IPG PHOTONICS CORP
Form S-1/A
December 04, 2006

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As filed with the Securities and Exchange Commission on December 4, 2006
Registration No. 333-136521

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

Amendment No. 5
to
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

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

9,000,000 Shares
Common Stock

This is IPG Photonics Corporation s initial public offering of its common stock. We are offering 6,241,379 shares of common stock. The selling stockholders named in this prospectus, including our chairman and chief executive officer, two other members of our board of directors and entities affiliated with Merrill Lynch & Co., one of the underwriters participating in this offering, are offering an additional 2,758,621 shares of common stock. We expect the public offering price to be between $13.50 and $15.50 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 1,350,000 shares of common stock from the selling stockholders 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.

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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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 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.

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.

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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 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 generally lower total cost of ownership compared to CO_2 and crystal 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. For the nine months ended September 30, 2006, we reported net sales of $101.1 million and net income of $12.6 million.

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, South 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, a technology that has the potential to displace traditional laser technologies and processes because it constitutes a fundamental shift, not merely an incremental advance, in laser technology. 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.

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

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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.

Notwithstanding the benefits offered by fiber lasers, there remain applications and processes where traditional laser technologies may provide superior performance with respect to particular features. For example, crystal lasers can provide higher peak power pulses and fiber lasers do not generate the deep ultraviolet light that is used for photolithography in many semiconductor applications.

According to Strategies Unlimited, sales of fiber lasers are estimated to grow at a compound annual growth rate of approximately 39%, from $131 million in 2005 to $674 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, 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 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:

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

Acceptance and Rate of Penetration. 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.

Effectively Managing Our Growth. We may not be able to effectively manage our growth, which may harm our business and operating results.

High Levels of Fixed Costs. 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.

Intellectual Property Infringement Claims. 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	6,241,379 shares
Common stock offered by the selling stockholders	2,758,621 shares
Common stock to be outstanding after the offering	43,498,926 shares
Use of proceeds	We expect to receive net proceeds from the offering of approximately $81.8 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, which may include working capital, expansion of our manufacturing facilities, purchases of equipment and expansion of our applications development and service capabilities. 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 are affiliates of Merrill Lynch & Co., one of the underwriters in this offering, will also be selling stock in this offering and will receive a portion of the proceeds of this offering as a result of our repurchase of series B warrants held by them. See Principal and Selling Stockholders and Underwriting Certain Relationships; NASD Conduct Rules. One of our directors, Michael C. Child, is a managing director of TA Associates, Inc., which will receive a portion of the proceeds of this offering as a result of our repurchase of the series B warrants held by it. See Use of Proceeds.
Nasdaq Global Market Symbol	IPGP

The number of shares of common stock to be outstanding after the offering is based on 27,343,330 shares outstanding as of September 30, 2006 and includes 9,914,217 shares that we will issue upon conversion of our outstanding preferred stock upon completion of the offering assuming an initial public offering price of $14.50 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:

- 4,411,923 shares issuable upon exercise of stock options outstanding as of September 30, 2006, which have a weighted average exercise price of $2.68 per share;
- 3,131,384 additional shares reserved as of September 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
- 17,746 shares issued upon the exercise of options after September 30, 2006.

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 a 2-for-3 reverse stock split to be effective prior to the pricing of this offering;

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 up to 1,350,000 additional shares of common stock from the selling stockholders that has been 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, and the nine months ended September 30, 2006 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 for the nine months ended September 30, 2005 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,					Nine Months Ended September 30,	
	2001	2002	2003	2004	2005	2005	2006
	(in thousands, except per share data)						
Consolidated Statement of Operations Data:(1)							
Net sales	$ 26,490	$ 22,180	$ 33,740	$ 60,707	$ 96,385	$ 62,238	$ 101,128
Cost of sales	26,223	23,277	38,583	42,274	62,481	41,763	57,983
Gross profit (loss)	267	(1,097)	(4,843)	18,433	33,904	20,475	43,145
Operating expenses:							
Sales and marketing	21,240	19,910	2,110	2,363	3,236	2,354	4,111
Research and development	8,407	8,383	10,063	4,831	5,788	4,177	4,314
General and administrative	18,875	13,354	9,998	8,179	10,598	6,689	9,352
Other operating expenses	15,042	9,474					
Total operating expenses	63,564	51,121	22,171	15,373	19,622	13,220	17,777
Operating (loss) income	(63,297)	(52,218)	(27,014)	3,060	14,282	7,255	25,368
Interest income (expense), net	1,857	(1,089)	(1,505)	(2,150)	(1,840)	(1,410)	(1,051)
Fair value adjustment to series B warrants(2)	6,862	2,518	(3,664)	(615)	(745)	(477)	(4,356)
Other income, net	975	2,414	1,647	196	236	196	143
(Loss) income before benefit from (provision	(53,603)	(48,375)	(30,536)	491	11,933	5,564	20,104

for) income taxes and minority interests in consolidated subsidiaries							
Benefit from (provision for) income taxes	3,985	(1,175)	2,205	1,601	(4,080)	(2,037)	(6,597)
Minority interests in consolidated subsidiaries	(4)	165	121	(80)	(426)	(25)	(910)
Net (loss) income	$ (49,622)	$ (49,385)	$ (28,210)	$ 2,012	$ 7,427	$ 3,502	$ 12,597
Net (loss) income per share:							
Basic	$ (2.17)	$ (2.13)	$ (1.40)	$ (0.01)	$ 0.16	$ 0.06	$ 0.34
Diluted	$ (2.17)	$ (2.13)	$ (1.40)	$ (0.01)	$ 0.16	$ 0.06	$ 0.31
Weighted average shares outstanding:							
Basic	23,973	24,317	25,534	25,698	26,232	26,105	27,052
Diluted	23,973	24,317	25,534	25,698	30,167	30,040	32,987
Supplementary pro forma net income per share(3)					$ 0.21		$ 0.42

(footnotes on following page)

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(1) 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. See Management s Discussion and Analysis of Financial Condition and Results of Operations Critical Accounting Policies and Estimates Stock-Based Compensation.

(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) 9,914,217 shares of common stock, which will be issued upon completion of this offering upon the conversion of our preferred stock, assuming an offering price of $14.50 per share, the midpoint of the range set forth on the cover page of this prospectus and (c) 3,407,383 shares related to the additional dilutive impact of existing assuming options assuming that the fair value of the common stock increases to $14.50. 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 $4.4 million for the nine months ended September 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 September 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 6,241,379 shares of our common stock in this offering at an assumed offering price of $14.50 per share and the application of the estimated net proceeds therefrom as described in Use of Proceeds.

	As of September 30, 2006		
	Actual	Pro Forma	Pro Forma as Adjusted
		(unaudited) (in thousands)	
Consolidated Balance Sheet Data:			
Cash and cash equivalents	$ 11,357	$ 11,357	$ 40,652
Working capital	37,994	37,994	85,200
Total assets	141,401	141,401	170,041
Long-term debt, including current portion	23,151	43,151	20,000
Series B warrants	19,000	19,000	

Convertible redeemable preferred stock	97,902		
Preferred stock	4,880		
Stockholders (deficit) equity	(31,411)	46,491	125,168

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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 770 of our 1,000 employees as of September 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. Given our vertical integration, 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 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. 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. Moreover, the frequency with which new patents are granted and the diversity of jurisdictions in which they are granted make it impractical and expensive for us to monitor all patents that may be relevant to our business.

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 three patent infringement lawsuits brought by the Scientific-Atlanta division of Cisco Systems, Inc., Spectra-Physics, Inc., a subsidiary of Newport Corporation, and IMRA America, Inc. See Business Legal Proceedings. The Scientific-Atlanta allegations generally relate to erbium and ytterbium co-doped optical fiber, and certain products that incorporate such fiber. Scientific-Atlanta in its complaint alleges willful infringement

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of one U.S. patent and seeks damages in an unspecified amount, treble damages and injunctive relief. Spectra-Physics allegations generally relate to certain of our fiber lasers and amplifiers. Spectra-Physics in its complaint alleges willful infringement of one U.S. patent and seeks damages of over $20.0 million, treble damages and injunctive relief. IMRA America s allegations generally relate to certain unspecified fiber amplifiers that we produce and also allege inducement of infringement and contributory infringement without specifying any of our products. IMRA America in its complaint alleges willful infringement of one U.S. patent and seeks damages in an unspecified amount, treble damages and injunctive relief. These lawsuits concern products made, used, sold, offered for sale, or imported in the United States and therefore these lawsuits affect products that contribute a substantial portion of our revenues. These lawsuits do not affect revenues that are derived from products that are not made, used, sold, offered for sale or imported in the United States. IMRA America and other parties have notified us that they believe certain of our fiber lasers and amplifiers, or the use of these products, infringe the respective parties patents. The subject matter of these assertions are products that contribute a substantial portion of our revenues. There can be no assurance that we will be able to amicably dispose of our pending litigations with Scientific-Atlanta, Spectra-Physics and IMRA America, claims or 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, including the lawsuits brought by Scientific-Atlanta, Spectra-Physics and IMRA America, it could affect our ability to sell our products and materially harm our business, financial condition and results of operations. 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, including the lawsuits brought by Scientific-Atlanta, Spectra-Physics and IMRA America that we are presently defending, could force us to take actions that could be harmful to our business, competitive position, results of operations and financial condition, 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, which individually or in the aggregate may be substantial;
- 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, which may be costly or impractical.

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.

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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 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. Our three major manufacturing facilities are located in Oxford, Massachusetts; Burbach, Germany; and Fryazino, Russia. If, as a result of a flood, fire, natural disaster, political unrest,

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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. The members of our scientific staff who are expected to make significant individual contributions to our business are also members of our executive management team as disclosed under Management below. 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 maintain our scientific expertise and grow our business could suffer significantly.

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.

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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 and 31% for the nine months ended September 30, 2006. 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 12% for the nine months ended September 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 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;

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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 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.

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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. This could lead to increased inventory levels and increased carrying costs and risk of excess or obsolete inventory due to unanticipated reductions in purchases by our customers. In this regard, we recorded provisions for inventory totaling $8.3 million, $0.0 million and $2.4 million in 2003, 2004 and 2005, respectively. These provisions were recorded as a result of changes in market prices of certain components, the value of those inventories that was realizable through finished product sales and uncertainties related to the recoverability of the value of inventories due to technological changes and excess quantities. 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 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

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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.

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

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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 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

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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 in order to remain in compliance with such laws and regulations. At this time, we do not believe the costs to maintain compliance with current environmental laws to be material. Although we do not currently anticipate that such costs will become material, if such costs were to become material in the future, whether due to unanticipated changes in environmental laws, unanticipated changes in our operations or other unanticipated changes, we may be required to dedicate additional staff or financial resources in order to maintain compliance. 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.

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. Because our products can be used or adapted for military, weapons or other similar uses, our 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 require that we obtain an export license before we can export certain products, components or technology to specified countries. Under applicable regulations, some of our laser products, components and technology are treated differently than traditional lasers or mechanical tools and, in some cases, the export of our products, components and technology to certain countries requires an export license even though an export license would not be required for the export of a CO_2 or YAG laser or mechanical tool. Unless a license exception is available, 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. Export licenses can permit the export of a unit to a single customer, or multiple units over a period of time to one or more customers, and may include conditions limiting the use of the product, resale, transfer, re-export, modification, disassembly or transfer of data. We have experienced and, in the future, may experience delays in obtaining export licenses as we respond to questions from licensing authorities on license requests and await their determination to grant permission in instances where a license is required. 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.

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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 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 46.0% 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

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majority owner, will beneficially own an aggregate of 19,999,245 shares of our common stock, or approximately 46.0% 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 1,718,902 shares of our common stock, or approximately 3.9% of our common stock, and collectively with Dr. Valentin P. Gapontsev, approximately 49.9% 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 $8.8 million of revenues for NTO IRE-Polus for the year ended December 31, 2005 and the nine months ended September 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 Dr. Valentin P. Gapontsev (together with his affiliates and associates) ceases 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 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;

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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 following such time as Dr. Valentin P. Gapontsev (together with his affiliates and associates) ceases to beneficially own 25% or more of the total voting power of our outstanding shares, 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 43,498,926 shares of common stock outstanding and 4,411,923 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. Our directors, executive officers and other stockholders holding in the aggregate approximately 99% of our outstanding shares prior to giving effect to this offering 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 34,432,260 shares of our common stock will be eligible for sale under Rule 144, Rule 144(k) or Rule 701. After the completion of this offering, the holders of an aggregate of approximately 7,144,498 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 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.

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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 $11.62 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 $81.8 million after the underwriting discount, commissions and expenses, assuming an initial public offering price of $14.50 per share, the midpoint of the price range set forth on the cover of this prospectus. We will not receive any proceeds from the sale of shares of common stock by the selling stockholders. Our chairman and chief executive officer, two other members of our board of directors and entities affiliated with Merrill Lynch & Co., one of the underwriters participating in this offering, are selling shares of common stock in this offering. See Principal and Selling Stockholders and Underwriting Certain Relationships; NASD Conduct Rules.

A $1.00 increase (decrease) in the assumed initial public offering price of $14.50 per share would increase (decrease) the net proceeds to us from this offering by approximately $5.8 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 $5.5 million to repay Euro-denominated construction loans due from 2006 to 2010 that bear annual interest at 5.25%;
- approximately $5.6 million to repay a U.S. construction loan due January 2007 that bears annual interest at 7.9%;
- approximately $10.6 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%;
- approximately $0.2 million to repay Euro-denominated line-of-credit facilities that bear annual interest at rates ranging from 6.0% to 7.6%;
- approximately $4.5 million to repay a U.S. demand line-of-credit facility that bears interest at a variable rate of LIBOR plus 3.0% (8.3% at September 30, 2006);
- approximately $3.3 million to repay Japanese Yen line-of-credit facilities that bear interest at approximately 2.0%; and
- the balance of the net proceeds for general corporate purposes.

Approximately $6.3 million of the $10.6 million Euro-denominated term debt was incurred within the past year to repay existing term debt, to finance construction and for general working capital purposes.

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 9.5% of our common stock after the completion of this offering. TA Associates, Inc. will receive approximately $11.6 million 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 are affiliates of Merrill Lynch & Co., one of the underwriters in this offering, will sell 676,511 shares in this offering and receive approximately $3.5 million of the proceeds of this offering as a result of our repurchase of series B warrants held by them. If the underwriters overallotment option is exercised in full, these entities will sell an additional 490,759 shares in this offering. See Principal and Selling Stockholders and

Underwriting Certain Relationships; NASD Conduct Rules.

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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 capitalization as of September 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 9,914,217 shares of common stock, assuming an initial offering price of $14.50 per share, 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 6,241,379 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 September 30, 2006		
	Actual	Pro Forma	Pro Forma As Adjusted
	(unaudited) (in thousands, except share and per share data)		
Short-term debt:			
Revolving line-of-credit facilities	$ 7,886	$ 7,886	$
Subordinated notes		20,000	20,000
Other long-term debt (including current maturities)	23,151	23,151	
Total debt	31,037	51,037	20,000
Series B warrants	19,000	19,000	
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	92,802		
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 stock, 500,000 shares designated, 488,000 shares issued	4,880		

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, 27,343,330 shares issued and outstanding, actual; 175,000,000 shares authorized, pro forma and pro forma as adjusted; 37,257,547 shares issued and outstanding, pro forma; 43,498,926 shares issued and outstanding, pro forma as adjusted	4	4	5
Additional paid-in capital	94,714	177,496	259,260
Notes receivable from stockholders	(23)	(23)	(23)
Accumulated deficit	(137,028)	(137,028)	(140,116)
Accumulated other comprehensive income	6,042	6,042	6,042
Total stockholders (deficit) equity	(31,411)	46,491	125,168
Total capitalization	$ 116,528	$ 116,528	$ 145,168

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DILUTION

Our pro forma net tangible book value as of September 30, 2006 was approximately $46.5 million, or $1.25 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 September 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 6,241,379 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 September 30, 2006 would have been approximately $125.2 million, or approximately $2.88 per share. This amount represents an immediate increase in pro forma net tangible book value of $1.63 per share to our existing stockholders and an immediate dilution in pro forma net tangible book value of approximately $11.62 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		$ 14.50
Pro forma net tangible book value as of September 30, 2006	$ 1.25	
Increase per share attributable to new investors	1.63	
Adjusted pro forma net tangible book value per share after this offering		2.88
Dilution in pro forma net tangible book value per share to new investors		$ 11.62

Any exercise by the underwriters of their option to purchase additional shares of our common stock will not affect the pro forma net tangible book value per share or dilution because, if exercised, they will purchase shares held by existing stockholders.

The following table summarizes, on a pro forma as adjusted basis as of September 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 (in thousands)	Percent	
Existing stockholders	37,257,547	85.7%	$ 122,937	57.6%	$ 3.30
New investors	6,241,379	14.3	90,500	42.4	14.50
Total	43,498,926	100.0%	$ 213,437	100.0%	4.91

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

The following table summarizes, on a pro forma as adjusted basis as of September 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 and assumes the exercise of all options that were outstanding and exercisable as of September 30, 2006.

	Shares Purchased		Total Consideration		
	Number	Percent	Amount (in thousands)	Percent	Average Price Per Share
Existing stockholders	37,257,547	77.8%	$ 122,937	54.6%	$ 3.30
Shares subject to options	4,411,923	9.2	11,845	5.3	2.68
Subtotal	41,669,470	87.0	134,782	59.9	3.23
New investors	6,241,379	13.0	90,500	40.2	14.50
Total	47,910,849	100.0%	$ 225,282	100.0%	4.70

A $1.00 increase (decrease) in the assumed initial public offering price of $14.50 per share would increase (decrease) the total consideration that we receive from this offering by approximately $5.8 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 September 30, 2006, and for the years ended December 31, 2003, 2004 and 2005, and the nine months ended September 30, 2006 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 for the nine months ended September 30, 2005 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,					Nine Months Ended September 30,	
	2001	2002	2003	2004	2005	2005	2006
	(in thousands, except per share data)						
Consolidated Statement of Operations Data:(1)							
Net sales	$ 26,490	$ 22,180	$ 33,740	$ 60,707	$ 96,385	$ 62,238	$ 101,128
Cost of sales	26,223	23,277	38,583	42,274	62,481	41,763	57,983
Gross profit (loss)	267	(1,097)	(4,843)	18,433	33,904	20,475	43,145
Operating expenses:							
Sales and marketing	21,240	19,910	2,110	2,363	3,236	2,354	4,111
Research and development	8,407	8,383	10,063	4,831	5,788	4,177	4,314
General and administrative	18,875	13,354	9,998	8,179	10,598	6,689	9,352
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	13,220	17,777
Operating (loss) income	(63,297)	(52,218)	(27,014)	3,060	14,282	7,255	25,368

Interest income (expense), net	1,857	(1,089)	(1,505)	(2,150)	(1,840)	(1,410)	(1,051)
Fair value adjustment to series B warrants(2)	6,862	2,518	(3,664)	(615)	(745)	(477)	(4,356)
Other income, net	975	2,414	1,647	196	236	196	143
(Loss) income before benefit from (provision for) income taxes and minority interests in consolidated subsidiaries	(53,603)	(48,375)	(30,536)	491	11,933	5,564	20,104
Benefit from (provision for) income taxes	3,985	(1,175)	2,205	1,601	(4,080)	(2,037)	(6,597)
Minority interests in consolidated subsidiaries	(4)	165	121	(80)	(426)	(25)	(910)
Net (loss) income	$ (49,622)	$ (49,385)	$ (28,210)	$ 2,012	$ 7,427	$ 3,502	$ 12,597
Net (loss) income per share:							
Basic	$ (2.17)	$ (2.13)	$ (1.40)	$ (0.01)	$ 0.16	$ 0.06	$ 0.34
Diluted	$ (2.17)	$ (2.13)	$ (1.40)	$ (0.01)	$ 0.16	$ 0.06	$ 0.31
Weighted average shares outstanding:							
Basic	23,973	24,317	25,534	25,698	26,232	26,105	27,052
Diluted	23,973	24,317	25,534	25,698	30,167	30,040	32,987
Supplementary pro forma net income per share(3)					$ 0.21		$ 0.42

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	As of December 31,					As of September 30,
	2001	2002	2003	2004	2005	2006
	(in thousands)					
Consolidated Balance Sheet Data:						
Cash and cash equivalents	$ 8,851	$ 1,379	$ 536	$ 2,548	$ 8,361	$ 11,357
Working capital	44,711	35,669	16,303	20,934	23,550	37,994
Total assets	128,230	117,166	105,481	110,545	115,481	141,401
Long-term debt, including current portion and a provision for contract settlement	21,668	38,143	34,268	31,454	26,081	23,151
Series B warrants	12,138	9,620	13,284	13,899	14,644	19,000
Convertible redeemable preferred stock	81,842	84,194	91,646	93,997	96,348	97,902
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)	(31,411)

(1) 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. See Management s Discussion and Analysis of Financial Condition and Results of Operations Critical Accounting Policies and Estimates Stock-Based Compensation.

(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) 9,914,217 shares of common stock, which will be issued upon completion of this offering upon the conversion of our preferred stock, assuming an offering price of $14.50 per share, the midpoint of the range set forth on the cover page of this prospectus and (c) 3,407,383 shares related to the additional dilutive impact of existing options assuming that the fair value of the common stock increases to $14.50. 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 $4.4 million for the nine months ended September 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 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 generally lower total cost of ownership compared to CO_2 and crystal 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, South 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. Our major products are based upon a common technology platform. We continually enhance these and other products by improving their components as well as by developing new components. Although it is difficult to predict the life cycles of our products and what stage of the life cycle our products are in, we estimate that our major products are in the early stages of their life cycles. 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

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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.

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. In the event that any losses attributable to the minority stockholders of these subsidiaries exceed the minority interest in the equity capital of the subsidiaries, we recognize the amount of such excess and any further losses attributable to the minority stockholders in our consolidated statements of operations because either the minority stockholders do not have the ability to absorb such losses or they are not obligated to do so. Such excess losses historically have not been significant and we do not expect them to be significant in future periods.

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 nine months ended September 30, 2006 increased by 62% 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, 35.2% in 2005 and 42.7% for the nine months ended September 30, 2006.

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

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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.

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, 37% in 2005 and 31% in the nine months ended September 30, 2006. Sales to our largest customer accounted for 17%, 20%, 13% and 12% of our net sales in 2003, 2004 and 2005 and the nine months ended September 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

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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 nine months ended September 30, 2006. See Selected Consolidated Financial Data. These pro forma disclosures are intended to demonstrate the effects on net 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 nine months ended September 30, 2006, the fair value of the series B warrants increased by $4.4 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 $3.1 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 $20.8 million 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

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

	Year Ended December 31,					Nine Months Ended September 30,	
	2001	2002	2003	2004	2005	2005	2006
						(unaudited)	
	(in thousands)						
Cost of sales	$ 2,574	$ 789	$ 577	$ 218	$ 4	$	$ 83
Sales and marketing	19,148	17,260	18	6	1		35

Research and development	1,608	314	1,062	669	1		16
General and administrative	9,403	3,326	546	10	1		183
Total	$ 32,733	$ 21,689	$ 2,203	$ 903	$ 7	$	$ 317

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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 nine months ended September 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.

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 nine months ended September 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.

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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 nine months ended September 30, 2006 is based on options ultimately expected to vest, it has been reduced for estimated forfeitures. SFAS No. 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 nine months ended September 30, 2006 reflects an estimated forfeiture rate of 5%. For purposes of preparing the pro forma information required under SFAS No. 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 No. 123(R). Total employee stock-based compensation expense recorded under SFAS No. 123(R) for the nine months ended September 30, 2006 was $0.3 million. We expect that our quarterly stock-based compensation expense will increase for the remainder of 2006. The timing of the issuance of stock options for the nine months ended September 30, 2006 resulted in a pro-rated expense charge for the period based upon the number of days for which the stock options were outstanding, which resulted in a smaller percentage of expense than if they had been granted earlier in the respective quarters in which they were granted.

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 September 30, 2006, we had a valuation allowance totaling $17.0 million, primarily against U.S. federal and state net operating losses as well as certain other U.S. timing differences. There was a benefit arising in the nine months ended September 30, 2006 related to the reversal of timing differences and the use of net operating loss carryforwards against which a valuation allowance previously had been provided. The release of the additional valuation allowance will depend upon the continued improvement in results of our U.S. operations. If the results of our U.S. operations continue to improve, we expect to be able to release the remaining 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

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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 fourth quarter 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.

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,						Nine Months Ended September 30,			
	2003		2004		2005		2005		2006	
							(unaudited)			
	(in thousands, except percentages)									
Net sales	$ 33,740	100.0%	$ 60,707	100.0%	$ 96,385	100.0%	$ 62,238	100.0%	$ 101,128	100.0%
Cost of sales	38,583	114.4	42,274	69.6	62,481	64.8	41,763	67.1	57,983	57.3
Gross (loss) profit	(4,843)	(14.4)	18,433	30.4	33,904	35.2	20,475	32.9	43,145	42.7
Operating expenses:										
Sales and marketing	2,110	6.3	2,363	3.9	3,236	3.4	2,354	3.8	4,111	4.1
Research and development	10,063	29.8	4,831	8.0	5,788	6.0	4,177	6.7	4,314	4.3
General and administrative	9,998	29.6	8,179	13.5	10,598	11.0	6,689	10.7	9,352	9.2
Total operating expenses	22,171	65.7	15,373	25.4	19,622	20.4	13,220	21.2	17,777	17.6
Operating (loss) income	(27,014)	(80.1)	3,060	5.0	14,282	14.8	7,255	11.7	25,368	25.1
Interest expense, net	(1,505)	(4.5)	(2,150)	(3.5)	(1,840)	(1.9)	(1,410)	(2.3)	(1,051)	(1.0)
Fair value adjustment to series B warrants	(3,664)	(10.9)	(615)	(1.0)	(745)	(0.8)	(477)	(0.8)	(4,356)	(4.3)

Other income, net	1,647	4.9	196	0.3	236	0.2	196	0.3	143	0.1
(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	5,564	8.9	20,104	19.9
Benefit from (provision for) income taxes	2,205	6.5	1,601	2.6	(4,080)	(4.2)	(2,037)	(3.3)	(6,597)	(6.5)
Minority interests in consolidated subsidiaries	121	0.4	(80)	(0.1)	(426)	(0.4)	(25)	(0.0)	(910)	(0.9)
Net (loss) income	$ (28,210)	(83.7)%	$ 2,012	3.3%	$ 7,427	7.7%	$ 3,502	5.6%	$ 12,597	12.5%

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Comparison of Nine Months Ended September 30, 2006 to Nine Months Ended September 30, 2005

Net sales. Our net sales increased by $38.9 million, or 62.5%, to $101.1 million in the nine months ended September 30, 2006 from $62.2 million in the nine months ended September 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 $34.7 million or by 89.1% of the total increase in net sales. Medical applications accounted for 5.8% of the total 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 increases in sales in the medical market for aesthetic applications.

Cost of sales and gross margin. Our cost of sales increased by $16.2 million, or 38.8%, to $58.0 million in the nine months ended September 30, 2006 from $41.8 million in the nine months ended September 30, 2005, as a result of the increased sales volume. Our gross margin increased to 42.7% in the nine months ended September 30, 2006 from 32.9% in the nine months ended September 30, 2005 because of a reduction in the cost of our internally manufactured optical components, including semiconductor diodes, more favorable absorption of fixed manufacturing costs as a result of higher production volumes and, to a lesser extent, a shift in product mix including increased sales of higher-margin low and mid-power fiber lasers and reduced sales of certain types of lower-margin fiber amplifiers.

Sales and marketing expense. Sales and marketing expense increased by $1.7 million, or 70.8%, to $4.1 million in the nine months ended September 30, 2006 from $2.4 million in the nine months ended September 30, 2005, primarily as a result of a $1.1 million increase in personnel costs due to the expansion of our worldwide direct sales organization and increases in related sales commissions and travel. To a lesser extent, the increase was also due to an increase in the number of demonstration products used in the selling process and associated depreciation costs.

Research and development expense. Research and development expense increased by $0.1 million, or 2.4%, to $4.3 million in the nine months ended September 30, 2006 from $4.2 million in the nine months ended September 30, 2005. This increase was primarily due to an increase of $0.2 million in personnel costs, partially offset by a slight decrease in other research and development expenses primarily attributable to the timing of research and development projects.

General and administrative expense. General and administrative expense increased by $2.7 million, or 40.3%, to $9.4 million in the nine months ended September 30, 2006 from $6.7 million in the nine months ended September 30, 2005, primarily due to a $0.5 million increase in consulting, legal and accounting costs and a $0.4 million increase in personnel-related expenses and other administrative expenses. The increase was also due to realized and unrealized foreign exchange losses related to the settlement and revaluation of foreign currency transactions and associated balances, which increased by $0.5 million to a loss of $0.3 million from a gain of $0.2 million in the prior year period.

Interest expense, net. Interest expense, net decreased by $0.3 million, or 21.4%, to $1.1 million in the nine months ended September 30, 2006 from $1.4 million in the nine months ended September 30, 2005, resulting from the repayment of term debt as well as lower utilization of our German line-of-credit facilities in the nine months ended September 30, 2006.

Fair value adjustment to series B warrants. The fair value adjustment of the series B warrants increased by $3.9 million to $4.4 million in the nine months ended September 30, 2006 from $0.5 million in the nine months ended September 30, 2005 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 $4.6 million, to a provision of $6.6 million in the nine months ended September 30, 2006 from $2.0 million in the nine months ended September 30, 2005, representing an effective tax rate of 32.8% in the nine months ended September 30, 2006 as compared to 36.6% in the same period of 2005. The decrease in the effective tax rate was primarily driven by a benefit arising in the current year related to the reversal of timing differences and the use of net operating loss carryforwards against which a valuation allowance

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previously had been provided, which was partially offset by the increase in the effective tax rate arising from a higher non-deductible charge related to the increase in the fair value of the series B warrants. A reconciliation of our effective tax rate to the U.S. statutory tax rate is included in Note 13 to the consolidated financial statements.

Net income (loss). Net income increased by $9.1 million to $12.6 million for the nine months ended September 30, 2006 from $3.5 million for the same period in 2005 and our net income as a percentage of our net sales increased by 6.9 percentage points to 12.5% for the nine months ended September 30, 2006 from 5.6% 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. In addition, sales for medical applications grew by almost $5.9 million to $7.4 million in 2005 due principally to qualification of our products by a customer in 2004.

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 components, including semiconductor diodes, and more favorable absorption of fixed manufacturing costs as a result of higher production volumes. The increase in gross margin was partially offset by higher manufacturing and labor costs and a shift in product mix to sales of lower-margin high-power fiber lasers and lower-margin fiber amplifiers as well as slightly reduced sales of higher-margin low-power fiber lasers.

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 adjustment 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

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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 as a percentage of our net sales increased by 4.4 percentage points to 7.7% in 2005 from 3.3% 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. In addition, sales for medical applications grew by almost $1.3 million to $1.5 million in 2004 due principally to qualification of our products by a customer in 2004.

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 semiconductor diodes resulting from our shift to in-house production from third-party suppliers, more favorable absorption of fixed manufacturing costs as a result of our increased production volume and a shift in product mix to sales of higher-margin low-power fiber lasers. The increase in gross margin was partially offset by an increase in sales of lower-margin fiber amplifiers.

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.

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Fair value adjustment to series B warrants. The fair value adjustment 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 as a percentage of our net sales increased to 3.3% in 2004 from (83.7)% in 2003.

Selected Quarterly Results

The following table presents certain unaudited quarterly financial information for our last seven 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.

	Three Months Ended						
	Mar. 31, 2005	June 30, 2005	Sep. 30, 2005	Dec. 31, 2005	Mar. 31, 2006	June 30, 2006	Sep. 30, 2006
	(in thousands)						
Net sales	$ 18,788	$ 22,843	$ 20,607	$ 34,147	$ 32,743	$ 32,184	$ 36,201
Cost of sales	12,937	15,501	13,325	20,718	20,278	18,841	18,864
Gross profit	5,851	7,342	7,282	13,429	12,465	13,343	17,337
Operating expenses:							
Sales and marketing	650	887	817	882	1,080	1,263	1,768
Research and development	1,370	1,504	1,303	1,611	1,235	1,387	1,692
General and administrative	1,793	2,559	2,337	3,909	2,659	3,154	3,539
Total operating expenses	3,813	4,950	4,457	6,402	4,974	5,804	6,999
Operating income	2,038	2,392	2,825	7,027	7,491	7,539	10,338
Interest expense, net	(514)	(454)	(442)	(430)	(355)	(354)	(342)
Fair value adjustment to series B warrants	(155)	(159)	(163)	(268)	(1,862)	(357)	(2,137)
Other income, net	(2)	143	55	40	8	4	131
Income before provision for income taxes and minority interests in consolidated subsidiaries	1,367	1,922	2,275	6,369	5,282	6,832	7,990

Provision for income taxes	(468)	(751)	(818)	(2,043)	(1,927)	(1,939)	(2,731)
Minority interests in consolidated subsidiaries	77	5	(107)	(401)	(288)	(110)	(512)
Net income	$ 976	$ 1,176	$ 1,350	$ 3,925	$ 3,067	$ 4,783	$ 4,747

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

	Three Months Ended						
	Mar. 31, 2005	June 30, 2005	Sep. 30, 2005	Dec. 31, 2005	Mar. 31, 2006	June 30, 2006	Sep. 30, 2006
Net sales	100.0%	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	52.1
Gross profit	31.1	32.1	35.3	39.3	38.1	41.5	47.9
Operating expenses:							
Sales and marketing	3.5	3.9	4.0	2.6	3.3	3.9	4.9
Research and development	7.3	6.6	6.3	4.7	3.8	4.3	4.7
General and administrative	9.5	11.2	11.3	11.4	8.1	9.8	9.8
Total operating expenses	20.3	21.7	21.6	18.7	15.2	18.0	19.3
Operating income	10.8	10.4	13.7	20.6	22.9	23.5	28.6
Interest expense, net	(2.7)	(2.0)	(2.1)	(1.3)	(1.1)	(1.1)	(0.9)
Fair value adjustment to series B warrants	(0.8)	(0.7)	(0.8)	(0.8)	(5.7)	(1.1)	(5.9)
Other income, net	(0.0)	0.6	0.3	0.1	0.0	0.0	0.4
Income before provision for income taxes and minority interests in consolidated subsidiaries	7.3	8.3	11.1	18.6	16.1	21.3	22.1
Provision for income taxes	(2.5)	(3.3)	(4.0)	(6.0)	(5.9)	(6.0)	(7.5)
Minority interests in consolidated subsidiaries	0.4	0.0	(0.5)	(1.2)	(0.9)	(0.3)	(1.4)
Net income	5.2%	5.0%	6.6%	11.4%	9.3%	15.0%	13.2%

Our net sales fluctuate on a quarterly basis and increased from $18.8 million in the quarter ended March 31, 2005 to $36.2 million in the quarter ended September 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 seven quarters ended September 30, 2006, ranging from 31.1% to 47.9%. 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 three 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 28.6% in the third 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.

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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.

The following table details our line-of-credit facilities as of September 30, 2006:

Description	Available Principal	Interest Rate	Maturity	Security
Euro Overdraft Facility	Euro 4.6 million ($5.9 million)	7.5%-8.6%, depending upon principal outstanding	Euro 3.5 million ($4.5 million) available through September 2007 Euro 1.1 million ($1.4 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	JPY 600 million ($5.1 million)	2.0%-2.13%	September 2007	Pool of assets of Japanese subsidiary

(1) This loan has a minimum debt service coverage covenant, which requires that we maintain a ratio of not less than 1.20:1.00 of (i) earnings before interest, taxes, depreciation and amortization, plus stock-based compensation and fair value adjustments to the series B warrants, less unfunded capital expenditures and cash taxes paid, divided by (ii)(a) current maturities of long-term debt and capital leases, plus (b) interest expense, measured as of each fiscal quarter. After the completion of this offering, we also will be required to maintain a ratio of not less than 2.50:1.00 of current assets to current liabilities and a ratio of not less than 2.01:1.00 of total liabilities to tangible net worth, measured each fiscal quarter.

We also have two credit lines with total availability of $0.8 million which bear interest at rates ranging from 4.0% to 7.6% and are secured by assets of our Italian subsidiary.

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The following table details our fixed-term debt as of September 30, 2006. 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)	$5.7 million	7.9%	January 2007	Property and plant in United States
Euro Construction Loans	$6.3 million	5.25%	March 2007 to March 2010	Property and plant in Germany
Other Euro-fixed term debt	$11.1 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, which requires that we maintain a ratio of not less than 1.20:1.00 of (i) net profit plus depreciation and amortization divided by (ii)(a) current maturities of long-term debt and capital leases, plus (b) interest expense, measured each fiscal year.

The financial covenants in our loan documents may cause us to not take or to delay investments and actions that we might otherwise undertake because of limits on capital expenditures and amounts that we can borrow or lease. In the event that we do not comply with any one of these covenants, we would be in default under the loan agreement or loan agreements, which may result in acceleration of the debt, cross-defaults on other debt and a reduction in available liquidity, any of which could harm our results of operations and financial condition.

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 September 30, 2006 consisted of cash and cash equivalents of $11.4 million, unused credit lines and overdraft facilities of $11.4 million and working capital of $38.0 million. This compares to cash and cash equivalents of $8.4 million, unused credit lines and overdraft facilities of $5.0 million and working capital of $23.5 million as of December 31, 2005.

Operating activities. Cash provided by operating activities was $9.9 million and $2.7 million in the nine months ended September 30, 2006 and 2005, respectively. The increase in cash provided by operating activities of $7.2 million in the nine months ended September 30, 2006 as compared to the nine months ended September 30, 2005 was primarily due to the increase in net income of $9.1 million and an increase in deferred income taxes as well as accounts payable, partially offset by an increase in inventory levels and repayment of $5.1 million of convertible notes payable originally issued to a vendor in settlement of a contract dispute. 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

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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 $12.8 million in the nine months ended September 30, 2006 as compared to cash used in investing activities of $3.4 million in the nine months ended September 30, 2005. The cash used in investing activities in the nine months ended September 30, 2006 was related to capital expenditures on plant and machinery and equipment, primarily in the United States and Germany. In the nine months ended September 30, 2005, capital expenditures of $10.8 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 $5.7 million in the nine months ended September 30, 2006 as compared to $6.8 million in the nine months ended September 30, 2005. The primary uses of cash in financing activities in the nine months ended September 30, 2006 were for the repayment of $5.2 million of long-term debt as compared to $1.5 million in the nine months ended September 30, 2005. In the nine months ended September 30, 2006, the cash outflows related to the repayment of term debt were offset by net inflows of $3.7 million relating to amounts drawn down against lines of credit and overdraft facilities, $6.4 million of proceeds from the issuance of long-term debt and proceeds of $1.0 million from the exercise of stock options. In the nine months ended September 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 mortgage used to finance the acquisition of a building and net drawdowns of $5.5 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.

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.

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Contractual Obligations

The following table describes our contractual obligations as of December 31, 2005 (in thousands).

		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 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 $0.3 million, $0.1 million, $0.3 million and $0.7 million in the nine months ended September 30, 2006, and 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.

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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 September 2006, the FASB issued SFAS No. 157, Fair Value Measurements, which addresses how companies should measure fair value when they are required to use a fair value measure for recognition or disclosure purposes under generally accepted accounting principles. The provisions of SFAS No. 157 are effective for us beginning after January 1, 2008. We have not yet adopted this pronouncement and we are currently evaluating the expected impact that the adoption of SFAS No. 157 will have on our consolidated financial position and 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 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 generally lower total cost of ownership compared to CO_2 and crystal 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 nine months ended September 30, 2006, materials processing accounted for 73.0% of our net sales and communications, medical and advanced applications accounted for 10.8%, 8.2% and 8.0%, 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, South 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. For the nine months ended September 30, 2006, we reported net sales of $101.1 million and net income of $12.6 million.

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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, a technology that has the potential to displace traditional laser technologies and processes because it constitutes a fundamental shift, not merely an incremental advance, in laser technology. Strategies Unlimited, an independent industry publication, estimates that sales of fiber lasers will grow by a compound annual growth rate of approximately 39%, from $131 million in 2005 to $674 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.

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

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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 generally lower total operating costs due to their lower required 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.

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

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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.

Notwithstanding the benefits offered by fiber lasers, there remain applications and processes where traditional laser technologies may provide superior performance with respect to particular features. For example, crystal lasers can provide higher peak power pulses and fiber lasers do not generate the deep ultraviolet light that is used for photolithography in many semiconductor applications.

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, sales of fiber lasers are expected to grow at a compound annual growth rate of approximately 39% annually, from $131 million in 2005 to $674 million in 2010.

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 8%. 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

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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 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, 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 continuous wave output power levels over 500 watts.

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 become more widely recognized, we plan to leverage our brand and position as the leader in developing and commercializing fiber lasers 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.

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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.

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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.

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

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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.

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.

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Our 15 largest customers for the nine months ended September 30, 2006 were:

Contec, Inc.	Harmonic Inc.	SUNX Limited
EOS GmbH Electro Optical Systems	HM Laser Machinery Co., Ltd.	Tada Electric Co., Ltd.
Esko-Graphics	Mitsubishi Heavy Industries, Ltd.	Telesis Technologies
European Aeronautic Defence and Space Company EADS N.V.	Reliant Technologies Inc.	TEM Incorporated
GSI Lumonics, Inc.	Sahajanand Laser Technology	Toyota Tsusho Corporation

The following table shows the allocation of our net sales (in thousands) among our principal markets:

	Year Ended December 31,						Nine Months Ended September 30,	
	2003		2004		2005		2006	
Materials Processing	$ 23,685	70.2%	$ 41,990	69.2%	$ 60,399	62.7%	$ 73,855	73.0%
Communications	5,250	15.6	9,697	16.0	15,751	16.3	10,923	10.8
Medical	181	0.5	1,544	2.5	7,422	7.7	8,284	8.2
Advanced Applications	4,624	13.7	7,476	12.3	12,813	13.3	8,066	8.0
Total	$ 33,740	100.0%	$ 60,707	100.0%	$ 96,385	100.0%	$ 101,128	100.0%

SUNX Limited, a provider of laser marking systems, accounted for 17%, 20%, 13% and 12% of our net sales for the years ended December 31, 2003, 2004, and 2005, and the nine months ended September 30, 2006, respectively.

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

	Year Ended December 31,						Nine Months Ended September 30,	
	2003		2004		2005		2006	
North and South America	$ 10,365	30.7%	$ 20,911	34.4%	$ 38,512	40.0%	$ 33,653	33.3%
Europe	12,963	38.4	19,339	31.9	23,882	24.8	32,391	32.0
Asia and Australia	10,412	30.9	20,232	33.3	33,569	34.8	35,084	34.7
Rest of World			225	0.4	422	0.4		
Total	$ 33,740	100.0%	$ 60,707	100.0%	$ 96,385	100.0%	$ 101,128	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, South 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 South 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.

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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;

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.

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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 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 $4.3 million in the nine months ended September 30, 2006, $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 do not believe that any of our patents are material to the conduct of our business. 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.

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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., Miyachi Unitek Corporation, MPB Communications Inc., SPI Lasers plc and JDS Uniphase Corporation for low and/or mid-power lasers. We believe that we compete favorably with other makers of fiber lasers on price, service, installed base and performance with respect to low and mid-power fiber lasers. In addition, we believe that we are the only fiber laser manufacturer that sells industrial-grade continuous wave fiber lasers with output power levels of over 500 watts. While we are currently a technology and price leader in fiber lasers and have a large share of the fiber laser market as compared to competitors that make fiber lasers, we expect competition from established laser makers that 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 are becoming increasingly available, barriers to entry are decreasing, and we expect new competitive products to enter the market. Several well-established conventional laser manufacturers are known to be interested in developing and licensing technology for fiber lasers. Many of the conventional laser companies 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. We also compete in the materials processing, medical and advanced applications markets with end users who produce their own solid-state and gas lasers as well as with manufacturers of non-laser methods and tools, 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. We believe that we compete favorably with other high-power fiber amplifier producers with respect to price, product performance and output power. The fiber amplifier market is more established than the fiber laser market and technological change has not occurred as rapidly as it has in the case of fiber lasers. Many of our competitors in this market are larger than we are 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.

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Employees

As of September 30, 2006, we had approximately 1,000 full-time employees, including approximately 90 in research and development, 770 in manufacturing operations, 50 in sales, service and marketing, and 90 in general and administrative functions. Of our total full-time employees at our principal facilities, 288 were in the United States, 374 were in Germany, 284 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		143,000	Optical fiber, components, final assembly, complete device manufacturing, administration
Fryazino, Russia	Leased	April 2007	57,000	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 59,000 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.

Legal Proceedings

From time to time, we are party to various legal proceedings and other disputes incidental to our business, including those described below. For a discussion of the risks associated with these legal proceedings and other disputes, see Risk Factors 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.

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 in its complaint that certain of our products, including but not limited to optical fiber amplifier products, infringe one U.S. patent allegedly owned by it and seeks damages in an unspecified amount, treble damages for alleged willful infringement and injunctive relief. Simultaneous with filing the complaint, Scientific-Atlanta requested that the

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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. Although we 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 Spectra-Physics, Inc., a subsidiary of Newport Corporation, filed in June 2006 in the United States District Court for the Northern District of California. The plaintiff alleges in its complaint 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 for alleged willful infringement 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. Although we intend to vigorously contest the claims against us, we cannot predict the outcome of the proceeding.

We are a defendant in an action by IMRA America, Inc. filed in November 2006 in the United States District Court for the Eastern District of Michigan. The plaintiff alleges in its complaint that certain unspecified fiber amplifier products that we produce infringe one U.S. patent allegedly owned by IMRA America and seeks damages in an unspecified amount, treble damages for alleged willful infringement and injunctive relief. The plaintiff also makes a general allegation of inducement of infringement and contributory infringement that does not specify any of our products. The patent claims generally relate to an optical amplification system in which a mode converter receives an input beam with a nearly diffraction limited mode from a laser source and converts the mode to match a fundamental mode of a multi-mode fiber amplifier, which amplifier provides at an output an amplified beam substantially in the fundamental mode. The patent expires in June 2017. Although we 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 and their ages as of September 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	37	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 H. BuAbbud, Ph.D.	51	Vice President-Telecommunications Products
Alexander Ovtchinnikov, Ph.D.	45	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)	66	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 telecommunications systems, from 1999 to 2002. He holds a B.E. in Electrical Engineering from the American University of Beirut and an M.Sc. 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 and approves base salary and incentive compensation for our chief executive officer, other officers and key executives;

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

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; and

periodically reviews compensation practices, procedures and policies throughout our company.

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 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

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purchase 6,667 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 20,000 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 20,000 shares of common stock to each of Messrs. Blair, Child and Dalton and Dr. Krupke on June 12, 2005, at an exercise price of $1.50 per share;

- We granted options to purchase 20,000 shares of common stock to each of Messrs. Gauthier and Hurley on April 18, 2006, at an exercise price of $5.37 per share; and

- We granted options to purchase 6,667 shares of common stock to each of Messrs. Blair, Child and Dalton and Dr. Krupke on June 21, 2006, at an exercise price of $6.45 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

	Annual Compensation			Long-Term Compensation Awards	
Name and Principal Position	**Salary($)**	**Bonus ($)(1)**	**Other Annual Compensation ($)(2)**	**Securities Underlying Options(#)**	**All Other Compensation ($)(3)**
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		13,334	8,913(6)
Timothy P.V. Mammen Vice President and Chief Financial Officer	200,000	142,500		13,334	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 834,667 shares of our common stock underlying options granted to employees and directors during the fiscal year ended December 31, 2005. The options in the table below were granted under our 2000 Incentive Compensation Plan and have an exercise price of $1.87 per share as determined by our board of directors on the date of grant. Based on our analysis, we determined that the fair market value of our common stock as of the date of grant was $1.99 per share. See Management s Discussion and Analysis of Financial Condition and Results of Operations Critical Accounting Policies and Estimates Stock- Based Compensation. These options will vest over four years in four equal installments from the date of grant.