

IPG PHOTONICS CORP  
Form 10-K  
March 29, 2007

**Table of Contents**

**UNITED STATES SECURITIES AND EXCHANGE COMMISSION  
Washington, DC 20549**

**Form 10-K**

(Mark One)

- ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**  
**For the fiscal year ended December 31, 2006**
- OR**
- TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**Commission file number: 001-33155**

**IPG PHOTONICS CORPORATION**

*(Exact name of registrant as specified in its charter)*

**Delaware**

*(State or other jurisdiction of incorporation or organization)*

**04-3444218**

*(IRS Employer Identification No.)*

**50 Old Webster Road, Oxford,  
Massachusetts**

*(Address of principal executive offices)*

**01540**

*(Zip Code)*

**Registrant's telephone number, including area code:**

**(508) 373-1100**

**Securities registered pursuant to Section 12(b) of the Act:**

**(Title of Class)**

**(Name of Exchange on Which Registered)**

Common Stock, Par Value \$0.0001 per share

The NASDAQ Stock Market LLC

**Securities registered pursuant to Section 12(g) of the Act:**

**None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No

## Edgar Filing: IPG PHOTONICS CORP - Form 10-K

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "accelerated filer and large accelerated filer" in Rule 12b-2 of the Exchange Act. (Check one):  
Large accelerated filer  Accelerated filer  Non-Accelerated filer

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes  No

As of March 23, 2007, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was approximately \$315.4 million, calculated based upon the closing price of our common stock of \$19.94 per share as reported by the Nasdaq Global Market on March 23, 2007.

As of March 23, 2007, 42,916,532 shares of the registrant's common stock were outstanding.

### **DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the registrant's Proxy Statement for its 2007 Annual Meeting of Stockholders to be filed pursuant to Regulation 14A within 120 days of the end of the registrant's fiscal year ended December 31, 2006 are incorporated by reference into Part III of this Annual Report on Form 10-K.

---

**TABLE OF CONTENTS**

**PART I**

<u>ITEM 1.</u>	<u>BUSINESS</u>	2
<u>ITEM 1A.</u>	<u>RISK FACTORS</u>	16
<u>ITEM 1B.</u>	<u>UNRESOLVED STAFF COMMENTS</u>	28
<u>ITEM 2.</u>	<u>PROPERTIES</u>	29
<u>ITEM 3.</u>	<u>LEGAL PROCEEDINGS</u>	29
<u>ITEM 4.</u>	<u>SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS</u>	30

**PART II**

<u>ITEM 5.</u>	<u>MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES</u>	31
<u>ITEM 6.</u>	<u>SELECTED FINANCIAL DATA</u>	33
<u>ITEM 7.</u>	<u>MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS</u>	34
<u>ITEM 7A.</u>	<u>QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK</u>	47
<u>ITEM 8.</u>	<u>FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA</u>	47
<u>ITEM 9.</u>	<u>CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE</u>	47
<u>ITEM 9A.</u>	<u>CONTROLS AND PROCEDURES</u>	48
<u>ITEM 9B.</u>	<u>OTHER INFORMATION</u>	48

**PART III**

<u>ITEM 10.</u>	<u>DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE</u>	48
<u>ITEM 11.</u>	<u>EXECUTIVE COMPENSATION</u>	48
<u>ITEM 12.</u>	<u>SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS</u>	48
<u>ITEM 13.</u>	<u>CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE</u>	48
<u>ITEM 14.</u>	<u>PRINCIPAL ACCOUNTING FEES AND SERVICES</u>	49

**PART IV**

<u>ITEM 15.</u>	<u>EXHIBITS AND FINANCIAL STATEMENT SCHEDULES</u>	49
<u>SIGNATURES</u>		50
<u>INDEX TO FINANCIAL STATEMENTS AND SCHEDULES</u>		F-1
<u>EX-21.1 Subsidiaries of Registrant</u>		
<u>EX-23.1 Consent of Independent Registered Public Accounting Firm</u>		
<u>EX-31.1 Section 302 Certification of C.E.O.</u>		
<u>EX-31.2 Section 302 Certification of C.F.O.</u>		
<u>EX-32.1 Section 906 Certification of C.E.O.</u>		
<u>EX-32.2 Section 906 Certification of C.F.O.</u>		

## **Table of Contents**

*This Annual Report on Form 10-K contains certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, and we intend that such forward-looking statements be subject to the safe harbors created thereby. For this purpose, any statements contained in this Annual Report on Form 10-K except for historical information are forward-looking statements. Without limiting the generality of the foregoing, words such as may, will, expect, believe, anticipate, intend, could, continue or the negative or other variations thereof or comparable terminology are intended to identify forward-looking statements. In addition, any statements that refer to projections of our future financial performance, trends in our businesses, or other characterizations of future events or circumstances are forward-looking statements.*

*The forward-looking statements included herein are based on current expectations of our management based on available information and involve a number of risks and uncertainties, all of which are difficult or impossible to accurately predict and many of which are beyond our control. As such, our actual results may differ significantly from those expressed in any forward-looking statements. Factors that may cause or contribute to such differences include, but are not limited to, those discussed in more detail in Item 1 (Business) and Item 1A (Risk Factors) of Part I and Item 7 (Management's Discussion and Analysis of Financial Condition and Results of Operations) of Part II of this Annual Report on Form 10-K. Readers should carefully review these risks, as well as the additional risks described in other documents we file from time to time with the Securities and Exchange Commission. In light of the significant risks and uncertainties inherent in the forward-looking information included herein, the inclusion of such information should not be regarded as a representation by us or any other person that such results will be achieved, and readers are cautioned not to rely on such forward-looking information. We undertake no obligation to revise the forward-looking statements contained herein to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.*

## **PART I**

### **ITEM 1. BUSINESS**

#### **Our Company**

IPG Photonics Corporation ( IPG, the Company, the Registrant, we , us or our ) was incorporated in Delaware. The Company is a leading developer and manufacturer of a broad line of high-performance fiber lasers for diverse applications in numerous markets. 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. 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. 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, the 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.



**Table of Contents**

**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<sub>2</sub> 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<sub>2</sub> 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<sub>2</sub> and YAG laser technologies over the past 40 years, these technologies have not kept pace with evolving customer requirements.

***Introduction of Fiber Lasers***

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 generally more reliable, efficient, robust and portable, and easier to operate than traditional 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 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. Also, the high cost of semiconductor diodes, a critical component of fiber lasers, meant that fiber lasers could not compete with conventional lasers on price and limited their use to high value-added applications. Over the last decade, however, semiconductor diodes have become more affordable and reliable due in part to substantial advancements in semiconductor diode technology and increased production volumes. Because of these improvements, fiber lasers can now effectively compete with conventional lasers over a wide range of output powers and applications.

## **Table of Contents**

### ***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. 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<sub>2</sub> 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 required maintenance costs.

*Ease of Use.* Many features of fiber lasers make them easy to operate, maintain and integrate into laser-based systems, providing a turnkey solution.

*Compact Size and Portability.* Fiber lasers are typically smaller and lighter in weight than traditional lasers, saving valuable floor space. Fiber lasers are durable and able to perform in variable working environments, qualities that permit fiber laser systems to be transported easily and perform in variable working environments.

*Choice of Wavelengths and Precise Control of Beam.* The design of fiber lasers generally provides a broad range of wavelength choices, a highly stable output and improved control of output beam parameters, allowing 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 and non-laser tools 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.

### **Our Competitive Strengths**

We believe that 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. 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.

*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.



*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, and optical, electrical, mechanical and semiconductor engineering that enables us to make our specialty optical fibers, semiconductor diodes and other critical components.

**Table of Contents**

*Vertically Integrated Development and Manufacturing.* 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 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.

*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 24,000 units through the end of 2006 and, in 2006, we shipped to more than 500 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:

*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, ranging in power from one watt to 50 kilowatts. Our vertically integrated manufacturing and broad technology expertise

## **Table of Contents**

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**

Our objective is to maintain and extend our competitive 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.

*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.

*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. 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 2006, more than 67% 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 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 applications. The Company's engineers and other technical experts work directly with the customer in the Company's applications centers to develop and configure the optimal solution for each customer's manufacturing requirements.

#### ***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 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

**Table of Contents**

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 some of the highest power solid-state lasers available. 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.

**Table of Contents**

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

## **Table of Contents**

### ***Materials Processing***

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

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

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

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

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

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

*Emerging Technologies and Applications.* Robotic production methods are increasing in use, driven by their lower production costs, flexibility and consistency. Fiber lasers complement the capabilities of robots with their flexible fiber delivery, high-power beam and low beam divergence. Another potential application of



## **Table of Contents**

fiber lasers is in cutting new lightweight and high-strength metal alloys used in automobile manufacturing, which requires the high output power densities that fiber lasers provide.

### ***Communications***

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

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

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

### ***Medical***

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

### ***Advanced Applications***

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

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

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

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

*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.

## **Table of Contents**

*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. The following technologies are key elements in our products.

### ***Specialty Optical Fibers***

We have 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. 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.

We developed molecular beam epitaxy techniques to grow 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 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.

### ***Specialty Components and Combining Techniques***

We have developed 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 methods and expertise in splicing fibers together with low optical energy loss and on-line loss testing.

### ***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. 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.

**Table of Contents*****High-Stress Testing***

We employ high-stress techniques in testing components and final products that help increase reliability and accelerate product development. We also have built a large database of diode test results that allows us to predict the estimated lifetime of our diodes 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 2006, we shipped products to over 500 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.

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

	<b>Year Ended December 31,</b>					
	<b>2006</b>		<b>2005</b>		<b>2004</b>	
Materials Processing	\$ 102,317	71.4%	\$ 59,659	61.9%	\$ 41,990	69.2%
Communications	15,187	10.6	15,751	16.3	9,697	16.0
Medical	11,163	7.8	7,319	7.6	1,544	2.5
Advanced Applications	14,558	10.2	13,656	14.2	7,476	12.3
Total	\$ 143,225	100.0%	\$ 96,385	100.0%	\$ 60,707	100.0%

SUNX Limited, a provider of laser marking systems, accounted for 10%, 13% and 20% of our net sales for the years ended December 31, 2006, 2005 and 2004, respectively.

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

	<b>Year Ended December 31,</b>					
	<b>2006</b>		<b>2005</b>		<b>2004</b>	
North and South America(1)	\$ 45,965	32.1%	\$ 38,512	40.0%	\$ 20,911	34.4%
Europe	48,491	33.9	23,882	24.8	19,339	31.9
Asia and Australia	48,769	34.1	33,569	34.8	20,232	33.3
Rest of World			422	0.4	225	0.4
Total	\$ 143,225	100.0%	\$ 96,385	100.0%	\$ 60,707	100.0%

(1) The substantial majority of sales in North and South America are to customers in the United States.

**Backlog**

At December 31, 2006, our backlog of orders scheduled for shipment (generally within one year) was approximately \$51.8 million compared to \$39.0 million at December 31, 2005. Orders used to compute backlog are generally cancelable without substantial penalties. Historically, the rate of cancellation experienced by us has not been significant. We manage the risk of cancellation by establishing the right to charge a cancellation fee that generally covers a portion of the purchase price, any materials and development costs incurred prior to the order being cancelled. Our ability to enforce this right depends on many factors including, but not limited to, the customer's requested length of delay, the number of other outstanding orders with the customer and our ability to quickly convert the canceled order to another sale.

The Company anticipates shipping the present backlog during fiscal year 2007. However, the Company's backlog at any given date is not necessarily indicative of actual sales for any future period.

## **Table of Contents**

### **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.

We typically provide one to three-year warranties on our lasers and amplifiers. Warranty reserves have generally been sufficient to cover product warranty repair and replacement costs.

### **Manufacturing**

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 have recently added 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. 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. 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.

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

### **Research and Development**

We have extensive research and development experience in laser materials, fiber and optoelectronic components. We 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. We concentrate our research and development efforts on advancements in performance as well as capacity to hold and produce higher optical power levels.



## **Table of Contents**

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 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 \$6.5 million in 2006, \$5.8 million in 2005 and \$4.8 million in 2004.

## **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 Item 1A, Risk Factors Risks Related to Our Business Our Inability to Protect Our Intellectual Property and Proprietary Technologies Could Result in the Unauthorized Use of Our Technologies by Third Parties, Hurt Our Competitive Position and Adversely Affect Our Operating Results.

## **Competition**

Our markets are competitive and characterized by rapidly changing technology and continuously evolving customer requirements. 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.

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<sub>2</sub> and solid-state lasers, including Fanuc, Lasag Ltd., Rofin-Sinar Technologies, Inc., and Trumpf Inc., and makers of mid and low-power conventional CO<sub>2</sub> and solid-state lasers such as Coherent, Inc., the Synrad, Inc. subsidiary of Excel Technology, 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 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. 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

## **Table of Contents**

Inc. 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 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.

## **Employees**

As of December 31, 2006, we had approximately 1,040 full-time employees, including approximately 60 in research and development, 840 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, approximately 300 were in the United States, 380 were in Germany, 300 were in Russia and 10 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.

## **Government Regulation**

### ***Regulatory Compliance***

The majority of our laser and amplifier products sold in the United States are classified as Class IV Laser Products under the applicable rules and regulations of the Center for Devices and Radiological Health ( CDRH ) of the U.S. Food and Drug Administration. The same classification system is applied in the European markets. Safety rules are formulated with Deutsche Industrie Norm (i.e., German Industrial Standards) or ISO standards, which are internationally harmonized. CDRH regulations generally require a self-certification procedure pursuant to which a manufacturer must submit a filing to the CDRH with respect to each product incorporating a laser device, make periodic reports of sales and purchases and comply with product labeling standards, product safety and design features and informational requirements. The Company's products applications can result in injury to human tissue if directed at an individual or otherwise misused. The CDRH is empowered to seek fines and other remedies for violations of their requirements. We believe that our products are in material compliance with applicable laws and regulations relating to the manufacture of laser devices.

### ***Environmental Regulation***

Our operations are subject to various federal, state and local environmental protection regulations governing the use, storage, handling and disposal of hazardous materials, chemicals, various radioactive materials and certain waste products. In the United States, we are subject to the federal regulation and control of the Environmental Protection Agency. Comparable authorities are involved in other countries. We believe that our operations are in material compliance with applicable environmental protection laws and regulations.

Although we believe that our safety procedures for using, handling, storing and disposing of such materials comply with the standards required by federal and state laws and regulations, we cannot completely eliminate the risk of accidental contamination or injury from these materials. In the event of such an accident involving such materials, we could be liable for damages and such liability could exceed the amount of our liability insurance coverage and the resources of our business.

## **Availability of Reports**

Edgar Filing: IPG PHOTONICS CORP - Form 10-K

Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to such reports are available free of charge on our web site at [www.ipgphotonics.com](http://www.ipgphotonics.com) as soon as reasonably practicable after such reports are electronically filed with, or furnished to, the Securities and Exchange Commission ([www.sec.gov](http://www.sec.gov)). We will also provide electronic or paper copies of such reports free of charge, upon request made to our Corporate Secretary.

**Table of Contents**

**ITEM 1A. RISK FACTORS**

*The factors described below are the principal risks that could materially adversely affect our operating results and financial condition. Other factors may exist that we do not consider significant based on information that is currently available. In addition, new risks may emerge at any time, and we cannot predict those risks or estimate the extent to which they may affect us.*

***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<sub>2</sub> 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<sub>2</sub> 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<sub>2</sub> 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.

***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

**Table of Contents**

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 840 of our 1,040 employees as of December 31, 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 two patent infringement lawsuits brought by the Scientific-Atlanta division of Cisco Systems, Inc., and IMRA America, Inc. See Item 3, 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 of one U.S. patent and seeks damages in an unspecified amount, 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 of at least \$10 million, 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



## **Table of Contents**

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 is 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 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 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 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.

### ***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

## **Table of Contents**

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, 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.

**Table of Contents**

***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. 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.

***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 29% of our consolidated net sales in 2006 and 37% of our consolidated net sales in each of 2005 and 2004. Our largest customer accounted for 10% of sales in 2006, 13% of sales in 2005 and 20% of sales in 2004. 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

**Table of Contents**

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;

seasonality attributable to different purchasing patterns and levels of activity throughout the year in the areas where we operate;

the timing of customer qualification of our products and commencement of volume sales of systems that include our products;

the rate at which our present and future customers and end users adopt our technologies;

the gain or loss of a key customer;

product or customer mix;

competitive pricing pressures;

the relative proportions of our U.S. and international sales;

our ability to design, manufacture and introduce new products on a cost-effective and timely basis;

the incurrence of expenses to develop and improve application and support capabilities, the benefits of which may not be realized until future periods, if at all;

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

foreign currency fluctuations; and

our ability to control expenses.

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

shipments, and production difficulties could delay shipments. Accordingly, our results of operations are subject to significant fluctuations from quarter to quarter, and we may not be able to accurately predict when these fluctuations will occur.

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

In response to an increase in demand for our fiber lasers over the last three years, we started adding substantial manufacturing capacity at our facilities in the United States, Germany and Russia beginning in early 2005, and we are continuing to expand our capacity further. A significant portion of our manufacturing facilities and production equipment, such as our semiconductor production and processing equipment, diode



## **Table of Contents**

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. Approximately 82% of our revenues during 2006 were in these two markets. Although these industries are broad, they are cyclical and have historically experienced sudden and severe downturns and periods of oversupply, resulting in significantly reduced demand for capital equipment, including the products that we manufacture and market. For the foreseeable future, our operations will continue to depend upon capital expenditures by customers in these markets, which, in turn, depend upon the demand for their products or services. Decreased demand for products and services from customers in these industries during an economic downturn may lead to decreased demand for our products, which would reduce our sales or sales growth rate.

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

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

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

We generally do not enter into long-term agreements with our customers obligating them to purchase our fiber lasers or amplifiers. Our business is characterized by short-term purchase orders and shipment schedules and, in some cases, orders may be cancelled or delayed without significant penalty. As a result, it is difficult to forecast our revenues and to determine the appropriate levels of inventory required to meet future demand. In addition, due to the absence of long-term volume purchase agreements, we forecast our revenues and plan our production and inventory levels based upon the demand forecasts of our OEM customers, end users, and distributors, which are highly unpredictable and can fluctuate substantially. 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 \$1.0 million and \$1.9 million in 2006 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

**Table of Contents**

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<sub>2</sub> and YAG lasers, as these makers of traditional solutions may lower prices to maintain current market share and have committed significant research and development resources to pursue opportunities related to these technologies.

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

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

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

longer accounts receivable collection periods;

changes in the values of foreign currencies;

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

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

certification requirements;

environmental regulations;

less effective protection of intellectual property rights in some countries;

potentially adverse tax consequences;

**Table of Contents**

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 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 2006, 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

## **Table of Contents**

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 misjudge the long-term potential of the acquired business or technology, or the acquisition may not be complementary to our existing business. Furthermore, potential acquisitions and investments, whether or not consummated, may divert our management's attention and require considerable cash outlays at the expense of our existing operations. In addition, to complete future acquisitions, we may issue equity securities, incur debt, assume contingent liabilities or have amortization expenses and write-downs of acquired assets, which could adversely affect our profitability and result in dilution to our existing and future stockholders.

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

Some of our operations use substances regulated under various federal, state, local, and international laws governing the environment, including those relating to the storage, use, discharge, disposal, labeling, and human exposure to hazardous and toxic materials. We could incur costs, fines and civil or criminal sanctions, third-party property damage or personal injury claims, or could be required to incur substantial investigation or remediation costs, if we were to violate or become liable under environmental laws. Liability under environmental laws can be joint and several and without regard to comparative fault. Compliance with current or future environmental laws and regulations could restrict our ability to expand our facilities or require us to acquire additional expensive equipment, modify our manufacturing processes, or incur other significant expenses 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



## **Table of Contents**

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<sub>2</sub> 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.

***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, controls more than 46.6% of our voting power, and has a significant influence on the outcome of director elections and other matters requiring stockholder approval, including a change in corporate control.***

Dr. Valentin P. Gapontsev, our chairman and chief executive officer, and IP Fibre Devices (UK) Ltd. (IPFD), of which Dr. Gapontsev is the managing director and majority owner, beneficially own an aggregate of 19,999,243 shares of our common stock, or approximately 46.6% of our common stock. In addition, Dr. Denis Gapontsev, our Vice President of Research and Development and the son of Dr. Valentin P. Gapontsev, beneficially owns 1,718,902 shares of our common stock, or approximately 4.0% of our common stock, and collectively with Dr. Valentin P. Gapontsev, approximately 50.6% of our common stock. As a result, Dr. Valentin P. Gapontsev has 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. 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.



**Table of Contents**

***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. 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.

***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, 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;

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, or the perception that sales could occur, could adversely affect the market price of our common stock. As of March 23, 2007, we had 42,916,532 shares of common stock

outstanding and 4,392,206 shares subject to outstanding options and restricted stock units. Our directors, executive officers and other stockholders holding in the aggregate approximately 79% of our outstanding shares as of March 23, 2007, have agreed not to sell or otherwise dispose of any shares of common stock for a period of at least 180 days after December 12, 2006, the date of the final prospectus relating to the IPO. The lock up agreements may be terminated by Merrill Lynch & Co. and Lehman Brothers Inc., or in some cases by us. When the lock-up agreements expire or are terminated, approximately 32,484,946 shares of our common stock will be eligible for sale under Rule 144, Rule 144(k) or Rule 701.

**Table of Contents**

The holders of an aggregate of approximately 5,181,184 shares of common stock 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. We have registered all shares of common stock that we may issue under our stock option plans. Consequently, 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.

***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 is unable to express an opinion as to 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.

**ITEM 1B. UNRESOLVED STAFF COMMENTS**

None.

**Table of Contents****ITEM 2. PROPERTIES**

Our main facilities include the following:

<b>Location</b>	<b>Owned or Leased</b>	<b>Lease Expiration</b>	<b>Approximate Size (sq. ft.)</b>	<b>Primary Activity</b>
Oxford, Massachusetts	Owned		137,000	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, Germany and Russia by adding more than 100,000 square feet on property owned by us. These additional facilities are expected to be used primarily for manufacturing.

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 have sales personnel at each of our manufacturing facilities and at leased offices in Wixom, Michigan; London, England; Tokyo, Japan; Nagoya, 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.

**ITEM 3. 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 Item 1A. 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 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.

In January 2007, we settled a lawsuit filed in June 2006 in the United States District Court for the Northern District of California by Spectra-Physics, Inc., a subsidiary of Newport Corporation. The plaintiff alleged in its complaint that certain of our optical fiber laser and amplifier products infringe one U.S. patent allegedly owned by it.

**Table of Contents**

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 excess of \$10 million, 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.

**ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS**

On October 27, 2006, we held our 2006 annual meeting of stockholders. Of the 27,411,701 shares for which votes were cast at the meeting, the votes cast for the proposals at the annual meeting were as follows:

<b>Proposal</b>	<b>Votes for</b>	<b>Votes Against</b>	<b>Withheld</b>	<b>Abstentions</b>
Adoption of Amended and Restated Bylaws	27,411,701			
Adoption of Amended and Restated Certificate of Incorporation	27,411,701			
Reverse stock split of our common stock	27,400,061	11,639		
Ratification of indemnification agreements with directors and executive officers	27,411,701			
Adoption of our 2006 Incentive Compensation Plan	27,411,701			
Adoption of our Non-Employee Directors Stock Plan	27,409,589	2,111		

In addition, 2,600,000 shares of our series B preferred stock (voting separately as a class) approved the adoption of our Amended and Restated Certificate of Incorporation.

Also at the annual meeting, the following directors were nominated for election to our board of directors and each was elected to the board for a term ending on the next annual meeting of stockholders: Valentin P. Gapontsev, John H. Dalton, Eugene Shcherbakov, Robert A. Blair, Michael C. Child, William F. Krupke, Igor Samartsev, Henry E. Gauthier and William S. Hurley. A total of 27,411,700 votes were cast for the election of each such director, except that 27,409,591 votes were cast in favor of, and 2,109 votes were withheld for, the election of Henry E. Gauthier and William S. Hurley.



**Table of Contents****PART II****ITEM 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES****Price Range of Common Stock**

Our common stock commenced trading on the Nasdaq Global Market on December 13, 2006 under the symbol IPGP. As of March 23, 2007, there were approximately 42,916,532 shares of our common stock outstanding held by approximately 200 holders of record, which does not include beneficial owners of common stock whose shares are held in the names of various securities brokers, dealers and registered clearing agencies.

The following table reflects the high and low sales prices of our common stock for fiscal 2006 since our initial public offering as reported by the Nasdaq Global Market:

<b>Quarter Ended</b>	<b>High</b>	<b>Low</b>
December 31, 2006 (from December 13, 2006)	\$ 26.06	\$ 21.61

**Dividends**

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. 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.

**Recent Sales of Unregistered Securities; Use of Proceeds from Registered Securities**

During the past three years, we have sold and issued the following unregistered securities:

1. In connection with our initial public offering, all outstanding shares of our series A preferred stock converted in to 359,463 shares of our common stock, all outstanding shares of our series B preferred stock converted into 7,252,927 shares of our common stock and all outstanding shares of our series D preferred stock converted into 1,683,168 shares of our common stock.

2. On December 15, 2004, we sold 66,000 shares of our common stock to Sujay Shetty, an individual, in exchange for 277,000 shares of IPG Photonics (India) Private Limited

3. Since January 1, 2004, we have granted options to purchase 3,406,546 shares of our common stock at exercise prices ranging from \$1.50 to \$9.60 per share to employees, consultants and directors under our 2000 Incentive Compensation Plan, our 2006 Incentive Compensation Plan and our Non-Employee Directors Stock Plan. From January 1, 2004 through March 23, 2007, we have issued 1,685,024 shares of our common stock pursuant to the exercise of stock options for aggregate consideration of \$2.5 million.

The sales of securities described in items (1) and (2) above were deemed to be exempt from registration pursuant to Section 4(2) of the Securities Act and Regulation D promulgated thereunder as transactions by an issuer not involving a public offering. Each of these sales was to accredited investors, as such term is defined in Rule 501 of Regulation D. Each of the recipients of securities in the transactions deemed to be exempt from registration pursuant to Section 4(2) of the Securities Act received written disclosures that the securities had not been registered under the Securities Act and that any resale must be made pursuant to a registration or an available exemption from such registration. The issuances of the securities described in item (3) above were deemed to be exempt from registration pursuant to either Rule 701 promulgated under the Securities Act as a transaction pursuant to compensatory benefit plans approved by our board of directors or, where such recipients of securities under these compensatory plans were accredited investors because the recipients were directors or executive officers of our company, under Section 4(2) of the Securities Act as

**Table of Contents**

transactions by an issuer not involving a public offering. None of the sales of the securities described in items (1) to (3) above involved the use of an underwriter, and no commissions were paid in connection with the sale of any of the securities that we issued. The sales of these securities were made without general solicitation or advertising.

The aggregate net proceeds from the sale by us of 6,241,379 shares of our common stock, \$0.0001 par value, in our initial public offering was approximately \$93.2 million. We did not receive any proceeds from the sale by selling shareholders of 4,108,621 shares of our common stock sold in the initial public offering. The representatives for the several underwriters in the offering were Merrill Lynch & Co. and Lehman Brothers. All of the shares of common stock sold in the offering were registered under the Securities Act of 1933 pursuant to a Registration Statement on Form S-1 (Reg. No. 333-136521), effective December 12, 2006. The offering commenced December 12 and closed on December 18, 2006. To date, \$44.9 million of our net proceeds from the initial public offering has been applied. In December 2006, we used \$22.1 million to purchase the series B preferred stock warrants and repaid \$4.5 million of long-term debt in December 2006. In January 2007, we repaid long-term debt in Germany and the United States amounting to \$18.3 million. In connection with the offering, we incurred underwriting discounts of \$7.2 million and offering expenses of \$2.6 million. We expect that remaining cash after repayment of debt will be sufficient to meet our liquidity and capital needs for the foreseeable future. Pending application of the remaining net proceeds, we have invested the remaining net proceeds of the offering in cash, cash equivalents and auction rate securities with maturities ranging from 30 to 90 days in accordance with our investment policy. None of our net proceeds were paid directly or indirectly to directors, officers, persons owning ten percent or more of our equity securities, or our affiliates.

**Issuer Purchases of Equity Securities**

During the quarter ended December 31, 2006, there were no repurchases made by us or on our behalf, or by any affiliated purchasers, of shares of our common stock.

**Information Regarding Equity Compensation Plans**

The following table sets forth information with respect to securities authorized for issuance under our equity compensation plans as of December 31, 2006:

**Equity Compensation Plan Information**

<b>Plan Category</b>	<b>Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights</b>	<b>Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights</b>	<b>Number of Securities</b>
			<b>Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a))</b>
	<b>(a)</b>	<b>(b)</b>	<b>(c)</b>
Equity Compensation Plans Approved by Security Holders	4,358,827	\$ 2.69	3,129,461
Equity Compensation Plans Not Approved by Security Holders	33,334	\$ 1.50	

Total	4,392,161	3,129,461
-------	-----------	-----------

The equity compensation plan not approved by security holders includes a non-plan grant of stock options by the Board of Directors in March 2000 to a non-employee advisor. The stock options were non-qualified stock options to purchase common stock at an exercise price of \$1.50 per share. These options vested immediately and expire in March 2010.

**Table of Contents****ITEM 6. SELECTED 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 Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations included elsewhere in this Annual Report on Form 10-K. The data as of December 31, 2006 and 2005, and for the years ended December 31, 2006, 2005 and 2004, is derived from our audited consolidated financial statements and related notes included elsewhere in this Annual Report on Form 10-K. The data as of December 31, 2004, 2003 and 2002, and for the years ended December 31, 2003 and 2002, is derived from our audited consolidated financial statements and related notes not included in this Annual Report on Form 10-K. 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. Our historical results are not necessarily indicative of the results for any future period.

	<b>Year Ended December 31,</b>				
	<b>2006</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>	<b>2002</b>
	<b>(In thousands, except per share data)</b>				
<b>Consolidated Statement of Operations</b>					
<b>Data:(1)</b>					
Net sales	\$ 143,225	\$ 96,385	\$ 60,707	\$ 33,740	\$ 22,180
Cost of sales	79,931	62,481	42,274	38,583	23,277
Gross profit (loss)	63,294	33,904	18,433	(4,843)	(1,097)
Operating expenses:					
Sales and marketing	6,222	3,236	2,363	2,110	19,910
Research and development	6,544	5,788	4,831	10,063	8,383
General and administrative	14,522	10,598	8,179	9,998	13,354
Other operating expenses(3)					9,474
Total operating expenses	27,288	19,622	15,373	22,171	51,121
Operating (loss) income	36,006	14,282	3,060	(27,014)	(52,218)
Interest expense, net	(1,493)	(1,840)	(2,150)	(1,505)	(1,089)
Fair value adjustment to series B warrants(2)	(7,444)	(745)	(615)	(3,664)	2,518
Other income, net	1,050	236	196	1,647	2,414
(Loss) income before benefit from (provision for) income taxes and minority interests in consolidated subsidiaries	28,119	11,933	491	(30,536)	(48,375)
Benefit from (provision for) income taxes	2,995	(4,080)	1,601	2,205	(1,175)
Minority interests in consolidated subsidiaries	(1,881)	(426)	(80)	121	165
Net (loss) income	\$ 29,233	\$ 7,427	\$ 2,012	\$ (28,210)	\$ (49,385)

Net (loss) income per share:

Basic	\$	0.27	\$	0.16	\$	(0.01)	\$	(1.40)	\$	(2.13)
Diluted	\$	0.26	\$	0.16	\$	(0.01)	\$	(1.40)	\$	(2.13)

- (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, 2002 and 2003. Those awards became fully vested during the year ended December 31, 2004. See Item 7, 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 would have been exercised prior to their expiration in April 2008. We repurchased these warrants on December 18, 2006. See Item 7, Management's Discussion and

**Table of Contents**

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) Amount in 2002 reflects provision for settlement of a contract with a supplier.

	2006	2005	As of December 31, 2004 (In thousands)	2003	2002
<b>Consolidated Balance Sheet Data:</b>					
Cash and cash equivalents	\$ 75,667	\$ 8,361	\$ 2,548	\$ 536	\$ 1,379
Working capital	115,668	21,487	20,934	16,303	35,669
Total assets	232,492	115,481	110,545	105,481	117,166
Long-term debt, including current portion and a provision for contract settlement	38,367	26,081	31,454	34,268	38,143
Series B warrants		14,644	13,899	13,284	9,620
Convertible redeemable preferred stock		96,348	93,997	91,646	84,194
Preferred stock		4,880	4,880	5,000	5,000
Stockholders' equity (deficit)	158,594	(46,504)	(49,038)	(51,947)	(19,516)

## **ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

*The following discussion and analysis of our financial condition and results of operations should be read in conjunction with Item 6, Selected Consolidated Financial Data and our consolidated financial statements and related notes included in this Annual Report of Form 10-K. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors including, but not limited to, those discussed under Item 1A. Risk Factors.*

### **Overview**

We develop and manufacture a broad line of high-performance fiber lasers for diverse applications in numerous markets. 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<sub>2</sub> 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



## **Table of Contents**

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.

In December 2006, we completed our IPO of 10,350,000 shares of common stock at \$16.50 per share, comprised of 6,241,379 primary shares and 4,108,621 shares offered by selling stockholders. In connection with the IPO, all of the outstanding shares of our preferred stock were converted into an aggregate of 9,295,558 shares of common stock.

## **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.

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.

## **Table of Contents**

*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. In December 2006, we repurchased the series B warrants with a portion of the proceeds from our IPO. The fair value adjustment to our series B warrants was a non-cash benefit or expense relating to a change in the fair value of the warrants. These warrants were accounted for as a derivative and were 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 was based on a change in the probability of any of such events occurring prior to the expiration of the warrants. We incurred 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 were repurchased. Following the IPO we will record no further adjustments to the fair value of these warrants in our financial statements because they have been repurchased.

*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 full 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.* From 2002 to 2006, our net sales grew from \$22.2 million to \$143.2 million, representing a compound annual growth rate of approximately 59%. 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, to a lesser extent, (v) the level of investment by communications system providers for broadband applications. While we believe we have multiple opportunities for additional net sales growth, we do not

expect our net sales percentage growth rates to continue at rates as high as those we have historically experienced. Our annual revenue growth rates have decreased from 80% in 2004 to 59% in 2005 and 49% in 2006. 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.

**Table of Contents**

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.

Our net sales have historically fluctuated from quarter to quarter. The increase and decrease in sales from a prior quarter can be affected by the timing of orders received from customers, the shipment, installation and acceptance of products at our customers' facilities, the mix of OEM orders and one-time orders for products with large purchase prices, and seasonal factors such as the purchasing patterns and levels of activity throughout the year in the regions where we operate. Historically, our net sales have been higher in the second half of the year than in the first half of the year.

*Gross margin.* In the last three years our gross margins have increased from 30.4% in 2004 to 35.2% in 2005 and 44.2% in 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 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 write-off 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, build and expand applications centers, hire additional personnel involved in marketing in our existing and new geographic locations and otherwise 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

## **Table of Contents**

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 our general and administrative expenses to continue to increase as we expand headcount to support the growth of the Company, public company reporting obligations and regulatory compliance, incur higher insurance expenses related to directors and officers insurance and continue to invest in our financial reporting systems. Further, legal expenses may increase in response to pending and any future litigation or intellectual property matters, the timing and amount of which may vary substantially from quarter to quarter.

*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 were 29% in 2006, 37% in 2005 and 37% in 2004. Sales to our largest customer accounted for 10%, 13% and 20% of our net sales in 2006, 2005 and 2004, 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 which were outstanding prior to our IPO in December 2006. We no longer have any such convertible debt or equity instruments outstanding. As such, our net income per share computations will no longer be adjusted for the effects of these convertible instruments for the periods following the completion of the IPO.

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 constituted freestanding derivatives that were accounted for as liabilities at fair value and the changes in fair value of the series B warrants were recorded as non-cash expenses or benefits. Any increase in the fair value of the series B warrants had the effect of reducing our reported net income and net income per share. For the years ended December 31, 2006, 2005, and 2004, the fair value of the series B warrants increased by \$7.4 million, \$0.7 million and \$0.6 million, respectively. We repurchased the series B warrants in December 2006 and we recorded 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 included price protection or anti-dilution features that constituted a contingent beneficial conversion feature (or deemed dividend) that were recorded upon the resolution of the contingency, the completion of our IPO. The deemed dividend did not reduce net income but did reduce net income applicable to common stockholders in the computation of net income (loss) per share. We recorded a deemed dividend totaling approximately \$18.3 million in the quarter ended December 31, 2006, the quarter in which our IPO occurred. 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 in subsequent quarters as all outstanding shares of our series A preferred stock and series B preferred stock converted into shares of our common stock upon completion of our IPO.

## **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



**Table of Contents**

to an inherent degree of uncertainty. On an ongoing basis we re-evaluate our judgments and estimates including those related to inventories, income taxes and the fair value of certain debt and equity instruments including stock-based compensation. We base our estimates and judgments on our historical experience and on other assumptions that we believe are reasonable under the circumstances, the results of which form the basis for making the judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results could differ from those estimates, which may result in material effects on our operating results and financial position. The accounting policies described below are those which, in our opinion, involve the most significant application of judgment, or involve complex estimation, and which could, if different judgments or estimates were made, materially affect our reported results of operations and financial position.

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

We recognize revenue in accordance with SEC Staff Accounting Bulletin, or SAB, No. 104, Revenue Recognition. SAB No. 104 requires that four basic criteria be met before revenue can be 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. Periodically, our revenue arrangements include customer acceptance clauses. Revenue is deferred until customer acceptance has been obtained.

*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. Write downs 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. 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 \$1.9 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

**Table of Contents**

the stock on the date of grant. Stock-based compensation is included in the following financial statement captions as follows:

	<b>Year Ended December 31,</b>		
	<b>2006</b>	<b>2005</b>	<b>2004</b>
	<b>(In thousands)</b>		
Cost of sales	\$ 127	\$ 4	\$ 218
Sales and marketing	62	1	6
Research and development	43	1	669
General and administrative	301	1	10
Total	\$ 533	\$ 7	\$ 903

Prior to the adoption of SFAS No. 123(R), we complied with the disclosure requirements of SFAS No. 123 and SFAS No. 148, which required 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 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 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, *Shared-Based Payment*, 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 was no public market for our common stock prior to December 12, 2006, 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;

**Table of Contents**

historical and anticipated fluctuations in our net sales and results of operations, which reflect our dependence on certain key customers, the cyclical nature of certain of our end markets and market acceptance of our products; and

the risk of owning our common stock and its non-liquid nature.

For the calculation of expected volatility, because there was no public market for our common stock prior to December 12, 2006, 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 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 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.

*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 our net operating losses in Germany that we have previously generated and we are now paying income taxes in Germany. In 2006, our valuation allowances related to deferred tax assets were reduced by \$17.7 million. The reduction included \$4.6 million related to operating losses used and timing differences that were reversed during the year and \$13.1 million of valuation allowances released in the fourth quarter of 2006 after we determined that the underlying deferred tax assets primarily consisting of U.S. Federal operating loss carryforwards were more likely than not to be realized. As of December 31, 2006, the remaining valuation allowances were \$1.7 million, primarily provided against U.S. state net operating loss carryforwards. The release of the remaining valuation allowance will depend upon the continued improvement in results of our U.S. operations.

*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 were treated as a free-standing derivative under SFAS No. 133, Accounting for Derivative Instruments and Hedging Activities. Under SFAS No. 133, the Company was required to record a non-cash expense or benefit each quarter, based upon the increase or

**Table of Contents**

decrease in the fair value of the warrants, until such warrants were repurchased. The warrants were repurchased in 2006 and no further charges will be incurred relative to changes in their fair market value.

**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.

	<b>Year Ended December 31,</b>					
	<b>2006</b>		<b>2005</b>		<b>2004</b>	
	<b>(In thousands, except percentages)</b>					
Net sales	\$ 143,225	100.0%	\$ 96,385	100.0%	\$ 60,707	100.0%
Cost of sales	79,931	55.8	62,481	64.8	42,274	69.6
Gross profit	63,294	44.2	33,904	35.2	18,433	30.4
Operating expenses:						
Sales and marketing	6,222	4.4	3,236	3.4	2,363	3.9
Research and development	6,544	4.6	5,788	6.0	4,831	8.0
General and administrative	14,522	10.1	10,598	11.0	8,179	13.5
Total operating expenses	27,288	19.1	19,622	20.4	15,373	25.4
Operating income	36,006	25.1	14,282	14.8	3,060	5.0
Interest expense, net	(1,493)	(1.0)	(1,840)	(1.9)	(2,150)	(3.5)
Fair value adjustment to series B warrants	(7,444)	(5.2)	(745)	(0.8)	(615)	(1.0)
Other income, net	1,050	0.7	236	0.2	196	0.3
Income before benefit from (provision for) income taxes and minority interests in consolidated subsidiaries	28,119	19.6	11,933	12.3	491	0.8
Benefit from (provision for) income taxes	2,995	2.1	(4,080)	(4.2)	1,601	2.6
Minority interests in consolidated subsidiaries	(1,881)	(1.3)	(426)	(0.4)	(80)	(0.1)
Net income	\$ 29,233	20.4	\$ 7,427	7.7	\$ 2,012	3.3

**Comparison of Year Ended December 31, 2006 to Year Ended December 31, 2005**

*Net sales.* Our net sales increased by \$46.8 million, or 48.6%, to \$143.2 million in 2006 from \$96.4 million in 2005. This increase was primarily attributable to a higher volume of sales of fiber lasers in materials processing applications, where net sales increased by \$42.7 million or, by 91.0% of the total increase in net sales. Medical applications

accounted for 8.1% of the total increase in net sales. These increases were partially offset by a slight decrease in sales in communications applications. 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 in medical applications resulted from an increase in net sales for aesthetic skin procedures.

*Cost of sales and gross margin.* Our costs of sales increased by \$17.4 million, or 27.8%, to \$79.9 million in 2006 from \$62.5 million in 2005, as a result of the increased sales volume. Our gross margin increased to 44.2% in 2006 from 35.2% in 2005 primarily 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.



**Table of Contents**

*Sales and marketing expense.* Sales and marketing expense increased by \$3.0 million, or 93.8%, to \$6.2 million in 2006 from \$3.2 million in 2005, primarily as a result of a \$1.5 million increase in personnel costs due to the expansion of our worldwide direct sales organization and increases in related sales commissions, compensation, travel and selling expenses related to the cost of products used for demonstration purposes. As we continue to expand our sales presence and organization worldwide we expect expenditures on sales and marketing to continue to increase.

*Research and development expense.* Research and development expense increased by \$0.7 million, or 12.1%, to \$6.5 million in 2006 from \$5.8 million in 2005. This increase is primarily due to a \$0.7 million increase in personnel costs related to higher headcount and increased research and development activity. Research and development activity continues to focus on enhancing the performance of our internally manufactured diodes, optical fibers and components, refining production processes to improve manufacturing yields of optical components, testing new applications for our existing products and developing new products.

*General and administrative expense.* General and administrative expenses increased by \$3.9 million, or 36.8%, to \$14.5 million in 2006 from \$10.6 million in 2005, primarily due to a \$0.8 million increase in legal, consulting and accounting costs attributable to new litigation, internal control compliance and financial reporting, a \$0.7 million increase in personnel-related expenses, a \$0.6 million increase in foreign exchange losses attributable to the depreciation of the U.S. Dollar relative to the Euro and Japanese Yen and a \$0.5 million increase in depreciation.

*Interest expense, net.* Interest expense, net decreased by \$0.3 million, or 16.7%, to \$1.5 million in 2006 from \$1.8 million in 2005, resulting from the repayment of term debt as well as lower utilization of our German line-of-credit facilities during 2006. We expect to generate net interest income in 2007 as a result of interest income generated from investing the net proceeds from our recent IPO, and reduction of interest expense related to repayment of our U.S. and German term debt and a reductions in the amounts drawn under our line-of-credit facilities, which will be partially offset by interest on the subordinated notes that we issued to our series B preferred stockholders in connection with the IPO.

*Fair value adjustment to series B warrants.* The fair value adjustment of the series B warrants increased by \$6.7 million to \$7.4 million in 2006 as a result of our IPO in December 2006. We will not incur any further charges related to the fair value adjustment of the series B warrants after 2006 as we repurchased the warrants using part of the proceeds from the IPO.

*Benefit from (provision for) income taxes.* Our benefit from income taxes in 2006 was \$3.0 million, which resulted from a reduction in our valuation allowance primarily related to the use of operating losses during the year and also the release of valuation allowances of \$13.1 million related to deferred tax assets that we have determined are more likely than not to be realized. This compared to a provision for income taxes of \$4.1 million in 2005. Our effective tax rate in 2006 was a benefit of 10.7% as compared to a provision of 34.2% in 2005. Excluding the impact of the release of the valuation allowance and the \$7.4 million fair value adjustment to the series B warrants, which is not tax deductible, our effective tax rate was 28.3% in 2006 compared to 32.2% in 2005. The decrease in effective tax rates is primarily due to changes in the relative amounts of our taxable income generated throughout various tax jurisdictions and benefits arising from an effective rate on income arising in the United States of zero percent because the income was offset by the use of operating losses against which we had previously established a valuation allowance. As a result of releasing the valuation allowance, we expect an effective tax rate of approximately 39% in 2007.

*Net income.* Net income increased by \$21.8 million, or over 100%, to \$29.2 million for the year ended December 31, 2006 from \$7.4 million for the same period in 2005. Our net income as a percentage of our net sales increased by 12.7 percentage points to 20.4% for the year ended December 31, 2006 from 7.7% 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

**Table of Contents**

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.

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

*Net income.* 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.

**Liquidity and Capital Resources**

Our principal sources of liquidity as of December 31, 2006 consisted of cash and cash equivalents of \$75.7 million and unused credit lines and overdraft facilities of \$13.8 million. This compares to cash and cash equivalents of \$8.5 million and unused credit lines and overdraft facilities of \$5.0 million as of December 31,

**Table of Contents**

2005. Our total working capital as of December 31, 2006 was \$115.7 million, compared to \$21.5 million as of December 31, 2005.

In December 2006, we completed and received \$93.2 million in proceeds from our IPO (net of \$9.8 million of expenses related to the offering). In December 2006, we used \$22.1 million of the net proceeds to purchase the series B warrants and \$4.5 million to repay long-term debt. In the first quarter of 2007, we used an additional \$18.3 million of proceeds to repay substantially all of our bank term debt except for the \$20.0 million subordinated, unsecured, variable-rate notes, which mature in 2009. We expect that the remaining cash after repayment of debt and cash generated from operations will be sufficient to meet our liquidity and capital needs for the foreseeable future. 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 additional financing, if required or desired, will be available in amounts or on terms acceptable to us, if at all.

Although we repaid substantially all our fixed-term debt with a portion of the proceeds of the IPO in the first quarter of 2007, 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.

The following table details our line-of-credit facilities as of December 31, 2006:

<b>Description</b>	<b>Available Principal</b>	<b>Interest Rate</b>	<b>Maturity</b>	<b>Security</b>
Euro Overdraft Facility	Euro 4.9 million (\$6.5 million)	7.5% - 8.6% depending upon principal outstanding	May 2007 to December 2010	Common pool of assets of German subsidiary
U.S. Demand Line(1)	80% of eligible receivables, up to \$7 million	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 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. We are also 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.

*Operating activities.* Cash provided by operating activities was \$19.2 million and \$13.6 million in the years ended December 31, 2006 and 2005, respectively. The increase in cash provided by operating activities of \$5.6 million in 2006 as compared to 2005 was primarily due to an increase in net income of \$21.8 million and an increase in cash resulting from higher income taxes and accounts payable. This increase in cash generated from our operations was

partially offset by cash used to purchase inventory and the 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.

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

**Table of Contents**

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 \$19.1 million in 2006 as compared to cash used in investing activities of \$8.6 million in 2005. The cash used in investing activities in 2006 was related to capital expenditures on plant and machinery and equipment of \$20.4 million, primarily in the United States and Germany, which was partially offset by loan repayments from certain of our stockholders. In 2005, capital expenditures of \$16.0 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. 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 cash used in investing activities of \$3.9 million in the year ended December 31, 2004.

*Financing activities.* Cash provided by financing activities was \$66.9 million in 2006 as compared to \$1.1 million in 2005. The increase in cash from financing activities was primarily attributable to net proceeds of \$93.2 million from our IPO in December 2006, partially offset by the purchase of the series B warrants for \$22.1 million and \$4.3 million that we used to repay long-term debt. The primary source of cash in financing activities in 2005 was \$1.0 million proceeds from the exercise of stock options. 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.

**Contractual Obligations**

The following table describes our contractual obligations as of December 31, 2006 (in thousands).

	Total	Payments Due in			
		Less Than 1 Year	1-3 Years	3-5 Years	More Than 5 Years
Operating lease obligations	\$ 3,870	\$ 1,574	\$ 1,880	\$ 416	\$
Long-term debt obligations (including interest)	44,848	9,913	31,708	3,227	
Total	\$ 48,718	\$ 11,487	\$ 33,588	\$ 3,643	\$

Of the total long-term debt obligations included in the table above, \$18.3 million were repaid in January 2007. Excluded from the table above are purchase commitments for property, plant and equipment entered into in the first quarter of 2007. Our annual minimum purchases under these commitments are \$6.4 million, \$1.5 million and \$1.0 million in 2007, 2008 and 2009, respectively.

**Recent Accounting Pronouncements**

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.

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



**Table of Contents**

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 February 2007, the FASB issued SFAS No. 159, The Fair Value Option for Financial Assets and Financial Liabilities, which provides companies with an option to report selected financial assets and liabilities at fair value. SFAS No. 159 also establishes presentation and disclosure requirements relating to the use of fair values within the financial statements. The provisions of SFAS No. 159 are effective for us beginning after January 1, 2008. We have not yet adopted this pronouncement and are currently evaluating the expected impact that the adoption of SFAS No. 159 will have on our consolidated financial position and results of operations.

**ITEM 7A. 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 had a fixed rate of interest as of December 31, 2006. All of our U.S. and German term debt was repaid in the first quarter of 2007 except for the \$20 million of subordinated notes issued to our series B stockholders upon completion of our IPO. 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 are 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 \$0.8 million, \$0.1 million and \$0.3 million in 2006, 2005 and 2004, 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.

**ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

This information is incorporated by reference from pages F-1 through F-27 of this report.

**ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE**

None.

**Table of Contents**

**ITEM 9A. CONTROLS AND PROCEDURES**

**Evaluation of Disclosure Controls and Procedures**

Under the supervision of our chief executive officer and our chief financial officer, our management has evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) promulgated under the Securities Exchange Act of 1934, as amended (the Exchange Act)), as of the end of the period covered by this Annual Report on Form 10-K (the Evaluation Date). Based upon that evaluation, our chief executive officer and our chief financial officer have concluded that, as of the Evaluation Date, our disclosure controls and procedures are effective to ensure that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms.

**Changes in Internal Controls**

There was no change in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) that occurred during the last fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

**ITEM 9B. OTHER INFORMATION**

None.

**PART III**

**ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE**

The information required hereunder is incorporated herein by reference to our definitive Proxy Statement to be filed pursuant to Regulation 14A, which Proxy Statement is anticipated to be filed with the Securities and Exchange Commission within 120 days after December 31, 2006.

**ITEM 11. EXECUTIVE COMPENSATION**

The information required hereunder is incorporated herein by reference to our definitive Proxy Statement to be filed pursuant to Regulation 14A, which Proxy Statement is anticipated to be filed with the Securities and Exchange Commission within 120 days after December 31, 2006.

**ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS**

The information required hereunder is incorporated herein by reference to our definitive Proxy Statement to be filed pursuant to Regulation 14A, which Proxy Statement is anticipated to be filed with the Securities and Exchange Commission within 120 days after December 31, 2006, with the exception of the information regarding securities authorized for issuance under our equity compensation plans, which is set forth in Item 5, Information Regarding Equity Compensation Plans and is incorporated herein by reference.

**ITEM 13.**

***CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE***

The information required hereunder is incorporated herein by reference to our definitive Proxy Statement to be filed pursuant to Regulation 14A, which Proxy Statement is anticipated to be filed with the Securities and Exchange Commission within 120 days after December 31, 2006.

**Table of Contents**

**ITEM 14. *PRINCIPAL ACCOUNTING FEES AND SERVICES***

The information required hereunder is incorporated herein by reference to our definitive Proxy Statement to be filed pursuant to Regulation 14A, which Proxy Statement is anticipated to be filed with the Securities and Exchange Commission within 120 days after December 31, 2006.

**PART IV**

**ITEM 15. *EXHIBITS AND FINANCIAL STATEMENT SCHEDULES***

(a) The following documents are filed as part of this Annual Report on Form 10-K:

(1) Financial Statements.

See Index to Financial Statements and Schedule on page F-1.

(2) Financial Statement Schedules.

See Index to Financial Statements and Schedule on page F-1. All schedules are omitted because they are not applicable or the required information is shown on the financial statements or notes thereto.

(3) The exhibits listed on the Index to Exhibits preceding the Exhibits attached hereto are filed with this Form 10-K or incorporated by reference as set forth therein.

(b) Exhibits.

See (a)(3) above.

(c) Additional Financial Statement Schedules.

All schedules are omitted because they are not applicable or the required information is shown on the financial statements or notes thereto.

**Table of Contents****SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on March 29, 2007.

IPG Photonics Corporation

By: */s/ Valentin P. Gapontsev*  
 Valentin P. Gapontsev  
*Chief Executive Officer and  
 Chairman of the Board*

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

<b>Signature</b>	<b>Title</b>	
<i>/s/ Valentin P. Gapontsev</i> Valentin P. Gapontsev	Chief Executive Officer, Chairman of the Board and Director (Principal Executive Officer)	March 29, 2007
<i>/s/ Timothy P.V. Mammen</i> Timothy P.V. Mammen	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	March 29, 2007
<i>/s/ Robert A. Blair</i> Robert A. Blair	Director	March 29, 2007
<i>/s/ Michael C. Child</i> Michael C. Child	Director	March 29, 2007
<i>/s/ John H. Dalton</i> John H. Dalton	Director	March 29, 2007
<i>/s/ Henry E. Gauthier</i> Henry E. Gauthier	Director	March 29, 2007
<i>/s/ William S. Hurley</i> William S. Hurley	Director	March 29, 2007
<i>/s/ William F. Krupke</i>	Director	March 29, 2007

William F. Krupke

*/s/ Eugene Shcherbakov*

Director

March 29, 2007

Eugene Shcherbakov

*/s/ Igor Samartsev*

Director

March 29, 2007

Igor Samartsev

**Table of Contents**

**INDEX TO CONSOLIDATED FINANCIAL STATEMENTS**

	<b>Page(s)</b>
<u>Report of Independent Registered Public Accounting Firm</u>	F-2
Consolidated Financial Statements	
<u>Consolidated Balance Sheets at December 31, 2006 and 2005</u>	F-3
<u>Consolidated Statements of Operations for the Years Ended December 31, 2006, 2005 and 2004</u>	F-4
<u>Consolidated Statements of Convertible Redeemable Preferred Stock and Stockholders' Equity for the Years Ended December 31, 2006, 2005 and 2004</u>	F-5
<u>Consolidated Statements of Cash Flows for the Years Ended December 31, 2006, 2005 and 2004</u>	F-6
<u>Notes to Consolidated Financial Statements</u>	F-7

F-1

---



**Table of Contents**

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

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

We have audited the accompanying consolidated balance sheets of IPG Photonics Corporation and subsidiaries (the Company ) as of December 31, 2006 and 2005, and the related consolidated statements of operations, convertible redeemable preferred stock and stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2006. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of IPG Photonics Corporation and subsidiaries as of December 31, 2006 and 2005, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2006, in conformity with accounting principles generally accepted in the United States of America.

As discussed in Note 2 to the consolidated financial statements, the Company adopted Statement of Financial Accounting Standards No. 123(R), Share-Based Payment, effective January 1, 2006.

/s/ Deloitte & Touche LLP

Boston, Massachusetts  
March 28, 2007

Table of Contents

**IPG PHOTONICS CORPORATION**  
**CONSOLIDATED BALANCE SHEETS**

	<b>December 31,</b>	
	<b>2006</b>	<b>2005</b>
	<b>(In thousands, except share and per share data)</b>	
<b>ASSETS</b>		
<b>CURRENT ASSETS:</b>		
Cash and cash equivalents	\$ 75,667	\$ 8,361
Accounts receivable, net	22,353	15,434
Inventories net	42,162	26,525
Prepaid expenses and other current assets	6,666	2,482
Deferred income taxes	9,591	3,005
Total current assets	156,439	55,807
DEFERRED INCOME TAXES	3,801	
PROPERTY, PLANT, AND EQUIPMENT Net	67,153	50,995
EMPLOYEE AND STOCKHOLDER LOANS	86	6,339
OTHER ASSETS	5,013	2,340
TOTAL	\$ 232,492	\$ 115,481
 <b>LIABILITIES AND STOCKHOLDERS EQUITY (DEFICIT)</b>		
<b>CURRENT LIABILITIES:</b>		
Revolving line-of-credit facilities	\$ 2,603	\$ 8,746
Current portion of long-term debt	8,299	10,438
Accounts payable	7,640	5,164
Accrued expenses and other liabilities	13,940	9,907
Income taxes payable	8,289	65
Total current liabilities	40,771	34,320
DEFERRED INCOME TAXES	232	82
LONG-TERM DEBT	30,068	15,643
SERIES B WARRANTS		14,644
COMMITMENTS AND CONTINGENCIES (Notes 6, 10 and 11)		
MINORITY INTERESTS	2,827	948
CONVERTIBLE REDEEMABLE PREFERRED STOCK, \$0.0001 par value:		

Edgar Filing: IPG PHOTONICS CORP - Form 10-K

Series B no shares designated, issued and outstanding at December 31, 2006; 3,800,000 shares designated, issued and outstanding at December 31, 2005		91,248
Series D no shares designated, issued and outstanding at December 31, 2006; 5,400,000 shares designated, 2,684,211 shares issued and outstanding at December 31, 2005		5,100
STOCKHOLDERS EQUITY (DEFICIT):		
Preferred stock, \$0.0001 par value 5,000,000 and 15,000,000 shares authorized at December 31, 2006 and 2005, respectively; Series A 500,000 shares designated, 488,000 shares issued and outstanding at December 31, 2005		4,880
Common stock, \$0.0001 par value 175,000,000 shares authorized, 42,901,612 shares issued and outstanding at December 31, 2006; 70,000,000 shares authorized, 26,659,212 shares issued and outstanding at December 31, 2005	4	4
Additional paid-in capital	271,122	95,029
Notes receivable from stockholders	(23)	(463)
Deferred compensation		(111)
Accumulated deficit	(120,392)	(149,625)
Accumulated other comprehensive income	7,883	3,782
Total stockholders equity (deficit)	158,594	(46,504)
TOTAL	\$ 232,492	\$ 115,481

See notes to consolidated financial statements.

Table of Contents

**IPG PHOTONICS CORPORATION**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**

	<b>Year Ended December 31,</b>		
	<b>2006</b>	<b>2005</b>	<b>2004</b>
	<b>(In thousands, except per share data)</b>		
NET SALES	\$ 143,225	\$ 96,385	\$ 60,707
COST OF SALES	79,931	62,481	42,274
GROSS PROFIT	63,294	33,904	18,433
OPERATING EXPENSES:			
Sales and marketing	6,222	3,236	2,363
Research and development	6,544	5,788	4,831
General and administrative	14,522	10,598	8,179
Total operating expenses	27,288	19,622	15,373
OPERATING INCOME	36,006	14,282	3,060
OTHER (EXPENSE) INCOME Net:			
Interest expense net	(1,493)	(1,840)	(2,150)
Fair value adjustment to Series B Warrants	(7,444)	(745)	(615)
Other income net	1,050	236	196
Total other expense	(7,887)	(2,349)	(2,569)
INCOME BEFORE BENEFIT FROM (PROVISION FOR) INCOME TAXES AND MINORITY INTERESTS IN CONSOLIDATED SUBSIDIARIES	28,119	11,933	491
BENEFIT FROM (PROVISION FOR) INCOME TAXES	2,995	(4,080)	1,601
MINORITY INTERESTS IN CONSOLIDATED SUBSIDIARIES	(1,881)	(426)	(80)
NET INCOME	\$ 29,233	\$ 7,427	\$ 2,012
ACCRETION OF SERIES B PREFERRED STOCK BENEFICIAL CONVERSION FEATURE	(1,944)	(2,351)	(2,351)
NET INCOME (LOSS) APPLICABLE TO COMMON STOCKHOLDERS	\$ 8,972	\$ 5,076	\$ (339)
NET INCOME (LOSS) PER SHARE:			
Basic	\$ 0.27	\$ 0.16	\$ (0.01)
Diluted	\$ 0.26	\$ 0.16	\$ (0.01)

WEIGHTED-AVERAGE SHARES OUTSTANDING:

Basic	27,896	26,232	25,698
Diluted	33,005	30,167	25,698

See notes to consolidated financial statements.

F-4

---

**Table of Contents**

**IPG PHOTONICS CORPORATION**

**CONSOLIDATED STATEMENTS OF CONVERTIBLE REDEEMABLE PREFERRED STOCK AND STOCKHOLDERS EQUITY**

Convertible Redeemable Preferred Stock Series D	Convertible Preferred Stock Series A		Common Stock		Additional Paid-In Capital		Note Receivable from Stockholders		Deferred Compensation	Accumulated Deficit
	Shares	Amount	Shares	Amount	Shares	Par Value	Paid-In Capital	Stockholders		
(In thousands, except share and per share data)										
2,684,211	\$ 5,100	500,000	\$ 5,000	25,628,609	\$ 3	\$ 98,228	\$ (463)	\$ (906)	\$ (159,000)	2,000
2,351				66,000		(2,351)				
						(3)		3		
		(12,000)	(120)	296,967		388		903		
2,684,211	5,100	488,000	4,880	25,991,576	3	96,262	(463)		(157,000)	7,400
2,351						(2,351)				
						118		(118)		
				667,636	1	1,000		7		
2,684,211	5,100	488,000	4,880	26,659,212	4	95,029	(463)	(111)	(149,000)	7,400

						440	
1,994				6,241,379	(1,994)	93,169	
(8,204)		(63)			18,267		
	(488,000)	(4,817)	359,463		4,817		
55,038)			7,252,927		55,038		
	(2,684,211)	(5,100)	1,683,168		5,100		
20,000)							
			(38)				
			705,501		1,076		
					198		
					(111)		111
					533		
	\$	\$	42,901,612	\$ 4	\$ 271,122	\$ (23)	\$ (120,3

See notes to consolidated financial statements.

Table of Contents

**IPG PHOTONICS CORPORATION**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

	<b>Year Ended December 31,</b>		
	<b>2006</b>	<b>2005</b>	<b>2004</b>
	<b>(In thousands)</b>		
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>			
Net income	\$ 29,233	\$ 7,427	\$ 2,012
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	9,105	8,092	7,154
Deferred income taxes	(10,159)	2,732	(462)
Stock-based compensation	533	7	903
Interest accretion of convertible note	158	247	235
Loss (gain) on sale of investment and fixed assets	56	(238)	(14)
Inventory provisions	1,037	1,861	
Fair value adjustment to Series B Warrants	7,443	745	615
Minority interests in consolidated subsidiaries	1,881	426	80
Changes in assets and liabilities that provided (used) cash:			
Accounts receivable	(6,127)	(5,599)	(2,791)
Due from affiliates net	473	236	(40)
Inventories	(19,884)	(4,011)	1,176
Prepaid expenses and other current assets	(1,148)	(312)	(55)
Accounts payable	1,089	(1,030)	(1,460)
Repayment of convertible supplier note	(5,100)		
Accrued expenses and other liabilities	3,447	4,088	207
Income and other taxes payable	7,165	(1,086)	(1,312)
Net cash provided by operating activities	19,202	13,585	6,248
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>			
Purchases of property, plant, and equipment	(20,442)	(15,989)	(4,037)
Proceeds from sale of property, plant, and equipment	90	782	80
Employee and stockholder loans repaid	1,225		
Restricted cash released to support construction loan		6,566	87
Net cash used in investing activities	(19,127)	(8,641)	(3,870)
<b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>			
Proceeds from line-of-credit facilities	16,695	9,561	3,456
Payments on line-of-credit facilities	(18,282)	(9,384)	(2,638)
Principal payments on long-term borrowings	(10,684)	(2,263)	(1,654)
Proceeds from long-term borrowings	6,384	2,209	
Exercise of employee stock options and related tax benefit from exercise	1,274	1,001	268
Repayment of Series B Warrants	(22,087)		



Edgar Filing: IPG PHOTONICS CORP - Form 10-K

Proceeds from initial public offering, net of offering expenses	93,169		
Repayment of note due from stockholder	440		
Minority interest capital contribution		11	142
Net cash provided by (used in) financing activities	66,909	1,135	(426)
EFFECT OF CHANGES IN EXCHANGE RATES ON CASH AND CASH EQUIVALENTS	322	(266)	60
NET INCREASE IN CASH AND CASH EQUIVALENTS	67,306	5,813	2,012
CASH AND CASH EQUIVALENTS Beginning of period	8,361	2,548	536
CASH AND CASH EQUIVALENTS End of period	\$ 75,667	\$ 8,361	\$ 2,548
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:			
Cash paid for interest	\$ 1,449	\$ 2,046	\$ 1,780
Income taxes paid	\$ 2,010	\$ 1,989	\$ 59
Non-cash transactions:			
Stock-for-stock swap on options	\$	\$	\$ 120
Beneficial conversion feature embedded in Series B Preferred Stock	\$ 18,267	\$	\$
Accretion of Series A Preferred Stock and Series B Preferred Stock	\$ 1,994	\$ 2,351	\$ 2,351
Issuance of subordinated notes upon conversion of Series B Preferred Stock	\$ 20,000	\$	\$
Exchange of IP Fibre Devices credit facility for stockholder note	\$ 4,614	\$	\$
Additions to property, plant and equipment included in accounts payable	\$ 996	\$	\$

See notes to consolidated financial statements.

**Table of Contents**

**IPG PHOTONICS CORPORATION**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**1. NATURE OF BUSINESS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

*Nature of Business* IPG Photonics Corporation (the Company) designs and manufactures a broad line of high-performance fiber lasers and fiber amplifiers for diverse applications in numerous markets, such as materials processing, communications, medical and advanced applications. The Company's world headquarters are located in Oxford, Massachusetts, U.S.A. The Company also has operations in Burbach, Germany; Milan, Italy; London, England; Fryazino, Russia; Tokyo, Japan; Bangalore, India; and Daejeon, South Korea.

In December 2006, the Company completed an initial public offering of the Company's common stock. The Company's shares of common stock trade on the Nasdaq Global Market under the symbol IPGP.

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

*Stock Split* The accompanying financial statements reflect a 2-for-3 reverse stock split of the Company's common stock which occurred on December 7, 2006. All share and per share information herein has been retroactively restated to reflect this split.

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

*Foreign Currency* The financial information for entities outside the United States is measured using local currencies as the functional currency. Assets and liabilities are translated into U.S. dollars at the exchange rate in effect on the respective balance sheet dates. Income and expenses are translated into U.S. dollars based on the average rate of exchange for the corresponding period. Exchange rate differences resulting from translation adjustments are accounted for directly as a component of accumulated other comprehensive income. Gains or losses from foreign currency transactions are reflected in the consolidated statements of operations and have not been material for any period presented.

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

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

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

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

F-7

---

**Table of Contents****IPG PHOTONICS CORPORATION****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Expenditures for maintenance and repairs are charged to operations. Interest expense associated with significant capital projects is capitalized as a cost of the project. The Company capitalized \$198,000, \$239,000 and \$0 of interest expense in 2006, 2005 and 2004, respectively.

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

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

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

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

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

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

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

Provision for bad debts	25
Uncollectible accounts written off	(4)
Foreign currency translation	8
Balance at December 31, 2006	\$ 227

F-8

---

**Table of Contents**

**IPG PHOTONICS CORPORATION**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

*Warranties* In general, the Company's products carry a warranty against defect for a period of one to three years, depending upon the product type and customer negotiations. The expected cost associated with these warranty obligations is recorded when the revenue is recognized. Accrued warranty costs amounted to \$1,998,000 and \$1,065,000 at December 31, 2006 and 2005, respectively.

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

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

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

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

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

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

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

The Company occasionally enters into a financial instrument that contains a derivative instrument that is embedded in the financial instrument. Upon entering into the instrument, the Company assesses (i) whether the economic characteristics of the embedded derivative are clearly and closely related to the economic characteristics of the remaining component of the financial instrument (i.e. the host contract), (ii) whether a separate instrument with the same terms as the embedded instrument would meet the definition of a derivative instrument and (iii) whether the

instrument is indexed to the Company's own stock and would be classified in stockholders' equity. When it is determined that (1) the embedded derivative possesses economic characteristics that are not clearly and closely related to the economic characteristics of the host contract, (2) a separate instrument with the same terms would qualify as a derivative instrument or (3) the embedded derivative is not

**Table of Contents**

**IPG PHOTONICS CORPORATION**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

indexed to the Company's own stock or would be classified outside of stockholders' equity, the embedded derivative is separated from the host contract and carried at fair value.

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

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

*Reclassifications* Certain reclassifications have been made in prior years' consolidated financial statements to conform to the 2006 presentation, including the reclassification of \$2.1 million of demonstration units and equipment leased to customers from inventory to other long-term assets in 2005.

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

In September 2006, the FASB issued SFAS No. 157, *Fair Value Measurements* (SFAS No. 157), 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 the Company beginning after January 1, 2008. The Company has not yet adopted this pronouncement and is currently evaluating the expected impact that the adoption of SFAS No. 157 will have on the Company's consolidated financial position and results of operations.



In February 2007, the FASB issued SFAS No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities* ( SFAS No. 159 ), which provides companies with an option to report selected financial assets and liabilities at fair value. SFAS No. 159 also establishes presentation and disclosure requirements relative to the use of fair values within the financial statements. The provisions of SFAS No. 159 are effective

F-10

---

Table of Contents**IPG PHOTONICS CORPORATION****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

for the Company beginning after January 1, 2008. The Company has not yet adopted this pronouncement and is currently evaluating the expected impact that the adoption of SFAS No. 159 will have on the Company's consolidated financial position and results of operations.

**2. STOCK-BASED COMPENSATION**

SFAS No. 123, *Accounting for Stock-Based Compensation* ( SFAS No. 123 ), encouraged, but did not require, companies to record compensation cost for stock-based employee compensation plans at fair value. As permitted by SFAS No. 123, for the years ended December 31, 2005 and 2004, the Company elected to account for stock-based compensation awarded to employees using the intrinsic value method prescribed in Accounting Principles Board ( APB ) Opinion No. 25, *Accounting for Stock Issued to Employees*, and related interpretations and adopted the disclosure-only provisions of SFAS No. 123. Accordingly, for financial reporting purposes, compensation cost for stock options granted to employees and directors was measured as the excess, if any, of the estimated fair market value of the Company's stock at the deemed measurement date over the amount an employee or director must pay to acquire the stock.

Effective January 1, 2006, the Company adopted the provisions of SFAS No. 123 (revised 2004), *Share-Based Payment* ( SFAS No. 123(R) ). SFAS No. 123(R) established accounting for stock-based awards exchanged for employees' services and other stock-based transactions. Stock-based compensation cost is measured at the grant date, based on the fair value of the award, and is recorded as compensation cost over the requisite service period.

Stock-based compensation is included in the following financial statement captions for the years ended December 31, as follows (in thousands):

	<b>2006</b>	<b>2005</b>	<b>2004</b>
Cost of sales	\$ 127	\$ 4	\$ 218
Sales and marketing	62	1	6
Research and development	43	1	669
General and administrative	301	1	10
Total	\$ 533	\$ 7	\$ 903
Income tax benefit recognized	\$ (158)		

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

Under SFAS No. 123(R), the Company calculates the fair value of stock option grants using the Black-Scholes option-pricing model. Determining the appropriate fair value model and calculating the fair value of stock-based payment awards require the use of highly subjective assumptions, including the expected life of the stock-based payment awards and stock price volatility. The assumptions used in calculating the fair value of stock-based payment awards represent management's best estimates, but the estimates involve inherent uncertainties and the application of management judgment. As a result, if factors change and the Company uses different assumptions, the Company's stock-based compensation expense could be materially different in the future. The weighted average assumptions used in the Black-Scholes model were 6.25 years for the expected term, 65% for the expected volatility, 4.75% for the risk-free rate and 0% for dividend yield for the year ended December 31, 2006.

Table of Contents**IPG PHOTONICS CORPORATION****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

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, *Share Based Payment*, which was issued in March 2005. The simplified method defines the life as the average of the contractual term of the options and the weighted average vesting period for all option tranches.

For the calculation of expected volatility, because there was no public market for the Company's common stock until December 13, 2006, and therefore a lack of company-specific historical and implied volatility information, the Company based its estimate of expected volatility on the expected volatility of similar entities whose share prices are publicly available. The Company used the following factors to identify similar public entities: industry, stage of life cycle, size and profitability. The Company intends to continue to consistently apply this process using the same or similar entities until a sufficient amount of historical information regarding the volatility of its own share price becomes available, or unless circumstances change such that the identified entities are no longer similar to the Company. In this latter case, more suitable, similar entities whose share prices are publicly available, would be utilized in the calculation.

As stock-based compensation expense recorded in the Company's statement of operations for the year ended December 31, 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 year ended December 31, 2006 reflects an estimated forfeiture rate of 5%. For the purposes of preparing the pro forma information required under SFAS No. 123 for the periods prior to 2006, the Company accounted for forfeitures as they occurred.

In accordance with the prospective transition method, the Company's financial statements for prior periods have not been restated to reflect, and do not include, the impact of SFAS No. 123(R).

If the compensation costs for options awarded to employees and directors had been determined using the fair value and amortized to expense over the vesting period of the awards, the recorded net income would have been for the years ended December 31, as follows (in thousands):

	<b>2005</b>	<b>2004</b>
Reported net income	\$ 7,427	\$ 2,012
Add stock-based employee compensation expense included in net income net of taxes	7	903
Deduct stock-based employee compensation expense determined using the fair value for all awards net of taxes	(22)	(915)
Pro forma net income	\$ 7,412	\$ 2,000

The Company's pro forma calculations for 2005 and 2004 were made using the minimum value method with the following weighted-average assumptions: expected life of four years; stock volatility of 0%; risk-free interest rate of

4.5% in 2005 and 3.5% in 2004; and no dividend payments during the expected term.

*Incentive Plans* In April 2000, the Company's board of directors adopted the 2000 Incentive Compensation Plan, or 2000 plan, and in February 2006, the Company's board of directors adopted the 2006 Incentive Compensation Plan, or 2006 plan, which provide for the issuance of stock options and other stock and non-stock based awards to the Company's directors, employees, consultants and advisors. The Company reserved 5,833,333 shares under the 2000 plan and 4,000,000 shares under the 2006 plan for the issuance of awards under the plans. In June 2006, the Company's board of directors adopted the Non-Employee Directors Stock Plan (the Directors Plan), or the directors plan. Only non-employee directors are eligible to receive awards under the Directors Plan. The Company reserved 166,667 shares for issuance under the Directors Plan. Under the three plans, the Company may grant nonstatutory stock options at exercise prices at least equal to the fair market value of the Company's common stock on the date of grant, unless the board of directors or

**Table of Contents****IPG PHOTONICS CORPORATION****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

compensation committee determines otherwise on the date of grant. Incentive stock options may be granted under the 2000 plan and the 2006 plans at exercise prices equal to or exceeding the fair market value of the common stock on the date of grant. Options generally become exercisable over periods of two to five years and expire seven to ten years from the date of the grant. The awards under the 2000 plan and the 2006 plans may become exercisable earlier upon the occurrence of certain change of control events at the election of the board of directors or compensation committee, and all awards under the directors plan automatically become exercisable upon a change-of-control. At December 31, 2006, 3,129,461 shares were available for future grant under the three option plans.

*Stock Options* A summary of option activity is presented below:

		Number of	Weighted-Average	Weighted-Average	Aggregate
		Options	Exercise Price	Remaining Contractual Life (In years)	Intrinsic Value (In thousands)
Outstanding	January 1, 2004	2,882,448	\$ 1.53		
Granted		1,357,966	1.50		
Exercised		(296,967)	1.31		
Forfeited		(123,170)	1.50		
Outstanding	December 31, 2004	3,820,277	1.53		
Granted		834,667	1.79		
Exercised		(667,636)	1.50		
Forfeited		(67,589)	1.50		
Outstanding	December 31, 2005	3,919,719	1.59		
Granted		1,213,913	5.62		
Exercised		(705,501)	1.53		
Forfeited		(35,970)	3.27		
Outstanding	December 31, 2006	4,392,161	\$ 2.70	7.31	\$ 93,552
Vested or expected to vest					
December 31, 2006		4,284,031	\$ 2.67	7.27	\$ 91,124
Exercisable	December 31, 2006	2,239,561	\$ 1.57	5.87	\$ 50,230
Exercisable	December 31, 2005	2,308,992	\$ 1.55		
Exercisable	December 31, 2004	2,441,097	\$ 1.54		

The weighted-average grant-date fair value of the options granted to employees in the year ended December 31, 2006 was \$3.20 and the minimum fair value of options granted to employees in the years ended December 31, 2005 and 2004 was \$0.39, and less than \$0.01, respectively. The intrinsic value of the options exercised during the year ended

December 31, 2006 was \$1,495,000. Options exercised in each of the years ended December 31, 2005 and 2004, had no intrinsic value.

F-13

---

Table of Contents**IPG PHOTONICS CORPORATION****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Additional information regarding options outstanding is as follows:

<b>Exercise Price</b>	<b>Number Outstanding</b>	<b>December 31, 2006 Weighted-Average Remaining Contractual Life (In years)</b>	<b>Number Exercisable</b>
\$1.50	2,565,670	6.05	2,070,243
1.87	595,705	8.74	137,111
3.41	149,347	9.17	
5.35	692,210	9.06	32,207
6.45	305,895	9.48	
8.40	73,334	8.40	
9.60	10,000	9.82	
	4,392,161	7.31	2,239,561

The total compensation cost related to nonvested awards not yet recorded at December 31, 2006 was \$3,220,000, which is expected to be recognized over 3.9 years on a weighted-average basis.

**3. INVENTORIES**

Inventories consist of the following (in thousands):

	<b>December 31,</b>	
	<b>2006</b>	<b>2005</b>
Components and raw materials	\$ 19,244	\$ 9,985
Work-in-process	12,886	10,010
Finished goods	10,032	6,530
Total	\$ 42,162	\$ 26,525

The Company recorded inventory provisions totaling \$1,037,000 and \$1,861,000 in 2006 and 2005, respectively. These provisions were recorded as a result of the changes in market prices of certain components, the realizable value of those inventories through finished product sales and uncertainties related to the recoverability of the value of inventories due to technological changes and excess quantities. These provisions are reported as a reduction to components and raw materials and finished goods. No inventory provision was recorded in 2004.



**4. PROPERTY, PLANT, AND EQUIPMENT**

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

	<b>December 31,</b>	
	<b>2006</b>	<b>2005</b>
Land	\$ 6,656	\$ 5,817
Buildings	41,916	35,397
Machinery and equipment	51,621	43,783
Office equipment and fixtures	7,465	5,625
Construction-in-progress	10,191	1,084
Total property, plant, and equipment	117,849	91,706
Accumulated depreciation	(50,696)	(40,711)
Total property, plant, and equipment net	\$ 67,153	\$ 50,995

F-14

---

**Table of Contents****IPG PHOTONICS CORPORATION****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****5. ACCRUED EXPENSES AND OTHER LIABILITIES**

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

	<b>December 31,</b>	
	<b>2006</b>	<b>2005</b>
Accrued compensation	\$ 5,527	\$ 4,248
Customer deposits and deferred revenue	3,581	2,078
Accrued warranty	1,998	1,065
Other	2,834	2,516
	<b>\$ 13,940</b>	<b>\$ 9,907</b>

**6. FINANCING ARRANGEMENTS**

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

	<b>December 31,</b>	
	<b>2006</b>	<b>2005</b>
Revolving Line-of-Credit Facilities:		
Euro Overdraft Facility	\$ 84	\$ 3,060
U.S. Line of Credit		1,000
Japanese Line of Credit	2,519	
IPFD Credit Facility (related party)		4,686
Total	<b>\$ 2,603</b>	<b>\$ 8,746</b>
Term Debt:		
U.S. Construction Loan	\$ 5,589	\$ 5,983
Subordinated Notes	20,000	
Convertible Supplier Note		4,942
Euro Construction Loan	2,886	7,588
Euro Variable Rate Loan	6,267	
NTO Note Payable to IPFD (related party)		595
Other term debt	3,625	6,973
Total term debt	<b>38,367</b>	<b>26,081</b>
Less current portion	<b>(8,299)</b>	<b>(10,438)</b>

Long-term debt	\$ 30,068	\$ 15,643
----------------	-----------	-----------

F-15

---

**Table of Contents****IPG PHOTONICS CORPORATION****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Principal maturities of long-term debt as of December 31, 2006 are as follows (in thousands):

2007	\$ 8,299
2008	2,561
2009	22,411
2010	2,000
2011	1,259
2012 and thereafter	1,837
Total	\$ 38,367

***Revolving Line-of-Credit Facilities:***

*Euro Overdraft Facilities* The Company maintains a syndicated overdraft facility with available principal of Euro 4,895,500 (approximately \$6,458,000 at December 31, 2006). Of the total amount, Euro 1,873,000 (approximately \$2,471,000 at December 31, 2006) is available at least through March 2010, Euro 2,000,000 (approximately \$2,639,000 at December 31, 2006) is available through September 2007 and Euro 1,022,500 (approximately \$1,349,000 at December 31, 2006) is available through May 2007. This facility bears interest at market rates that vary depending upon the principal outstanding (from 7.5% to 8.6% at December 31, 2006). This facility and the Euro Construction Loan are collateralized by a common pool of the assets of the German entity. A portion of this loan is partially guaranteed by the Company's largest stockholder. At December 31, 2006, the availability under the Euro Overdraft Facility totaled \$6,458,000.

The Company also maintains Euro credit lines in Italy with available principal of Euro 650,000 (approximately \$858,000 as of December 31, 2006) which bear interest at rates ranging from 5.2% to 7.0%. At December 31, 2006, the remaining availability under the Euro credit lines was \$774,000.

*U.S. Line of Credit* The Company maintains a credit line with available principal of 80% of eligible receivables, up to \$7,000,000, on a revolving basis. This facility bears interest at a variable rate of LIBOR plus 3% (8.33% at December 31, 2006). The facility terminates in June 2007, and is collateralized by all the assets held by the U.S. parent company. At December 31, 2006, the availability under the U.S. Line of Credit totaled \$4,009,000.

*Japanese Line of Credit* In September 2006, the Company negotiated two credit lines with available principal of 100% of eligible receivables, up to JPY 600,000,000 (approximately \$5,037,000 at December 31, 2006), on a revolving basis. These facilities bear interest at rates ranging from 2.0% to 2.13% at December 31, 2006. The facility is renewable annually and collateralized by accounts receivable and inventory in Japan. At December 31, 2006, the availability under the Japanese Line of Credit totaled \$2,518,000.

*IPFD Credit Facility* Through July 31, 2006, the Company maintained a credit line with available principal of \$4,600,000 on a revolving basis with its affiliate and stockholder, IPFD. Principal drawn under the facility accrued interest at a rate equal to the three-month LIBOR rate in effect on the date of the drawdown plus 2%. As discussed in Note 8, the IPFD Credit Facility was terminated on July 31, 2006.

***Term Debt:***

*U.S. Construction Loan* Outstanding principal under the U.S. Construction Loan bore interest at a fixed rate of 7.9% and was collateralized by the real estate and building housing the Company's U.S. operations. In January 2007, the Company repaid the U.S. Construction Loan.

*Subordinated Notes* The Company issued subordinated notes to the holders of its Series B convertible redeemable preferred stock upon conversion of their shares in December 2006. The subordinated notes bear interest at the greater of the short-term applicable Federal rate (4.97% at December 31, 2006), as published by

**Table of Contents****IPG PHOTONICS CORPORATION****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

the Internal Revenue Service, or 4% in the first year, 7% in the second year and 10% in the third year. The notes mature in December 2009 and may be prepaid without penalty.

*Convertible Supplier Note* In connection with a settlement with a component supplier, who subsequently became a stockholder, the Company issued a note with a face value totaling \$5,100,000. The note did not require any interest payments. Upon issuance in 2003, the Company recorded a discount totaling \$726,000, reflecting imputed interest. During the years ended December 31, 2006, 2005 and 2004, imputed interest expense totaling \$158,000, \$247,000 and \$235,000, respectively, was accreted to the carrying value of the note. The Company could settle the note prior to August 2006 for cash totaling \$5,100,000 or by issuing 2,684,211 shares of Series D preferred stock. In August 2006, the note was fully settled in cash.

*Euro Construction Loan* The Company maintains a financing agreement with a syndicate of banks used to finance construction of a manufacturing facility in Germany and to meet the working capital needs of the German operation. Principal and interest payments were due semiannually through March 2010. Interest accrued at 5.25%. A portion of this loan was personally guaranteed by the Company's largest stockholder. In January 2007, the Company repaid the Euro Construction Loan.

*Euro Variable Rate Loan* In September 2006, the Company entered into a Euro-denominated variable rate term loan with total principal of Euro 4,750,000 (approximately \$6,266,000 at December 31, 2006). The interest rate was reset quarterly using the 3-month EURIBOR rate plus 1.5% (5.163% at December 31, 2006). Principal was payable in equal quarterly installments through December 2011. The loan was secured by mortgages on land and building totaling \$3.9 million and the remaining \$2.7 million of the loan was unsecured. In January 2007, the Company repaid the Euro Variable Rate Loan.

*NTO Note Payable to IPFD* At December 31, 2005, there was an unsecured \$560,000 note payable to IPFD, maturing in January 2006. Interest accrued at 4.4% annually. The principal balance included \$35,000 of accrued interest at December 31, 2005. The note was repaid in May 2006.

*Other Term Debt* Other term debt consisted principally of Euro-denominated notes payable with fixed and variable rates ranging from 4.2% to 6.5% and various maturities ranging from 2007 to 2019. These notes were collateralized by property, plant, and equipment in Germany. In January 2007, the Company repaid the Euro-denominated notes.

## **7. COMMON STOCK, CONVERTIBLE REDEEMABLE PREFERRED STOCK, PREFERRED STOCK AND WARRANTS**

*Authorized Capital* The Company has authorized capital stock consisting of 175,000,000 shares of common stock, par value \$0.0001 per share, and 5,000,000 shares of preferred stock, par value \$0.0001 per share.

*Initial Public Offering* The Company received proceeds of \$93.2 million, net of expenses, from its issuance and sale of 6,241,379 shares of common stock.

*Preferred Stock* There are no shares of preferred stock outstanding as of December 31, 2006. Upon the Company's initial public offering in December 2006, 488,000 outstanding shares of Series A convertible preferred stock (the Series A ) converted into 359,463 shares of common stock, 3,800,000 outstanding shares of Series B convertible

redeemable preferred stock (the Series B ) converted into 7,252,927 shares of common stock and \$20.0 million principal amount of subordinated promissory notes, and 2,684,211 outstanding shares of Series D convertible redeemable preferred stock (the Series D ) converted into 1,683,168 shares of common stock.

F-17

---

**Table of Contents**

**IPG PHOTONICS CORPORATION**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The rights and preferences of the preferred stock prior to their conversion were as follows:

*Dividends* The holders of the Series A, Series B, and Series D, are not entitled to dividends at any fixed rate, but are entitled to receive dividends at the rate paid, if any, on the common shares.

*Liquidation* In the event of any voluntary or involuntary liquidation or dissolution of the Company, each holder of the Series A, Series B, and Series D was entitled to be paid, before any distributions are made to the common stockholders or other junior stockholders, a liquidation preference. The holders of the Series A, Series B, and Series D were entitled to be paid an amount equal to the preference value of \$10.00, \$25.00 and \$1.90 per share, respectively, plus, in each case, accrued and unpaid dividends. In addition, the holders of the Series B would have participated in further distributions available for the common shares in the amount that would have been payable per share if the Series B had been converted to common shares.

*Voting Rights* The holders of Series A were not entitled to vote on any matters other than those affecting the rights and preferences of their shares. The holders of the Series B and Series D were entitled to vote on matters with holders of common shares in an amount equal to the number of common shares into which the Series B and Series D were then convertible.

*Redemption* Prior to their conversion into common stock, the holders of Series B and Series D had redemption rights. The Series B was being accreted to its redemption value through the redemption dates. Accretion totaled \$1,994,000, \$2,351,000 and \$2,351,000 for each of the years ended December 31, 2006, 2005 and 2004, respectively.

*Conversion* The Series A, Series B and Series D were convertible into the number of shares of common stock of the Company determined by dividing their respective preference values by their respective conversion values then in effect. The preference values of the Series A, Series B and Series D were \$10.00, \$25.00 and \$1.90 per share, respectively, and the conversion values at the time of their conversion were \$14.27, \$33.83 and \$3.03 per share, respectively. In December 2005 and January 2006, the conversion rights and obligations of the Series B and Series A, respectively, were amended to modify their automatic conversion right into common shares upon public offerings that met specific conditions.

Upon a public offering meeting certain conditions, all Series A automatically converted into common stock at the lower of the conversion price then in effect or the offering price to the public.

Upon a qualified public offering meeting certain conditions, all Series B automatically converted into subordinated debt and common shares. One of the conditions was that the Company repurchase all of the warrants to purchase its common stock that were granted to the holders of the Series B. In a qualified public offering, the holders of the Series B received consideration equal to the greater of (A) what the holders of the Series B would have received if the Company were sold to a third party using the public offering price to compute the total sale price, which amount would have included the liquidation preference of the Series B plus an additional participation amount, as set forth in the Company's certificate of incorporation, and (B) what the holders of the

Series B would have received if it converted upon the public offering at \$15.00 per share. The Company's initial public offering in December 2006 met the conditions for a qualified public offering and the holders of the Series B received upon conversion of their shares consideration consisting of subordinated three-year notes totaling \$20,000,000 in



principal amount and the remainder in the form of the Company's common stock valued at \$16.50, the per share offering price to the public.

Because of the anti-dilution provision in the Series A and Series B, as a result of the initial public offering, the Company recorded a deemed dividend related to the beneficial conversion of the Series A and Series B of \$63,000 and \$18,204,000, respectively. The deemed dividend was recorded to give effect to the additional shares issued to the holders of Series A and Series B.

**Table of Contents**

**IPG PHOTONICS CORPORATION**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

During 2004, two employees exercised 80,000 stock options and paid the exercise price with 12,000 shares of Series A.

*Warrants* In connection with the issuance of the Series B, the Company issued Series B Warrants to purchase, in the aggregate, \$47,500,000 of the Company's common stock at an equivalent per-share price of 50% of the fair value on the date of an initial public offering of common stock or the sale, merger or liquidation of the Company. The Company repurchased all of the Series B Warrants in connection with its initial public offering in December 2006 for \$22,087,000. The Series B Warrants constituted freestanding derivatives that were accounted for as liabilities at fair value, which was estimated to be \$14,644,000 at December 31, 2005. The Series B Warrants were a binary financial instrument with a fair value of either \$23,750,000 if the Series B Warrants were exercised prior to their expiration or zero if the term of the Series B Warrants expired before they were exercised. At each balance sheet date, the fair value of the Series B Warrants was estimated by the Company by assessing the probability that the Series B Warrants would be exercised prior to their expiration. To calculate the estimated fair value, the determined probability percentage was multiplied by the total potential value of the Series B Warrants. A discount relating to the time value of money was applied to the estimated value if the Series B Warrants were not expected to be exercised within twelve months. As freestanding derivative instruments, changes in fair value of the Series B Warrants were recognized in earnings and reported as other income (expense). For the years ended December 31, 2006, 2005 and 2004, the fair value of the Series B Warrants increased by \$7,443,500, \$745,000 and \$615,000, respectively.

*Notes Receivable From Issuances of Shares* The Company has received notes from an individual in connection with this individual's exercise of 126,667 nonqualified stock options in March 2000, as well as the issuance of 166,667 shares of common stock in connection with professional services. This individual later became a member of the Company's Board of Directors. The notes receivable had principal balances of \$190,000 and \$250,000, accruing interest at 1.68% and 1.52%, respectively, and were collateralized by 326,667 shares of the Company's common stock. The loans were repaid in 2006.

During 2001, an employee exercised stock options and paid the exercise price and taxes with a nonrecourse note payable in a principal amount of \$23,000 with a weighted-average interest rate of 4.76%.

The notes receivable are presented in the consolidated balance sheets as a decrease in stockholders' equity. Interest income recognized from these notes totaled approximately \$5,000, \$8,000 and \$10,000 during the years ended December 31, 2006, 2005 and 2004, respectively.

*Minority Interests* Minority interests reported in the accompanying consolidated financial statements consist of the 20% of IPG Fibertech S.r.l., Italy (Fibertech) held by the management of Fibertech; 49% of NTO IRE-POLUS, Russia (NTO) held by certain Company employees and other parties; 20% of IPG Photonics (Japan) Ltd., Japan (IPG Japan) held by the Company's Japanese distributor which also holds shares of the Company's common stock; and 10% of IPG Photonics (Korea) (IPG Korea) held by the management of IPG Korea. During 2005 and 2004, the minority stockholders of IPG Korea and IPG Japan contributed \$11,000 and \$142,000, respectively, in capital in connection with the formation of those companies.

**8. RELATED-PARTY TRANSACTIONS**

In 2001, the Company loaned three officers of the Company, including the Company's chief executive officer, a total of \$6,736,000, bearing interest as of December 31, 2005, at a weighted-average interest rate of 2.15%. In July 2003, \$1,681,000 in outstanding principal and interest was repaid by the chief executive officer. Interest earned and accrued on such loans totaled \$47,000 during 2006, \$130,000 during 2005, and \$127,000 during 2004, and was included in the carrying value of the loans.

**Table of Contents**

**IPG PHOTONICS CORPORATION**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

At December 31, 2005, the Company had an amount payable to IPFD totaling \$4,686,000 under the IPFD Credit Facility discussed in Note 6. Interest expense on the IPFD Credit Facility totaled \$94,000, \$161,000 and \$156,000 for the years ended December 31, 2006, 2005, and 2004, respectively. In July 2006, IPFD purchased from the Company's chief executive officer 770,670 shares of the Company's common stock in exchange for \$357,000 in cash and \$4.6 million in the form of the assignment of the amounts due under the IPFD Credit Facility. Simultaneously, the Company exchanged with the chief executive officer the note due from him with a remaining principal amount of \$5.0 million for \$357,000 in cash and \$4.6 million in the form of the assignment of amounts due under the IPFD Credit Facility. As a result of these transactions, the IPFD Credit Facility and the note receivable from the chief executive officer were fully repaid and were no longer outstanding.

The principal of the stockholder loans and accrued interest due from the two other officers were repaid in January and August 2006.

At December 31, 2005, there was a \$560,000 note payable to IPFD from NTO. Interest expense, accruing at 4.4% annually, for the years ended December 31, 2006, 2005 and 2004 totaled \$9,000, \$25,000 and \$20,000, respectively, and was included in the carrying value of the note. This note was repaid in full in May 2006.

In November 2003, NTO advanced \$175,000 to an officer of the Company. The loan was secured by real property. In 2004, the officer repaid \$103,000 and, in 2005, the remaining outstanding principal of \$72,000 was repaid.

In November 2004, the chief executive officer provided a personal guarantee for the U.S. Line of Credit for the Company. In consideration of the personal guarantee, the Company approved a guarantee fee to the executive equal to interest on his loan from the Company (with a tax gross-up) for each quarter that the U.S. Line of Credit is outstanding. The Company paid \$71,000, \$136,000 and \$16,000 in 2006, 2005 and 2004, respectively, related to the guarantee fee.

The Company leases office space from IPFD and reimburses IPFD for general and administrative expenses. The costs related to the lease and services totaled \$115,000, \$116,000 and \$148,000 for the years ended December 31, 2006, 2005 and 2004, respectively. In addition, during 2004, the Company purchased optical components from IPFD for \$297,000.

Interest expense on the Note Payable to Supplier totaled \$45,000 and \$187,000 for the years ended December 31, 2005 and 2004, respectively. The Company repaid the total amount of outstanding principal and accrued interest in May 2005. Also discussed in Note 6 is a Convertible Supplier Note that was payable to the same supplier as the Note Payable to Supplier. The Convertible Supplier Note was repaid in August 2006.

In April 2006, the chairman of the board of directors of one of the Company's customers joined the Board of Directors of the Company. Sales to this customer totaled \$10,366,000, \$7,007,000 and \$1,457,000 for the years ended December 31, 2006, 2005 and 2004, respectively.

**9. NET INCOME (LOSS) PER SHARE**

For periods during which the Company had two classes of equity securities issued and outstanding, it followed EITF Issue No. 03-6, *Participating Securities and the Two-Class Method under FASB Statement No. 128* ( EITF 03-6 ), which established standards regarding the computation of net income (loss) per share by companies that have issued securities other than common stock that contractually entitle the holder to participate in dividends and earnings of the company. EITF 03-6 requires earnings available to common stockholders for the period, after deduction of preferred stock accretion and deemed dividends related to beneficial conversion features, to be allocated between the common and convertible securities based on their respective rights to receive dividends. Basic net income (loss) per share is then calculated by dividing income

**Table of Contents****IPG PHOTONICS CORPORATION****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

(loss) applicable to common stockholders by the weighted average number of shares outstanding. The Company's preferred stock does not participate in losses, and therefore is not included in the computation of net loss per share, as applicable. EITF 03-6 does not require the presentation of basic and diluted net income (loss) per share for securities other than common stock; therefore, the following per share amounts only pertain to the Company's common stock.

The Company calculates diluted net income (loss) per share under the if-converted method unless the conversion of the convertible preferred stock is anti-dilutive to basic net income (loss) per share. To the extent convertible preferred stock is anti-dilutive, the Company calculates diluted net income (loss) per share under the two-class method to include the effect of potential common shares.

The share count used to compute basic and diluted net income (loss) per share is calculated as follows (in thousands):

	<b>Year Ended December 31,</b>		
	<b>2006</b>	<b>2005</b>	<b>2004</b>
Weighted-average common shares outstanding used to compute basic net income (loss) per share	27,117	26,232	25,698
Weighted-average common shares outstanding used to compute basic net income (loss) per share after conversion of convertible redeemable preferred stock; one class of common shares was outstanding for the period from December 13 to December 31, 2006	42,902		
Weighted-average common shares outstanding	27,896	26,232	25,698
Add dilutive common equivalents:			
Stock options	2,351		
Series A preferred stock		357	
Series B preferred stock			
Series D preferred stock	1,665	1,789	
Convertible supplier note payable	1,093	1,789	
Shares used to compute diluted net income (loss) per share	33,005	30,167	25,698

The following is a summary of the securities outstanding during the respective periods that have been excluded from the calculations because the effect on net income (loss) per share would have been anti-dilutive (in thousands):

	<b>Year Ended December 31,</b>		
	<b>2006</b>	<b>2005</b>	<b>2004</b>
Stock options		3,920	3,820
Series A preferred stock if converted	342		357

Edgar Filing: IPG PHOTONICS CORP - Form 10-K

Series B preferred stock if converted	2,810	2,890	2,890
Series D preferred stock if converted			1,789
Convertible supplier note payable if converted			1,789

The Series B Warrants were only exercisable upon the completion of an initial public offering of the Company's common stock or the sale, liquidation, or merger of the Company and, as such, any shares that would have been issued upon the exercise of the Series B Warrants were excluded from the computations of net income (loss) per share for all periods presented.

F-21

---

**Table of Contents****IPG PHOTONICS CORPORATION****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The following table sets forth the computation of basic and diluted net income (loss) per share (in thousands, except per share data):

	<b>Year Ended December 31,</b>		
	<b>2006</b>	<b>2005</b>	<b>2004</b>
<b>Calculation of basic net income (loss) per share two-class method:</b>			
Net income(1)	\$ 27,790	\$ 7,427	\$ 2,012
Accretion of Series B Preferred Stock	(1,994)	(2,351)	(2,351)
Beneficial conversion feature	(18,267)		
Net income (loss), net of assumed stock dividends	\$ 7,529	\$ 5,076	\$ (339)
Percent of net income (loss) applicable to common stockholders(2)	85%	84%	100%
Net income (loss) applicable to common stockholders	6,435	4,258	(339)
Weighted-average common shares outstanding	27,117	26,232	25,698
Basic net income (loss) per share two-class method	\$ 0.24	\$ 0.16	\$ (0.01)
Net income for period during which single class of equity securities was outstanding(1)	\$ 1,443		
Weighted-average common shares outstanding	42,902		
Basic net income (loss) per share for period during which a single class of equity securities was outstanding	\$ 0.03		
Basic net income (loss) per share	\$ 0.27	\$ 0.16	\$ (0.01)
<b>Calculation of diluted net income per share:</b>			
Net income (loss) applicable to common stockholders	\$ 7,877	\$ 4,258	\$ (339)
Interest expense on convertible supplier note payable	158	247	
Net income applicable to dilutive convertible preferred	384	348	
Net income (loss)	8,419	4,853	(339)
Weighted-average diluted shares outstanding	33,005	30,167	25,698
Diluted net income (loss) per share	\$ 0.26	\$ 0.16	\$ (0.01)

(1) Net income for the year ended December 31, 2006 was allocated between the periods during which two classes of equity securities were outstanding and a single class of equity securities was outstanding based on the respective number of days in each such period. The preferred stock was converted into common stock upon the Company's initial public offering on December 13, 2006.

(2) Calculation of percentage of net income (loss) applicable to common stockholders:



	<b>Year Ended December 31,</b>		
	<b>2006</b>	<b>2005</b>	<b>2004</b>
Weighted-average common shares outstanding	27,896	26,232	25,698
Weighted-average dilutive convertible preferred stock outstanding	1,665	2,146	
Weighted-average anti-dilutive convertible preferred stock outstanding	3,079	2,890	5,046
Weighted-average common shares and preferred shares	32,640	31,268	30,744
Percent of net income (loss) applicable to common stockholders	85%	84%	84%
Percent of net income (loss) applicable to dilutive convertible preferred stockholders	5%	7%	0%

F-22

**Table of Contents****IPG PHOTONICS CORPORATION****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****10. COMMITMENTS AND CONTINGENCIES**

*Operating Leases* The Company leases certain facilities under cancelable and noncancelable operating lease agreements which expire through November 2011. In addition, the Company leases capital equipment under several operating leases.

Rent expense for the years ended December 31, 2006, 2005 and 2004, totaled \$383,000, \$570,000 and \$633,000, respectively.

Commitments under the noncancelable lease agreements as of December 31, 2006, are as follows (in thousands):

<b>Years Ending December 31</b>	<b>Facilities</b>	<b>Equipment</b>	<b>Total</b>
2007	\$ 1,044	\$ 530	\$ 1,574
2008	933	247	1,180
2009	590	110	700
2010	285	45	330
2011	76	10	86
Total	\$ 2,928	\$ 942	\$ 3,870

*Employment Agreements* The Company has entered into employment agreements with certain members of senior management. The terms of these agreements are up to three years and include noncompete and nondisclosure provisions, as well as provide for defined severance payments in the event of termination.

*Product Sales Agreement* In August 2003, the Company settled a contract dispute and related litigation with a component supplier. Under the terms of the settlement, the Company entered into two supply agreements, pursuant to which (a) the Company agreed to sell to the component supplier certain products at discounted amounts and (b) the Company agreed to purchase from the component supplier certain percentages (but not fixed dollar amounts) of the Company's external requirements, if any, for specified components for five years. The Company sold products to the supplier totaling \$266,000, \$119,000 and \$189,000 for the years ended December 31, 2006, 2005 and 2004, respectively.

**11. LEGAL PROCEEDINGS**

In April 2005, the Company was sued for patent infringement relating to optical fiber. The plaintiff has made a complaint with unspecified damages. The Company answered the complaint on June 2, 2005, and filed a counterclaim, denying infringement and raising additional defenses. On the same day, the plaintiff in the case filed its complaint, the plaintiff requested that the United States Patent and Trademark Office reexamine the plaintiff's patent, and the patent office granted that request. In view of the pending reexamination, the litigation was stayed until the conclusion of the patent office reexamination. The patent expires in January 2011. The Company believes it has meritorious defenses and intends to vigorously contest the claims after the patent office concludes the reexamination

and the stay of litigation is lifted. As such, no amounts have been accrued in respect of this contingency.

In June 2006, another company filed a claim against the Company alleging infringement of a United States patent related to diode pumping of single mode core optical fibers. The plaintiff in this case seeks damages of over \$20.0 million, treble damages and injunctive relief. In January 2007, the Company settled the claim. The settlement did not have a material impact on the Company's financial statements.

On November 20, 2006, the Company was sued for patent infringement relating to certain unspecified fiber amplifier products. The plaintiff has made a complaint for damages of over \$10 million, treble damages

**Table of Contents****IPG PHOTONICS CORPORATION****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

for alleged willful infringement and injunctive relief. The Company believes it has meritorious defenses and intends to vigorously contest the claims. As such, no amounts have been accrued in respect of this contingency.

**12. EMPLOYEE BENEFIT PLANS**

*Retirement Savings Plan* The Company maintains a 401(k) retirement savings plan covering all of its U.S. employees. The Company makes matching contributions equal to 50% of the employee's pretax contributions, subject to a maximum of 6% of eligible compensation. Compensation expense related to the Company's contribution to the plan for the years ended December 31, 2006, 2005 and 2004, approximated \$321,000, \$263,000 and \$157,000, respectively.

**13. INCOME TAXES**

The income before the impact of income taxes and minority interests in consolidated subsidiaries consisted of the following (in thousands):

	<b>Year Ended December 31,</b>		
	<b>2006</b>	<b>2005</b>	<b>2004</b>
U.S.	\$ 1,307	\$ 1,211	\$ (1,637)
Foreign	26,812	10,722	2,128
Total	\$ 28,119	\$ 11,933	\$ 491

The Company's benefit from (provision for) income taxes consisted of the following (in thousands):

	<b>Year Ended December 31,</b>		
	<b>2006</b>	<b>2005</b>	<b>2004</b>
Current:			
U.S.	\$ 2,859	\$	\$ 1,569
Foreign	(10,023)	(1,348)	(430)
Total current	(7,164)	(1,348)	1,139
Deferred:			
Federal	(4,329)	(682)	(189)
State	(290)	(56)	(97)
Foreign	(2,902)	(2,992)	586
Change in valuation allowance	17,680	998	162

Total deferred	10,159	(2,732)	462
Benefit from (provision for) income taxes	\$ 2,995	\$ (4,080)	\$ 1,601

During 2004, the Company completed audits performed by the Internal Revenue Service for the years ended 2001 and 2000. The completion of the audits allowed the Company to release \$1,569,000 of accrued tax contingencies related to those years under audit. In addition, the benefit from (provision for) income taxes is different from that which would be obtained by applying the statutory federal income tax rate to income before income taxes due primarily to the valuation allowance that has been provided against the net operating losses that are not deemed to be recoverable. In 2006, the Company determined that it was more likely than not that a benefit would be realized from the domestic deferred tax assets and released \$13,060,000 related to the valuation allowance in addition to a favorable change of \$4,620,000 resulting from the use of net operating

**Table of Contents****IPG PHOTONICS CORPORATION****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

losses in 2006. The favorable changes to the valuation allowance in 2005 and 2004 reflect the actual net operating losses utilized in those periods.

A reconciliation of income tax expense at the U.S. federal statutory income tax rate to the recorded tax benefit (provision) is as follows (in thousands):

	<b>Year Ended December 31,</b>		
	<b>2006</b>	<b>2005</b>	<b>2004</b>
Tax at statutory rate	\$ (9,560)	\$ (4,057)	\$ (167)
Non-U.S. rate differential net	(1,388)	(658)	492
State income taxes net	(121)	(18)	97
Resolution of prior year tax contingencies and reserves			1,569
Fair value adjustment to series B warrants	(2,531)	(253)	(209)
Stock compensation expense	(76)		(307)
Change in valuation allowance	17,680	998	162
Other net	(1,009)	(92)	(36)
	<b>\$ 2,995</b>	<b>\$ (4,080)</b>	<b>\$ 1,601</b>

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities are as follows (in thousands):

	<b>December 31,</b>	
	<b>2006</b>	<b>2005</b>
Property, plant, and equipment	\$ (518)	\$ (790)
Inventory provisions	2,474	4,961
Allowances and accrued liabilities	1,031	3,433
Other tax credits	1,132	1,056
Net operating loss carryforwards	10,752	13,654
Valuation allowance	(1,711)	(19,391)
Net deferred tax assets	<b>\$ 13,160</b>	<b>\$ 2,923</b>

As of December 31, 2006, the Company has U.S. federal and state tax net operating loss carryforwards available for future periods of approximately \$26,418,000 and \$23,318,000. The federal and state tax net operating loss carryforwards begin expiring in 2022 and 2007, respectively.



Table of Contents**IPG PHOTONICS CORPORATION****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****14. GEOGRAPHIC AND PRODUCT INFORMATION**

The Company markets and sells its products throughout the world through both direct sales and distribution channels. The geographic sources of the Company's net sales, based on billing addresses of the Company's customers are as follows (in thousands):

	<b>Year Ended December 31,</b>		
	<b>2006</b>	<b>2005</b>	<b>2004</b>
United States and other North America	\$ 45,519	\$ 38,512	\$ 20,911
South America	446		
Europe:			
Germany	24,454	13,137	11,898
Other including Eastern Europe/ CIS	24,037	10,745	7,441
Asia and Australia:			
Japan	35,585	25,354	16,022
Other	13,184	8,215	4,210
Rest of the World		422	225
Total	\$ 143,225	\$ 96,385	\$ 60,707

Sales are derived from products for different applications: fiber lasers and diode lasers for materials processing, fiber amplifiers for communications applications, fiber lasers and diode lasers for medical applications, and fiber lasers and amplifiers for advanced applications. Net sales for these product lines are as follows (in thousands):

	<b>Year Ended December 31,</b>		
	<b>2006</b>	<b>2005</b>	<b>2004</b>
Materials processing	\$ 102,317	\$ 59,659	\$ 41,990
Communications	15,187	15,751	9,697
Medical	11,163	7,319	1,544
Advanced applications	14,558	13,656	7,476
Total	\$ 143,225	\$ 96,385	\$ 60,707

The Company has one customer that individually comprised 10%, 13% and 20% of net sales during the years ended December 31, 2006, 2005 and 2004, respectively. Accounts receivable related to this customer totaled approximately 10% and 18% of the net accounts receivable balance as of December 31, 2006 and 2005, respectively.



Edgar Filing: IPG PHOTONICS CORP - Form 10-K

The geographic location of the net book value of the Company's long-lived assets, based on physical location of the assets is as follows (in thousands):

	<b>December 31,</b>	
	<b>2006</b>	<b>2005</b>
United States	\$ 32,798	\$ 27,071
Germany	30,108	22,107
Russia	3,183	1,438
Other	1,064	379
	\$ 67,153	\$ 50,995

F-26

---

**Table of Contents****IPG PHOTONICS CORPORATION****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****15. SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED)**

<b>2006</b>	<b>First Quarter</b>	<b>Second Quarter</b>	<b>Third Quarter</b>	<b>Fourth Quarter</b>
	<b>(In thousands, except per share data)</b>			
Net Sales	\$ 32,743	\$ 32,184	\$ 36,201	\$ 42,097
Gross profit	12,465	13,343	17,337	20,149
Net income (loss) applicable to common stockholders, two-class method	2,174	3,637	3,624	(5,326) <sup>(1)</sup>
Net income (loss) for period during which single class of equity securities was outstanding				3,255 <sup>(1)(2)</sup>
Basic earnings per share, two-class method	0.08	0.13	0.13	(0.19) <sup>(1)</sup>
Basic earnings per share for period during which single class of equity securities was outstanding				0.08 <sup>(1)(2)</sup>
Basic earnings per share applicable to common stockholders	0.08	0.13	0.13	(0.11) <sup>(1)(2)</sup>
Diluted earnings per share applicable to common stockholders	0.07	0.12	0.12	(0.11) <sup>(1)(2)</sup>
<b>2005</b>	<b>First Quarter</b>	<b>Second Quarter</b>	<b>Third Quarter</b>	<b>Fourth Quarter</b>
	<b>(In thousands, except per share data)</b>			
Net Sales	\$ 18,788	\$ 22,843	\$ 20,607	\$ 34,147
Gross profit	5,851	7,342	7,282	13,429
Net income applicable to common stockholders	328	499	648	2,847 <sup>(3)</sup>
Basic earnings per share applicable to common stockholders	0.01	0.02	0.03	0.11 <sup>(3)</sup>
Diluted earnings per share applicable to common stockholders	0.01	0.02	0.03	0.11 <sup>(3)</sup>

(1) Includes a \$3.1 million charge related to the change in the fair value of the Company's Series B Warrants and a \$13.1 million benefit related to the release of a deferred tax valuation allowance in the fourth quarter of 2006.

(2) Includes a one-time deemed dividend of \$18.3 million related to the beneficial conversion of preferred stock in the Company's initial public offering in 2006 and accretion relating to preferred stock.

(3) Includes a \$0.3 million charge related to the change in the fair value of the Company's Series B Warrants.

F-27

---

**Table of Contents****EXHIBIT INDEX**

<b>Exhibit No.</b>	<b>Description</b>
3.1	Form of Second Amended and Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.2 to Registration Statement No. 333-136521 filed with the Securities and Exchange Commission (the Commission) on August 11, 2006)
3.2	Form of Certificate of Amendment of Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.4 to Registration Statement No. 333-136521 filed with the Commission on November 24, 2006)
3.3	Amended and Restated By-laws of the Registrant (incorporated by reference to Exhibit 3.3 to Registration Statement No. 333-136521 filed with the Commission on August 11, 2006)
4.1	Specimen Stock Certificate (incorporated by reference to Exhibit 4.1 to Registration Statement No. 333-136521 filed with the Commission on November 14, 2006)
4.2	Registration Rights Agreement by and among the Registrant and the Investors named therein, dated as of August 30, 2000, as amended (incorporated by reference to Exhibit 4.2 to Registration Statement No. 333-136521 filed with the Commission on August 11, 2006)
4.3	Registration Rights Agreement by and among the Registrant and JDS Uniphase Corporation, dated as of August 13, 2003, as amended (incorporated by reference to Exhibit 4.3 to Registration Statement No. 333-136521 filed with the Commission on August 11, 2006)
10.1	2000 Incentive Compensation Plan (incorporated by reference to Exhibit 10.1 to Registration Statement No. 333-136521 filed with the Commission on August 11, 2006)
10.2	2006 Incentive Compensation Plan (incorporated by reference to Exhibit 10.2 to Registration Statement No. 333-136521 filed with the Commission on August 11, 2006)
10.3	Non-Employee Directors Compensation Plan (incorporated by reference to Exhibit 10.3 to Registration Statement No. 333-136521 filed with the Commission on August 11, 2006)
10.4	Non-Employee Directors Stock Plan (incorporated by reference to Exhibit 10.4 to Registration Statement No. 333-136521 filed with the Commission on August 11, 2006)
10.5	Senior Executive Short-Term Incentive Plan (incorporated by reference to Exhibit 10.5 to Registration Statement No. 333-136521 filed with the Commission on August 11, 2006)
10.6	Form of Subordinated Note of the Registrant to be issued to holders of series B preferred stock (incorporated by reference to Exhibit 10.6 to Registration Statement No. 333-136521 filed with the Commission on August 11, 2006)
10.7	Form of Warrant to Purchase Common Stock of the Registrant issued to holders of series B preferred stock, as amended (incorporated by reference to Exhibit 10.7 to Registration Statement No. 333-136521 filed with the Commission on August 11, 2006)
10.8	Employment Agreement by and between the Registrant and Valentin P. Gapontsev, dated as of March 1, 2006 (incorporated by reference to Exhibit 10.8 to Registration Statement No. 333-136521 filed with the Commission on August 11, 2006)
10.9	Service Agreement by and between the Registrant and Eugene Shcherbakov, dated as of March 1, 2006 (incorporated by reference to Exhibit 10.9 to Registration Statement No. 333-136521 filed with the Commission on August 11, 2006)
10.10	Employment Agreement by and between the Registrant and Tim Mammen, dated as of March 1, 2006 (incorporated by reference to Exhibit 10.10 to Registration Statement No. 333-136521 filed with the Commission on August 11, 2006)
10.11	Employment Agreement by and between the Registrant and Angelo P. Lopresti, dated as of March 1, 2006 (incorporated by reference to Exhibit 10.11 to Registration Statement No. 333-136521 filed with



**Table of Contents**

<b>Exhibit No.</b>	<b>Description</b>
10.12	Employment Agreement by and between the Registrant and Denis Gapontsev, dated as of March 1, 2006 (incorporated by reference to Exhibit 10.12 to Registration Statement No. 333-136521 filed with the Commission on August 11, 2006)
10.13	Form of Indemnification Agreement between the Registrant and each of its Directors and Executive Officers (incorporated by reference to Exhibit 10.13 to Registration Statement No. 333-136521 filed with the Commission on August 11, 2006)
10.14	Form of Stock Option Agreement under the 2000 Incentive Compensation Plan (incorporated by reference to Exhibit 10.14 to Registration Statement No. 333-136521 filed with the Commission on August 11, 2006)
10.15	Form of Stock Option Agreement under the 2006 Incentive Compensation Plan (incorporated by reference to Exhibit 10.15 to Registration Statement No. 333-136521 filed with the Commission on August 11, 2006)
10.16	Form of Stock Option Agreement under the 2006 Non-Employee Directors Stock Plan (incorporated by reference to Exhibit 10.16 to Registration Statement No. 333-136521 filed with the Commission on August 11, 2006)
10.17	Form of Confidentiality, Non-Competition and Confirmatory Assignment Agreement (incorporated by reference to Exhibit 10.16 to Registration Statement No. 333-136521 filed with the Commission on August 11, 2006)
10.18	Construction Loan Agreement, dated as of April 28, 2000, between the Registrant and Family Bank, FSB, as amended (incorporated by reference to Exhibit 10.18 to Registration Statement No. 333-136521 filed with the Commission on August 11, 2006)
10.19	Loan and Security Agreement, dated as of November 15, 2004, between the Registrant and BankNorth, N.A. as Lender, as amended (incorporated by reference to Exhibit 10.19 to Registration Statement No. 333-136521 filed with the Commission on August 11, 2006)
10.20	Assignment, Research and Development Agreement between the Registrant, IPG Laser GmbH, IPG Fibertech S.R.L. and NTO IRE-Polus, dated as of August 30, 2000 (incorporated by reference to Exhibit 10.21 to Registration Statement No. 333-136521 filed with the Commission on September 27, 2006)
10.21	Investment Agreement between NTO IRE-Polus and IPG Laser GmbH, dated as of March 1, 2001 (incorporated by reference to Exhibit 10.22 to Registration Statement No. 333-136521 filed with the Commission on September 27, 2006)
10.22	Loan and Security Agreement between the Registrant and IP Fibre Devices (UK) Ltd., dated as of August 23, 2002 (incorporated by reference to Exhibit 10.23 to Registration Statement No. 333-136521 filed with the Commission on September 27, 2006)
10.23	Non-Recourse Promissory Note by Valentin P. Gapontsev, dated April 1, 2003 (incorporated by reference to Exhibit 10.24 to Registration Statement No. 333-136521 filed with the Commission on September 27, 2006)
10.24	Amended and Restated Non-Recourse Promissory Note by John H. Dalton, dated April 13, 2001 (incorporated by reference to Exhibit 10.25 to Registration Statement No. 333-136521 filed with the Commission on September 27, 2006)
10.25	Stock Purchase Agreement of John H. Dalton, dated December 14, 2004 (incorporated by reference to Exhibit 10.26 to Registration Statement No. 333-136521 filed with the Commission on September 27, 2006)
10.26	Guaranty of Valentin P. Gapontsev, dated as of August 9, 2006 (incorporated by reference to Exhibit 10.27 to Registration Statement No. 333-136521 filed with the Commission on September 27,

2006)

---

**Table of Contents**

<b>Exhibit No.</b>	<b>Description</b>
10.27	Stock Purchase Agreement between the Registrant and the Investors named therein, dated as of August 30, 2000 (incorporated by reference to Exhibit 10.28 to Registration Statement No. 333-136521 filed with the Commission on September 27, 2006)
10.28	Loan Agreement between IP Fibre Devices (UK) Ltd. and NTO IRE-Polus, dated January 3, 2002, as amended (incorporated by reference to Exhibit 10.29 to Registration Statement No. 333-136521 filed with the Commission on September 27, 2006)
10.29	Exchange Agreement between the Registrant and Valentin P. Gapontsev, dated as of July 31, 2006 (incorporated by reference to Exhibit 10.30 to Registration Statement No. 333-136521 filed with the Commission on September 27, 2006)
10.30	Subscription Agreement between the Registrant and JDS Uniphase Corporation, dated August 13, 2003 (incorporated by reference to Exhibit 10.31 to Registration Statement No. 333-136521 filed with the Commission on September 27, 2006)
10.31	Confidential Settlement Agreement between the Registrant and JDS Uniphase Corporation, dated as of June 25, 2003 (incorporated by reference to Exhibit 10.32 to Registration Statement No. 333-136521 filed with the Commission on October 18, 2006)
10.32	Convertible Promissory Note between the Registrant and JDS Uniphase Corporation, dated August 13, 2003 (incorporated by reference to Exhibit 10.33 to Registration Statement No. 333-136521 filed with the Commission on September 27, 2006)
10.33	Secured Promissory Note between the Registrant and JDS Uniphase Corporation, dated August 13, 2003 (incorporated by reference to Exhibit 10.34 to Registration Statement No. 333-136521 filed with the Commission on September 27, 2006)
10.34	Non-Recourse Promissory Note by Robert A. Blair, dated September 30, 2003 (incorporated by reference to Exhibit 10.35 to Registration Statement No. 333-136521 filed with the Commission on September 27, 2006)
10.35	Non-Recourse Promissory Note by Robert A. Blair, dated December 3, 2003 (incorporated by reference to Exhibit 10.36 to Registration Statement No. 333-136521 filed with the Commission on September 27, 2006)
10.36	Pledge Agreement between the Registrant and Robert A. Blair, dated September 30, 2003 (incorporated by reference to Exhibit 10.37 to Registration Statement No. 333-136521 filed with the Commission on October 18, 2006)
10.37	Pledge Agreement between the Registrant and Robert A. Blair, dated December 3, 2003 (incorporated by reference to Exhibit 10.38 to Registration Statement No. 333-136521 filed with the Commission on October 18, 2006)
10.38	Pledge Agreement between the Registrant and John H. Dalton, dated April 13, 2001, as amended (incorporated by reference to Exhibit 10.39 to Registration Statement No. 333-136521 filed with the Commission on October 18, 2006)
10.39	Pledge Agreement between the Registrant and Dr. Valentin P. Gapontsev, dated March 5, 2001, as amended (incorporated by reference to Exhibit 10.40 to Registration Statement No. 333-136521 filed with the Commission on October 18, 2006)
10.40	Pledge Agreement between the Registrant and Vincent Au-Yeung, dated January 22, 2001 (incorporated by reference to Exhibit 10.41 to Registration Statement No. 333-136521 filed with the Commission on October 18, 2006)
10.41	Promissory Note by Vincent Au-Yeung, dated January 22, 2001 (incorporated by reference to Exhibit 10.42 to Registration Statement No. 333-136521 filed with the Commission on October 18, 2006)



- 10.42 Stockholders Agreement by and among the Registrant, the Founders named therein and the Investors named therein, dated as of August 30, 2000, as amended (incorporated by reference to Exhibit 10.43 to Registration Statement No. 333-136521 filed with the Commission on October 18, 2006)
-

**Table of Contents**

<b>Exhibit No.</b>	<b>Description</b>
10.43	Series D Preferred Stockholders Agreement by and among the Registrant and JDS Uniphase Corporation, dated as of August 13, 2003 (incorporated by reference to Exhibit 10.44 to Registration Statement No. 333-136521 filed with the Commission on October 18, 2006)
10.44	Sublease Agreement between IP Fibre Devices (UK) Ltd. and IPG Photonics (UK) Ltd., dated October 31, 2006 (incorporated by reference to Exhibit 10.45 to Registration Statement No. 333-136521 filed with the Commission on November 14, 2006)
10.45	Right of First Offer Agreement between IPG Laser GmbH and Dr. Valentin P. Gapontsev, dated November 1, 2006 (incorporated by reference to Exhibit 10.46 to Registration Statement No. 333-136521 filed with the Commission on November 14, 2006)
10.46	Right of First Offer Agreement between IPG Laser GmbH and Igor Samartsev, dated November 1, 2006 (incorporated by reference to Exhibit 10.47 to Registration Statement No. 333-136521 filed with the Commission on November 14, 2006)
21.1	List of Subsidiaries
23.1	Consent of Deloitte & Touche LLP
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a)
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a)
32.1	Certification of Chief Executive Officer pursuant to Section 1350
32.2	Certification of Chief Financial Officer pursuant to Section 1350

Portions of this exhibit are the subject of a confidential treatment request and have been omitted. These portions have been submitted separately to the Securities and Exchange Commission.