock and the Series D in 2003 resulted in an adjustment to the conversion ratios of the Series A and Series B, and such price protection or antidilution features constitute a contingent beneficial conversion feature in the Series A and Series B. The Company recorded a beneficial conversion charge (deemed dividend) of approximately $5,242,000 in 2003 arising from these contingent beneficial conversion features. Future issuances of equity instruments that are deemed to be antidilutive to the holders of the Series A and Series B will result in additional beneficial conversion charges (deemed dividends).

During 2004, two employees exercised 120,000 stock options and paid the exercise price with 12,000 shares of Series A.

Investor Rights The holders of Series A, Series B, and Series D and certain other stockholders have certain co-sale rights and drag-along obligations upon the sale of shares by the founders, as well as demand and piggy-back registration rights as described in their respective agreements.

Warrants In connection with the issuance of the Series B, the Company issued Series B Warrants to purchase, in the aggregate, $47,500,000 of the Company s common stock at an equivalent per-share price of 50% of the fair value on the date of an initial public offering of common stock or the sale, merger or liquidation of the Company. The Warrants are exercisable only upon the merger or liquidation of the Company, the sale of all of the Company s assets or stock or an underwritten initial public offering of the Company s common stock. In December 2005, the term of the warrants was extended from August 30, 2007 to April 15, 2008, and the Company obtained the right to repurchase them for $23,750,000, less underwriting discount and fees applicable to an initial public offering of shares. The Series B Warrants constitute freestanding derivatives that are accounted for as liabilities at fair value, which is estimated to be $13,899,000 and $14,644,000, at December 31, 2004 and 2005, respectively. As freestanding derivative instruments, changes in fair value of the Series B Warrants are recognized in earnings and reported as other income (expense). For the years ended December 31, 2003, 2004, and 2005, the fair value of the Series B Warrants increased by $3,664,000, $615,000, and $745,000, respectively.

Reserved Shares In addition to the shares of common stock reserved for issuance under the Company s stock option plan, the Company agreed to reserve a sufficient number of shares of common stock for potential conversion of the Series A, Series B, and Series D and for the exercise of outstanding warrants to purchase common stock.

Notes Receivable From Issuances of Shares The Company has received notes from an individual in connection with this individual s exercise of 190,000 nonqualified stock options in March 2000, as well as the issuance of 250,000 shares of common stock in connection with professional services. This individual later became a member of the Company s Board of Directors. The notes receivable have principal balances of $190,000 and $250,000, accruing interest at 1.68% and 1.52%, respectively, and are collateralized by 490,000 shares of the Company s common stock. In September 2003, the loans to this individual were converted from recourse to nonrecourse, resulting in a stock-based compensation charge totaling $496,000 in 2003. Subsequent to the September 2003 modification, the shares of restricted stock underlying these loans, along with any newly issued loans granted in connection with stock-based compensation arrangements, require variable plan accounting. The appreciation in the fair value of the underlying common stock was such that the total compensation calculated was less than the cumulative amount previously recognized under fair value accounting and no further compensation expense was recorded in the years ended December 31, 2003, 2004, and 2005.

During 2001, an employee exercised stock options and paid the exercise price and taxes with a nonrecourse note payable in a principal amount of $23,000 with a weighted-average interest rate of 4.76%.

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The notes receivable are presented in the consolidated balance sheets as an increase in stockholders deficit. Interest income recognized from these notes totaled approximately $12,000, $10,000, and $8,000 during the years ended December 31, 2003, 2004, and 2005, respectively.

In July and August 2006, the loans and accrued interest, with the exception of one loan with a principal balance of $23,000, were settled.

Minority Interests Minority interests reported in the accompanying consolidated financial statements consist of the 20% of IPG Fibertech S.r.l., Italy (Fibertech) held by the management of Fibertech; 49% of NTO IRE-POLUS, Russia (NTO) held by certain Company employees and other parties; 20% of IPG Photonics (Japan) Ltd., Japan (IPG Japan) held by the Company s Japanese distributor which also holds shares of the Company s common stock; and 10% of IPG Photonics (Korea) (IPG Korea) held by the management of IPG Korea. During 2004 and 2005, the minority stockholders of IPG Korea and IPG Japan contributed $142,000 and $11,000, respectively, in capital in connection with the formation of those companies.

8. RELATED-PARTY TRANSACTIONS

In 2001, the Company loaned three officers of the Company, including the Company s chief executive officer, a total of $6,736,000, bearing interest as of December 31, 2005, at a weighted-average interest rate of 2.15%. In July 2003, $1,681,000 in outstanding principal and interest was repaid by the chief executive officer. In January 2006, a former officer repaid $786,000 principal and $249,000 accrued interest to the Company. Interest earned and accrued on such loans totaled $233,000 during 2003, $127,000 during 2004, and $130,000 in 2005, and has been included in the carrying value of the loans.

At December 31, 2004 and 2005, the Company had an amount payable to IPFD totaling $4,600,000 and $4,686,000, respectively, under the IPFD Credit Facility discussed in Note 4. Interest expense on the IPFD Credit Facility totaled $106,000, $156,000 and $161,000 for the years ended December 31, 2003 2004, and 2005, respectively. In addition, during 2004, the Company purchased optical components from IPFD for $297,000.

At December 31, 2004 and 2005, there was a $560,000 note payable to IPFD from NTO, maturing on December 31, 2007. Interest expense, accruing at 4.4% annually, for the years ended December 31, 2003, 2004, and 2005 totaled $30,000, $20,000, and $25,000, respectively, and has been included in the carrying value of the note.

On July 31, 2006, IPFD purchased from the chief executive officer 1,156,005 shares of the Company s common stock in exchange for $357,000 in cash and $4.6 million in the form of the assignment of the amounts due under the IPFD Credit Facility. Simultaneously, the Company exchanged with the chief executive officer the note due from him with a remaining principal amount of $5.0 million for $357,000 in cash and $4.6 million in the form of the assignment of amounts due under the IPFD Credit Facility. As a result of these transactions, the IPFD Credit Facility and the note receivable from the chief executive officer were fully repaid and were no longer outstanding.

In addition, the remaining principal and accrued interest due from the other officers were repaid in August 2006.

In November 2003, NTO advanced $175,000 to an officer of the Company. The loan was secured by real property. In 2004, the officer repaid $103,000 and, in 2005, the remaining outstanding principal of $72,000 was repaid.

In November 2004, the chief executive officer provided a personal guarantee for the U.S. Demand Line of Credit for the Company. In consideration of the personal guarantee, the Company approved a guarantee fee to the executive equal to interest on his loan from the Company (with a tax gross-up) for

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each quarter that the U.S. Demand Line of Credit is outstanding. The Company paid $16,000 in 2004 and $136,000 in 2005 related to the guarantee fee.

The Company leased office space from IPFD and reimbursed IPFD for general and administrative expenses. The costs related to the lease and services totaled $115,000, $148,000 and $116,000 in 2003, 2004 and 2005, respectively.

At December 31, 2004, the Company had an amount payable under the Convertible Supplier Note totaling $3,349,000 as discussed in Note 6. Interest expense on the Convertible Supplier Note totaled $91,000, $187,000 and $45,000 for the years ended December 31, 2003, 2004, and 2005, respectively. The Company repaid the total amount of outstanding principal and accrued interest in May 2005.

In November 2004, the minority stockholder advanced $970,000 to IPG Japan, which has been reported in the consolidated balance sheet under the caption accrued expenses and other liabilities. In February 2005, the amount was repaid to the minority stockholder.

9. NET INCOME (LOSS) PER SHARE

The Company follows EITF 03-6, *Participating Securities and the Two-Class Method under FASB Statement 128* (EITF 03-6), which established standards regarding the computation of net income (loss) per share by companies that have issued securities other than common stock that contractually entitle the holder to participate in dividends and earnings of the company. EITF 03-6 requires earnings available to common stockholders for the period, after deduction of preferred stock accretion and deemed dividends related to beneficial conversion features, to be allocated between the common and convertible securities based on their respective rights to receive dividends. Basic net income (loss) per share is then calculated by dividing income (loss) applicable to common stockholders by the weighted average number of shares outstanding. The Company s preferred stock does not participate in losses, and therefore is not included in the computation of net loss per share, as applicable. EITF 03-6 does not require the presentation of basic and diluted net income (loss) per share for securities other than common stock; therefore, the following per share amounts only pertain to the Company s common stock.

The Company calculates diluted net income (loss) per share under the if-converted method unless the conversion of the convertible preferred stock is anti-dilutive to basic net income (loss) per share. To the extent convertible preferred stock is anti-dilutive, the Company calculates diluted net income (loss) per share under the two-class method to include the effect of potential common shares.

The share count used to compute basic and diluted net income (loss) per share is calculated as follows (in thousands):

	Year Ended December 31,			Six Months Ended June 30,	
	2003	2004	2005	2005	2006
				(unaudited)	
Weighted-average common shares outstanding used to compute basic net income per share	38,302	38,547	39,348	39,008	40,385
Add dilutive common equivalents:					
Stock options					3,295
Series A preferred stock if converted			536	536	536
Series B preferred stock if converted					
Series D preferred stock if converted			2,684	2,684	2,684
Convertible supplier note payable if converted			2,684	2,684	2,684

Shares used to compute diluted net income per share	38,302	38,547	45,252	44,912	49,584

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The following is a summary of the securities outstanding during the respective periods that have been excluded from the calculations because the effect on net income (loss) per share would have been anti-dilutive (in thousands):

	Year Ended December 31,			Six Months Ended June 30,	
	2003	2004	2005	2005	2006
				(unaudited)	
Stock options	4,324	5,730	5,880	5,606	964
Series A preferred stock if converted	549	549			
Series B preferred stock if converted	4,336	4,336	4,336	4,336	4,377
Series D preferred stock if converted	2,684	2,684			
Convertible supplier note payable if converted	2,684	2,684			

The Series B Warrants are only exercisable upon the completion of an initial public offering of the Company s common stock or the sale, liquidation, or merger of the Company and, as such, any shares that would be issued upon the exercise of the Series B Warrants have been excluded from the computations of net income (loss) per share for all periods presented.

The following table sets forth the computation of basic and diluted net income (loss) per share (in thousands, except per share data):

	Year Ended December 31,			Six Months Ended June 30,	
	2003	2004	2005	2005	2006
				(unaudited)	
Calculation of basic net income per share two-class method:					
Net income (loss)	$ (28,210)	$ 2,012	$ 7,427	$ 2,150	$ 6,118
Accretion of series B preferred stock	(2,352)	(2,351)	(2,351)	(1,176)	(1,037)
Beneficial conversion feature	(5,242)				
Subtotal	$ (35,804)	$ (339)	$ 5,076	$ 974	$ 5,081
Percent of net income (loss) allocable to common stockholders	100%	100%	84%	84%	84%
Net income (loss) allocable to common stockholders	(35,804)	(339)	4,258	816	4,277
Weighted average common shares outstanding	38,302	38,547	39,348	39,008	40,385
Basic net income (loss) per share two-class method	$ (0.93)	$ (0.01)	$ 0.11	$ 0.02	$ 0.11
Calculation of diluted net income per share:					
Net income (loss) allocable to common stockholders	$ (35,804)	$ (339)	$ 4,258	$ 816	$ 4,277

Interest expense on convertible supplier note payable			247	121	127
Net income allocable to anti-dilutive convertible preferred			349	67	341
Net income (loss)	(35,804)	(339)	4,854	1,004	4,745
Weighted average diluted shares outstanding	38,302	38,547	45,252	44,912	49,584
Diluted net income (loss) per share	$ (0.93)	$ (0.01)	$ 0.11	$ 0.02	$ 0.10

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	Year Ended December 31,			Six Months Ended June 30,	
	2003	2004	2005	2005	2006
				(unaudited)	
Weighted average common shares outstanding	38,302	38,547	39,348	39,008	40,385
Weighted average dilutive convertible preferred stock			3,220	3,220	3,220
Weighted average anti-dilutive convertible preferred stock outstanding	5,589	7,569	4,336	4,336	4,377
Weighted average common shares and preferred shares outstanding	43,891	46,116	46,904	46,564	47,982
Percent of net income (loss) allocable to common stockholders	87%	84%	84%	84%	84%
Percent of net income (loss) allocable to dilutive convertible preferred stockholders	0%	0%	7%	7%	7%

10. COMMITMENTS AND CONTINGENCIES

Operating Leases The Company leases certain facilities under cancelable and noncancelable operating lease agreements which expire through June 2010. In addition, the Company leases capital equipment under several operating leases. Rent expense for the years ended December 31, 2003, 2004, and 2005, totaled $263,000, $633,000, and $570,000, respectively.

Commitments under the noncancelable lease agreements as of December 31, 2005, are as follows (in thousands):

Years Ending December 31	Facilities	Equipment	Total
2006	$ 406	$ 688	$ 1,094
2007	373	414	787
2008	370	132	502
2009	367	23	390
2010	321	17	338
2011	275		275
Total	$ 2,112	$ 1,274	$ 3,386

Employment Agreements The Company has entered into employment agreements with certain members of senior management. The terms of these agreements are up to two years and include noncompete and nondisclosure provisions, as well as provide for defined severance payments in the event of termination.

Product Sales Agreement In August 2003, the Company settled a contract dispute and related litigation with a component supplier. Under the terms of the settlement, the Company entered into two supply agreements, pursuant to which (a) the Company agreed to sell to the component supplier certain products at discounted amounts and (b) the Company agreed to purchase from the component supplier certain percentages (but not fixed dollar amounts) of the

Company s external requirements, if any, for specified components for five years. The Company sold products to the supplier totaling $119,000 in 2005, $189,000 in 2004, and $38,000 in 2003.

Other In 2004, the German tax authorities commenced a review of the Company s German income tax filings for the years 1999 through 2002. Management does not believe that any adjustments to amounts previously reported on the Company s German income tax returns will have a material impact on the Company s consolidated financial position or results of operations.

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11. LEGAL PROCEEDINGS

In April 2005, the Company was sued for patent infringement relating to optical fiber. The plaintiff has made a complaint with unspecified damages. The Company answered the complaint on June 2, 2005, and filed a counterclaim, denying infringement and raising additional defenses. On the same day, the plaintiff in the case filed its complaint, the plaintiff requested that the United States Patent and Trademark Office reexamine the plaintiff s patent, and the patent office granted that request. In view of the pending reexamination, the litigation was stayed until the conclusion of the patent office reexamination. The patent expires in January 2011. The Company believes it has meritorious defenses and intends to vigorously contest the claims after the patent office concludes the reexamination and the stay of litigation is lifted. As such, no amounts have been accrued in respect of this contingency.

In June 2006, another company filed a claim against the Company alleging infringement of a United States patent related to diode pumping of single mode core optical fibers. The plaintiff in this case seeks damages of over $20.0 million, treble damages and injunctive relief. The patent expires in June 2007. The Company believes it has meritorious defenses and intends to vigorously contest the claims. As such, no amounts have been accrued in respect of this contingency.

12. EMPLOYEE BENEFIT PLANS

Retirement Savings Plan The Company maintains a 401(k) retirement savings plan covering all of its U.S. employees. The Company makes matching contributions equal to 50% of the employee s pretax contributions, subject to a maximum of 6% of eligible compensation. Compensation expense related to the Company s contribution to the plan for each of the years ended December 31, 2003, 2004, and 2005, approximated $110,000, $157,000, and $263,000, respectively.

Employee Stock Option Plan In March 2000, the stockholders approved the Company s 2000 Incentive Compensation Plan (the Plan). At December 31, 2005, 8,750,000 common shares have been reserved for grant under the Plan and 211,168 shares remain available for future grants under the Plan. Options are subject to the vesting provisions associated with each grant. These provisions generally provide for vesting on a straight-line basis over four years. All options expire 10 years from the date of grant.

Compensation expense related to options previously awarded (primarily during the year ended December 31, 2000) was deferred and amortized over the vesting period. During the years ended December 31, 2003 and 2004, the Company recorded $2,203,000 and $903,000, respectively, of compensation expense for these awards. No deferred compensation remained at December 31, 2004 related to any awards granted prior to January 1, 2005.

During the year ended December 31, 2005, the Company awarded options to purchase 947,000 shares of the Company s common stock that were deemed to have an intrinsic value aggregating $118,000. Compensation expense for these awards has been deferred and is being amortized on a straight-line basis over the vesting period, which is generally four years. During the year ended December 31, 2005, the Company recorded $7,000 of compensation expense related to the 2005 awards and will record approximately $29,000 annually through 2009.

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IPG PHOTONICS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The following table presents a summary of the option activity and related information:

		Number of Options	Weighted-Average Exercise Price
Outstanding	January 1, 2003	3,311,996	$ 1.03
Granted		2,148,976	1.00
Exercised		(2,375)	1.07
Forfeited		(1,134,925)	1.01
Outstanding	December 31, 2003	4,323,672	1.02
Granted		2,036,949	1.00
Exercised		(445,451)	0.87
Forfeited		(184,755)	1.00
Outstanding	December 31, 2004	5,730,415	1.02
Granted		1,252,000	1.19
Exercised		(1,001,454)	1.00
Forfeited		(101,383)	1.00
Outstanding	December 31, 2005	5,879,578	$ 1.06

The weighted-average minimum value of the options granted to employees in 2005 was $0.26 and in 2004 and 2003 was less than $0.01.

Additional information regarding options outstanding at December 31, 2005, is as follows:

Exercise Price	Number Outstanding	Weighted-Average Remaining Contractual Life (Years)	Number Exercisable at December 31, 2005	2004	2003
$1.00	4,876,148	7.11	3,594,278	4,018,628	48,526
1.25	947,000	9.74			2,359,849
2.57	5,830	5.28	5,830	5,830	4,373
3.00	25,700	5.85	25,700	19,800	13,750
3.50	24,900	4.60	24,900	24,900	23,675
	5,879,578		3,650,708	4,069,158	2,450,173

13. INCOME TAXES

The (loss) income before the impact of income taxes and minority interests in consolidated subsidiaries for the years ended December 31, 2003, 2004, and 2005, consisted of the following (in thousands):

	2003	2004	2005

U.S.	$ (21,040)	$ (1,637)	$ 1,211
Foreign	(9,496)	2,128	10,722
Total	$ (30,536)	$ 491	$ 11,933

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IPG PHOTONICS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The Company s benefit from (provision for) income taxes for the years ended December 31, 2003, 2004, and 2005, consisted of the following (in thousands):

	2003	2004	2005
Current:			
U.S.	$	$ 1,569	$
Foreign	(331)	(430)	(1,348)
Total current	(331)	1,139	(1,348)
Deferred:			
Federal	5,280	(189)	(682)
State	337	(97)	(56)
Foreign	2,536	586	(2,992)
Change in valuation allowance	(5,617)	162	998
Total deferred	2,536	462	(2,732)
Benefit from (provision for) income taxes	$ 2,205	$ 1,601	$ (4,080)

During 2004, the Company completed audits performed by the Internal Revenue Service for the years ended 2000 and 2001. The completion of the audits allowed the Company to release $1,569,000 of accrued tax contingencies related to those years under audit. In addition, the benefit from (provision for) income taxes is different from that which would be obtained by applying the statutory federal income tax rate to income before income taxes due primarily to the valuation allowance that has been provided against the net operating losses that are not deemed to be recoverable. The change in the valuation allowance from 2004 to 2005 reflects the utilization of the deductions associated with inventory provisions that had previously been fully reserved.

A reconciliation of income tax expense at the U.S. federal statutory income tax rate to the recorded tax benefit (provision) is as follows:

	2003	2004	2005
Tax at statutory rate	$ 10,517	$ (167)	$ (4,057)
Non-U.S. rate differential net	(1,010)	492	(658)
State income taxes net	337	97	(18)
Resolution of prior year tax contingencies and reserves		1,569	
Fair value adjustment to series B warrants	(1,246)	(209)	(253)
Stock compensation expense	(749)	(307)	
Change in valuation allowance	(5,617)	162	998
Other net	(27)	(36)	(92)
	$ 2,205	$ 1,601	$ (4,080)

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IPG PHOTONICS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities at December 31, 2004 and 2005 are as follows (in thousands):

	2004	2005
Property, plant, and equipment	$ (918)	$ (790)
Inventory provisions	6,779	4,961
Allowances and accrued liabilities	2,832	3,433
Other tax credits	1,055	1,056
Net operating loss carryforwards	17,050	13,654
Valuation allowance	(20,389)	(19,391)
Net deferred tax assets	$ 6,409	$ 2,923

As of December 31, 2005, the Company has U.S. federal and state tax net operating loss carryforwards available for future periods of approximately $25,535,000 and $34,164,000. The federal tax and state net operating loss carryforwards begin expiring in 2022 and 2006, respectively. The Company has a net operating loss carryforward in Germany totaling $6,648,000, which may be carried forward indefinitely.

14. GEOGRAPHIC AND PRODUCT INFORMATION

The Company markets and sells its products throughout the world through both direct sales and distribution channels. The geographic sources of the Company s net sales, based on billing addresses of the Company s customers, for the years ended December 31, 2003, 2004, and 2005, are as follows (in thousands):

	2003	2004	2005
United States and other North America	$ 10,349	$ 20,911	$ 38,512
South America	16		
Europe:			
Germany	7,583	11,898	13,137
Other including Eastern Europe/ CIS	5,380	7,441	10,745
Asia and Australia:			
Japan	10,412	16,022	25,354
Other		4,210	8,215
Rest of the World		225	422
Total	$ 33,740	$ 60,707	$ 96,385

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IPG PHOTONICS CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Sales are derived from products for different applications: fiber lasers and diode lasers for materials processing, fiber amplifiers for communications applications, fiber lasers for medical applications, and fiber lasers and amplifiers for advanced applications. Net sales for the years ended December 31, 2003, 2004, and 2005, for these product lines are as follows (in thousands):

	2003	2004	2005
Materials processing	$ 23,685	$ 41,990	$ 60,399
Communications	5,250	9,697	15,751
Medical	181	1,544	7,422
Advanced applications	4,624	7,476	12,813
Total	$ 33,740	$ 60,707	$ 96,385

The Company has one customer that individually comprised 17%, 20%, and 13% of net sales during the years ended December 31, 2003, 2004, and 2005, respectively. Accounts receivable related to this customer totaled approximately 13% and 18% of the net accounts receivable balance at December 31, 2004, and 2005, respectively.

The geographic location of the Company s long-lived assets, based on physical location of the assets, as of December 31, 2004 and 2005, is as follows (in thousands):

	2004	2005
United States	$ 23,391	$ 27,071
Germany	21,024	22,107
Russia	1,344	1,438
Other	223	379
	$ 45,982	$ 50,995

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Through and including , 2006 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

Shares

Common Stock

PROSPECTUS

Joint Book-Running Managers

Merrill Lynch & Co. **Lehman Brothers**

Needham & Company, LLC
Jefferies & Company
Thomas Weisel Partners LLC

, 2006

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PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 13. ***Other Expenses of Issuance and Distribution.***

The following table sets forth the costs and expenses, other than the underwriting discount, payable by us in connection with the sale of common stock being registered. All amounts are estimated except the SEC registration fee and the NASD filing fee.

		Amount to be Paid
SEC registration fee	$	13,910
National Association of Securities Dealers Inc. fee		13,500
Nasdaq Global Market listing fee		5,000
Printing and mailing		150,000
Legal fees and expenses		
Accounting fees and expenses		
Directors and officers insurance		700,000
Miscellaneous		
Total	$	

ITEM 14. ***Indemnification of Directors and Officers.***

Section 145(a) of the Delaware General Corporation Law provides, in general, that a corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation), because he or she is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding, if he or she acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful.

Section 145(b) of the Delaware General Corporation Law provides, in general, that a corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor because the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys fees) actually and reasonably incurred by the person in connection with the defense or settlement of such action or suit if he or she acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation, except that no indemnification shall be made with respect to any claim, issue or matter as to which he or she shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, he or she is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or other adjudicating court shall deem proper.

Section 145(g) of the Delaware General Corporation Law provides, in general, that a corporation may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer,

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employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of his or her status as such, whether or not the corporation would have the power to indemnify the person against such liability under Section 145 of the Delaware General Corporation Law.

Article VIII of our Amended and Restated Certificate of Incorporation that will become effective upon the closing of the offering (Charter) provides that no director of our company shall be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duty as a director. This provision does not eliminate or limit the liability of any of our directors or officers (1) for any breach of the director s duty of loyalty to us or our stockholders, (2) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (3) in respect of unlawful dividend payments or stock redemptions or repurchases or (4) for any transaction from which the director derived an improper personal benefit. In addition, our Charter provides that if the Delaware General Corporation Law is amended to authorize the further elimination or limitation of the liability of directors, then the liability of a director of our company shall be eliminated or limited to the fullest extent permitted by the Delaware General Corporation Law, as so amended.

Article VIII of the Charter further provides that any repeal or modification of such article by our stockholders or an amendment to the Delaware General Corporation Law will not adversely affect any right or protection existing at the time of such repeal or modification with respect to any acts or omissions occurring before such repeal or modification of a director serving at the time of such repeal or modification.

Article VI of the Charter and Section X of our Amended and Restated By-laws that will become effective upon the closing of the offering (By-laws) provide that, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, we will indemnify any person (Covered Person) who was or is made or is threatened to be made a party or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (proceeding), by reason of the fact that he or she, or a person for whom he or she is the legal representative, is or was a director or officer of the company or, while a director or officer of the company, is or was serving at the request of the company as a director, officer, employee or agent of another company or of a partnership, joint venture, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys fees) reasonably incurred by such Covered Person. However, we will be required to indemnify a Covered Person in connection with a proceeding (or part thereof) commenced by such Covered Person only if the commencement of such proceeding (or part thereof) by the Covered Person was authorized in the specific case by our board of directors.

In addition, Article VI of the Charter and Section X of the By-laws provide that the right of each of our directors and officers to indemnification and advancement of expenses shall not be exclusive of any other right now possessed or hereafter acquired under any statute, provision of the Charter or By-laws, agreement, vote of stockholders or otherwise.

We have entered into indemnification agreements with each of our directors and executive officers. These agreements provide that we will indemnify each of our directors and executive officers to the fullest extent permitted by law. In addition, our stock purchase agreement with the holders of our series B preferred stock provides indemnification to those holders, including TA Associates and its associated investment funds, for damages, expenses or losses arising out of, based upon or by reason of any third party or governmental claims relating to their status as a security holder, creditor, director, officer, agent, representative or controlling person of our company, or otherwise relating to their involvement with us.

We also maintain a general liability insurance policy which covers certain liabilities of directors and officers of our company arising out of claims based on acts or omissions in their capacities as directors or officers.

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In any underwriting agreement we enter into in connection with the sale of common stock being registered hereby, the underwriters will agree to indemnify, under certain conditions, us, our directors, our officers and persons who control us within the meaning of the Securities Act, as amended, against certain liabilities.

ITEM 15. ***Recent Sales of Unregistered Securities.***

During the past three years, we have sold and issued the following unregistered securities:

(1) On December 15, 2004, we sold 99,000 shares of our common stock to Sujay Shetty, an individual, in exchange for 277,000 shares of IPG Photonics (India) Private Limited;

(2) On August 13, 2003, in connection with the settlement of a litigation between us and JDS Uniphase Corporation (JDSU), we issued to JDSU 2,684,211 shares of our series D preferred stock having an aggregate liquidation value of $5,100,000, which shares are convertible into up to 2,684,211 shares of our common stock, and we issued to JDSU a subordinated convertible note in the principal amount of $5,100,000, which note was convertible into 2,684,211 shares of our series D preferred stock and was repaid in August 2006;

(3) On April 4, 2003, we sold 500,000 shares of our common stock to TEM Incorporated for $1,000,000; and

(4) Since January 1, 2003, we have granted options to purchase 7,134,350 shares of our common stock at exercise prices ranging from $1.00 to $4.30 per share to employees, consultants and directors under our 2000 Incentive Compensation Plan, our 2006 Incentive Compensation Plan and our Non-Employee Directors Stock Plan. Since January 1, 2003, we have issued 2,344,032 shares of our common stock pursuant to the exercise of stock options for aggregate consideration of $2.3 million.

Each of the sales described above was effected without registration under the Securities Act in reliance upon Section 4(2) of the Securities Act and/or Rule 701 promulgated under the Securities Act. None of the sales of the securities that we issued have involved the use of an underwriter, and no commissions were paid in connection with the sale of any of the securities that we issued.

ITEM 16. ***Exhibits.***

(a) See the Exhibit Index on the page immediately preceding the exhibits for a list of exhibits filed as part of this registration statement on Form S-1, which Exhibit Index is incorporated herein by reference.

(b) Financial Statement Schedules

All schedules have been omitted because they are not applicable.

ITEM 17. ***Undertakings.***

The undersigned registrant hereby undertakes to provide to the underwriter at the closing specified in the underwriting agreements certificates in such denominations and registered in such names as required by the underwriter to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the

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opinion of its counsel the matter has been settled by the controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of Prospectus filed as part of this Registration Statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4), or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the town of Oxford, Commonwealth of Massachusetts, on August 11, 2006.

IPG Photonics Corporation
By: /s/ Valentin P. Gapontsev

Valentin P. Gapontsev
Chief Executive Officer and
Chairman of the Board

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Valentin P. Gapontsev as such person s true and lawful attorney-in-fact and agent, with full power of substitution and revocation, for such person and in such person s name, place and stead, in any and all capacities to sign any and all amendments (including post-effective amendments) to this Registration Statement, and to file the same with all exhibits thereto, and the other documents in connection therewith, and any registration statement relating to any offering made pursuant to this Registration Statement that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and things requisite and necessary to be done, as fully to all intents and purposes as such person might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the town of Oxford, Commonwealth of Massachusetts, on August 11, 2006.

Signature	**Title**
/s/ Valentin P. Gapontsev Valentin P. Gapontsev	Chief Executive Officer, Chairman of the Board and Director (Principal Executive Officer)
/s/ Timothy P.V. Mammen Timothy P.V. Mammen	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)
/s/ Robert A. Blair Robert A. Blair	Director
/s/ Michael C. Child Michael C. Child	Director
/s/ John H. Dalton John H. Dalton	Director

/s/ Henry E. Gauthier	Director
Henry E. Gauthier	

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Signature	Title
/s/ William S. Hurley	Director
William S. Hurley	
/s/ William F. Krupke	Director
William F. Krupke	
/s/ Eugene Shcherbakov	Director
Eugene Shcherbakov	
/s/ Igor Samartsev	Director
Igor Samartsev	

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EXHIBIT INDEX

Number	Description
1.1	Form of Underwriting Agreement*
3.1	Amended and Restated Certificate of Incorporation of the Registrant
3.2	Form of Second Amended and Restated Certificate of Incorporation of the Registrant, to be effective at the completion of this offering
3.3	By-laws of the Registrant
3.4	Form of Amended and Restated By-laws of the Registrant, to be effective at the completion of this offering
4.1	Specimen Stock Certificate*
4.2	Registration Rights Agreement by and among the Registrant and the Investors named therein, dated as of August 30, 2000, as amended
4.3	Registration Rights Agreement by and among the Registrant and JDS Uniphase Corporation, dated as of August 13, 2003, as amended
5.1	Opinion of Winston & Strawn LLP*
10.1	2000 Incentive Compensation Plan
10.2	2006 Incentive Compensation Plan
10.3	Non-Employee Directors Compensation Plan
10.4	Non-Employee Directors Stock Plan
10.5	Senior Executive Short-Term Incentive Plan
10.6	Form of Subordinated Note of the Registrant to be issued to holders of series B preferred stock
10.7	Form of Warrant to Purchase Common Stock of the Registrant issued to holders of series B preferred stock, as amended
10.8	Employment Agreement by and between the Registrant and Valentin P. Gapontsev, dated as of March 1, 2006
10.9	Service Agreement by and between the Registrant and Eugene Shcherbakov, dated as of March 1, 2006
10.10	Employment Agreement by and between the Registrant and Tim Mammen, dated as of March 1, 2006
10.11	Employment Agreement by and between the Registrant and Angelo P. Lopresti, dated as of March 1, 2006
10.12	Employment Agreement by and between the Registrant and Denis Gapontsev, dated as of March 1, 2006
10.13	Form of Indemnification Agreement between the Registrant and each of its Directors and Executive Officers
10.14	Form of Stock Option Agreement under the 2000 Incentive Compensation Plan
10.15	Form of Stock Option Agreement under the 2006 Incentive Compensation Plan
10.16	Form of Stock Option Agreement under the 2006 Non-Employee Directors Stock Plan
10.17	Form of Confidentiality, Non-Competition and Confirmatory Assignment Agreement
10.18	Construction Loan Agreement, dated as of April 28, 2000, between the Registrant and Family Bank, FSB, as amended
10.19	Loan and Security Agreement, dated as of November 15, 2004, between the Registrant and BankNorth, N.A. as Lender, as amended
21.1	List of Subsidiaries
23.1	Consent of Deloitte & Touche LLP
23.2	Consent of Winston & Strawn LLP (included in Exhibit 5.1)*

24.1	Power of Attorney (included on signature page)

* To be filed by amendment.