

IPG PHOTONICS CORP  
Form 424B5  
March 02, 2012  
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Filed Pursuant to Rule 424(b)(5)  
Registration No. 333-179722

**CALCULATION OF REGISTRATION FEE**

<b>Title of Each Class of Securities to be Registered</b>	<b>Amount to be Registered<sup>(1)</sup></b>	<b>Maximum Aggregate Offering Price</b>	<b>Amount of Registration Fee<sup>(2)</sup></b>
Common Stock, par value \$0.0001 per share	3,450,000	\$187,335,000	\$21,469

- (1) Assuming exercise in full of the underwriters' option to purchase additional shares.  
(2) Calculated in accordance with Rule 457(r) under the Securities Act of 1933, as amended.

**PROSPECTUS SUPPLEMENT**

(to prospectus dated February 27, 2012)

**3,000,000 Shares**

**Common Stock**

We are selling 2,800,000 shares of our common stock and our chairman and chief executive officer is selling an additional 200,000 shares of our common stock.

Our shares trade on the Nasdaq Global Market under the symbol IPGP. On March 1, 2012, the last sale price of the shares as reported on the Nasdaq Global Market was \$54.80 per share.

**Investing in the common stock involves risks that are described in the Risk Factors section beginning on page S-6 of this prospectus supplement.**

	<b>Per Share</b>	<b>Total</b>
Public offering price	\$54.30	\$162,900,000
Underwriting discount	\$2.4435	\$7,330,500
Proceeds, before expenses, to us	\$51.8565	\$145,198,200
Proceeds, before expenses, to the selling stockholder	\$51.8565	\$10,371,300

The underwriters may also exercise their option to purchase up to an additional 450,000 shares from us, at the public offering price, less the underwriting discount, for 30 days after the date of this prospectus supplement.

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

The shares will be ready for delivery on or about March 7, 2012.

*Sole Bookrunning Manager*

**BofA Merrill Lynch**

**Needham & Company**

**Stifel Nicolaus Weisel**

The date of this prospectus supplement is March 1, 2012

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You should rely only on the information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus. We and the selling stockholder have not, and the underwriters have not, authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We and the selling stockholder are not, and the underwriters are not, making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference is accurate only as of their respective dates. Our business, financial condition, results of operations and prospects may have changed since those dates.

**About This Prospectus Supplement**

This document is in two parts. The first part is this prospectus supplement, which describes the terms of the offering of common stock, contains information about us and specific information about the selling stockholder, and also adds to and updates information contained in the accompanying prospectus as well as the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. The second part, the accompanying prospectus, gives more general information. This prospectus supplement incorporates by reference important business and financial information about us that is not included in or delivered with this prospectus supplement. To the extent any inconsistency or conflict exists between the information included or incorporated by reference in this prospectus supplement and the information included in the accompanying prospectus, the information included or incorporated by reference in this prospectus supplement updates and supersedes the information in the accompanying prospectus.

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

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**PROSPECTUS SUPPLEMENT SUMMARY**

*The following summary is qualified in its entirety by the more detailed information included elsewhere in, or incorporated by reference into, this prospectus supplement or the accompanying prospectus. Because this is a summary, it does not contain all of the information that may be important to you or that you should consider before investing in the common stock. You should read the entire prospectus supplement and the accompanying prospectus, including the section entitled *Risk Factors* and the documents incorporated by reference, which are described under *Where You Can Find More Information* and *Incorporation of Certain Information by Reference* before making an investment decision.*

**Our Company**

We are the leading developer and manufacturer of a broad line of high-performance fiber lasers, fiber amplifiers and diode lasers that are used in numerous applications in diverse end markets. Fiber lasers are a type of laser that combines 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 cost compared to competing lasers.

Our diverse lines of low, mid and high-power lasers and amplifiers are used in materials processing, advanced, communications and medical applications. For the year ended December 31, 2011, we reported net sales of \$474.5 million, an increase of 58.6% from the year ended December 31, 2010, and net income attributable to common shareholders of \$117.8 million. We sell our products globally to original equipment manufacturers ( OEMs ), system integrators and end users. We market our products internationally primarily through our direct sales force. We have sales offices in the United States, Germany, Italy, the United Kingdom, France, Spain, Japan, China, South Korea, Singapore, India and Russia.

We design and manufacture most of our key components used in our finished products, from semiconductor diodes to optical fibers and other components, finished fiber lasers and amplifiers. We also manufacture certain complementary products used with our lasers, including optical delivery cables, fiber couplers, beam switches, optical heads and chillers. Our vertically integrated operations allow us to reduce manufacturing costs, ensure access to critical components, rapidly develop and integrate advanced products and protect our proprietary technology.

**Industry Background**

Since the laser was invented over 50 years ago, laser technology has revolutionized a broad range of applications and products in various industries, including general manufacturing, automotive, shipbuilding, consumer products, electronics, semiconductors, research, medical and communications. Lasers provide flexible, non-contact and high-speed ways to process and treat various materials. For a wide variety of applications, lasers provide superior performance and a more cost-effective solution than non-laser technologies.

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. Traditional lasers have a number of disadvantages and limitations, including low beam quality, low reliability, limited output powers and wavelength choices, high energy consumption, large size, lack of mobility, the need for expensive replacement parts and complex cooling and maintenance requirements. In addition, the operating parameters of traditional lasers are difficult to control precisely.

We believe that fiber lasers represent a disruptive technology, a technology that is displacing traditional laser technologies and processes. Fiber lasers use semiconductor diodes as the light source to pump specialty

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optical fibers, which are infused with rare earth ions. Technological improvements in active optical fibers, semiconductor diodes and other optical components have resulted in performance improvements and increases in cost effectiveness, reliability and output power levels of fiber lasers. Also, component prices for fiber lasers have decreased as production volumes have risen, making fiber lasers cost-competitive and generally priced lower than competing lasers. As a result, fiber lasers have gained market share by replacing traditional lasers in existing laser applications and enabling new applications by addressing customer needs that are not met by traditional lasers and non-laser processes. We believe that fiber lasers provide a combination of benefits that include:

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

***Lower Cost.*** Fiber lasers offer strong value to customers because of their generally lower required maintenance costs, high reliability and energy efficiency. Many high-power lasers have lower acquisition costs.

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

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

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

## **Our Competitive Strengths**

We believe that our key strengths and competitive advantages include:

***World's Leading Producer of Fiber Laser Technology.*** 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 able to leverage our scale to lower costs for our customers and drive the proliferation of fiber lasers in existing and new applications.

***Vertically Integrated Development and Manufacturing.*** We develop and manufacture all of our key high-volume specialty components, including semiconductor diodes, active fibers, passive fibers and specialty optical components. We believe that our vertical integration and our high-volume production enhances our ability to meet customer requirements, accelerate development, manage costs, improve component yields and protect our intellectual property, while maintaining high performance and quality standards.

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

***Diverse Customer Base, End Markets and Applications.*** Our diverse customer base, end markets and applications provide us with many growth opportunities. In 2011, we shipped more than 15,000 units to over 1,700 customers worldwide, with no single customer representing more than 8% of our sales. Our products are used in a variety of applications and end markets worldwide. Our principal end markets include general manufacturing, automotive, heavy industry, aerospace, consumer, semiconductor and electronics. In these markets, our customers use our lasers to cut, weld, mark, engrave and perform numerous micro-processing functions.



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*Broad Product Portfolio and Ability to Meet Customer Requirements.* We offer a broad range of standard and custom fiber lasers and amplifiers, enabling deployment of our products in a wide variety of applications and end markets. Our vertically integrated manufacturing and broad technology expertise enable us to design, prototype and commence high-volume production of our products rapidly, allowing our customers to meet their time-to-market requirements.

### **Our Strategy**

Our objective is to maintain and extend our leadership position by pursuing the following key elements of our strategy:

*Leverage Our Technology to Increase Sales.* As fiber lasers become more widely accepted, we plan to leverage our position as the leader in fiber lasers and our applications expertise to develop solutions for customers and increase our position in the broader laser market. We believe that our fiber lasers will continue to displace traditional lasers in many existing applications due to their superior performance and value.

*Target New Applications for Lasers and Expand into Broader Markets.* We intend to expand the use of fiber lasers into additional applications where higher power, portability, efficiency, size and flexible fiber cable delivery can lead customers to adopt fiber lasers instead of non-laser solutions. We believe that the advantages of fiber laser technology can overcome many of the limitations that have hindered the adoption of conventional lasers in broader industrial markets and processes.

*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, as well as developing new product lines and laser-based systems.

*Lower Our Costs Through Manufacturing Improvements and Innovation.* We plan to seek further improvements in component manufacturing processes and device assembly as well as innovation in components and device designs to improve performance and decrease the overall cost per watt for our products.

*Expand Global Reach to Attract Customers Worldwide.* Our customers' manufacturing operations have expanded in emerging markets and are moving to lower-cost international locations. We have increased and will continue to increase our international sales and service locations to respond to our customers' needs.

### **Corporate Information**

We were incorporated in Delaware in 1998. Our principal executive office is located at 50 Old Webster Road, Oxford, Massachusetts 01540. Our telephone number is (508) 373-1100. Our website is located at [www.ipgphotonics.com](http://www.ipgphotonics.com).



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**The Offering**

Common stock offered by IPG Photonics 2,800,000 shares

Common stock offered by the selling stockholder 200,000 shares

Shares to be outstanding after the offering 50,484,206 shares

Use of proceeds Our net proceeds from this offering without exercise of the option to purchase additional shares will be approximately \$144.7 million, after deducting underwriting discounts and commissions and transaction expenses. We intend to use these net proceeds for general corporate purposes and to fund our capital expenditures and working capital requirements. We may also use some of the net proceeds for acquisitions of complementary businesses and technologies, although no such acquisitions are currently pending.

The selling stockholder, our chairman and chief executive officer, will receive all proceeds from the offering of his shares. See Selling Stockholder.

See Use of Proceeds on page S-23 of this prospectus supplement.

Risk factors See Risk Factors beginning on page S-6 of this prospectus supplement and other information included in this prospectus supplement and the accompanying prospectus for a discussion of factors you should carefully consider before deciding to invest in shares of the common stock.

Nasdaq Global Market symbol

IPGP

The number of shares outstanding after the offering excludes 6,640,170 shares reserved for issuance under our stock option plans as of March 1, 2012, of which (1) outstanding options to purchase 2,928,645 shares of our common stock at an average option price of \$25.69 and (2) unvested outstanding restricted stock units with respect to 88,016 shares of our common stock have been issued. This number assumes that the underwriters' option to purchase additional shares is not exercised. If the option to purchase additional shares is exercised in full, we will issue and sell an additional 450,000 shares.

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The following tables summarize our consolidated financial data for the periods indicated. The summary consolidated statement of income data for the years ended December 31, 2011, 2010 and 2009, and the summary consolidated balance sheet data as of December 31, 2011 have been derived from our audited consolidated financial statements, which are incorporated by reference from our Annual Report on Form 10-K for the year ended December 31, 2011. Our historical results are not necessarily indicative of the results for any future period.

	Year Ended December 31,		
	2011	2010	2009
(In thousands, except per share data)			
<b>Consolidated Statement of Income Data:</b>			
Net sales	\$ 474,482	\$ 299,256	\$ 185,894
Cost of sales	217,227	152,798	121,626
Gross profit	257,255	146,458	64,268
Operating expenses:			
Sales and marketing	21,731	19,100	15,157
Research and development	25,422	19,160	18,543
General and administrative expenses	37,442	28,645	20,489
(Gain) loss on foreign exchange	(2,862)	(848)	1,022
Total operating expenses	81,733	66,057	55,211
Operating income	175,522	80,401	9,057
Interest (expense) income, net	(681)	(1,188)	(1,252)
Other (expense) income, net	(257)	39	(36)
Income before provision for income taxes	174,584	79,252	7,769
Provision for income taxes	(53,575)	(24,900)	(2,485)
Net income	121,009	54,352	5,284
Less: Net income (loss) attributable to noncontrolling interests	3,250	361	(135)
Net income attributable to IPG Photonics Corporation	117,759	53,991	5,419
Net income attributable to common shareholders	\$ 117,759	\$ 53,991	\$ 5,419
Net income per share:			
Basic	\$ 2.48	\$ 1.16	\$ 0.12
Diluted	\$ 2.41	\$ 1.13	\$ 0.12
Weighted-average number of shares outstanding:			
Basic	47,365	46,424	45,489
Diluted	48,685	47,594	46,595

	As of December 31,	
	2011	
(In thousands)		
<b>Consolidated Balance Sheet Data:</b>		
Cash and cash equivalents	\$	180,234
Short-term investments		25,451
Working capital, excluding cash and cash equivalents and short-term investments		135,060
Total assets		608,132
Revolving line-of-credit facilities		7,057

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Long-term debt, including current portion	17,339
Redeemable noncontrolling interests	46,123
Stockholders' equity	443,323

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**RISK FACTORS**

*An investment in our common stock involves risks. You should carefully consider the risks set forth below, as well as all of the other information contained in this prospectus supplement and the accompanying prospectus and the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, including our Annual Report on Form 10-K for the year ended December 31, 2011, before deciding to invest in our common stock. The occurrence of any of the following risks could materially and adversely affect our business, financial condition, prospects, results of operations and cash flows. In such case, the trading price of our common stock could decline and you could lose all or part of your investment. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial may also materially adversely affect our business, prospects, financial condition, results of operations and cash flows.*

**Risks Relating to Our Business**

*Downturns in the geographic areas and markets we serve, particularly materials processing, 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 market, which includes general manufacturing, automotive, heavy industry, aerospace, consumer, semiconductor and electronics. Approximately 88.4% of our revenues in 2011 were from customers in the materials processing market. Although applications in this market are broad, sales for these applications 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 example, in 2009, our sales decreased by 25% in the materials processing market as a result of the global economic recession. For the foreseeable future, our operations will continue to depend upon capital expenditures by customers in this market, which, in turn, depend upon the demand for their products or services. Our sales have materially benefited in 2010 and 2011 from our increased sales of mid- and high-power lasers to end users in China. A slowing of economic growth, or a recession in China, would slow our growth rates or may result in a decrease in our sales. Decreased demand for products and services from customers for materials processing applications during an economic downturn or a decrease in purchases from end users in China may lead to decreased demand for our products, which would reduce our sales and margins. We may not be able to respond by decreasing our expenses quickly enough, due in part, to our fixed overhead structure related to our vertically integrated operations and our commitments to continuing investment in research and development.

*Our business is impacted by global economic conditions and macroeconomic downturns can disrupt our business and sales and may harm our financial condition.*

We have customers in many geographic areas. If a global economic downturn were to occur, we believe many of our customers would significantly decrease their capital expenditures to cut their costs. Accordingly, we believe our ability to generate sales is particularly sensitive to global and regional macroeconomic conditions. Adverse changes have occurred and may occur in the future as a result of declining or flat global or regional economic conditions, fluctuations in currency and commodity prices, wavering confidence, capital expenditure reductions, unemployment, declines in stock markets, contraction of credit availability, declines in real estate values, or other factors affecting economic conditions generally. These changes may negatively affect the sales of our lasers and amplifiers, increase exposure to losses from bad debts, increase the cost and decrease the availability of financing, increase the risk of loss on investments, or increase costs associated with manufacturing and distributing products. A prolonged economic downturn could have a material adverse effect on our business, financial condition and results of operations.

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*Uncertainty in the general economic conditions of markets in which we participate negatively affect our ability to estimate future income and expenditures.*

Current and future conditions in the economy have an inherent degree of uncertainty. As a result, it is difficult to estimate the level of growth or contraction for the economy as a whole. It is even more difficult to estimate growth or contraction in various parts, sectors and regions of the economy, including the materials processing, telecommunications, advanced and medical markets and applications in which we participate. Because all components of our budgeting and forecasting are dependent upon estimates of growth or contraction in the markets and applications we serve and demand for our products, the prevailing economic uncertainties render estimates of future income and expenditures very difficult to make.

*Our sales depend upon our ability to penetrate new applications for fiber lasers and increase our market share in existing applications.*

Our level of sales will depend on our ability to generate sales of fiber lasers in applications where conventional lasers, such as CO<sub>2</sub> and 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 maintain or 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;

effectively service and support our installed product base on a global basis;

extend our product line to address new applications;

develop new applications for our products; and

continue to reduce our manufacturing costs and enhance our competitive position.

Fiber lasers are relatively new when compared to conventional lasers and our future success depends on the development and broader acceptance of fiber lasers. Potential customers may be reluctant to adopt fiber lasers as an alternative to conventional 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. 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.

*Our vertically integrated business results in high levels of fixed costs and inventory levels that may adversely impact our gross profits and our operating results in the event that demand for our products declines or we maintain excess inventory levels.*

We have a high fixed cost base due to our vertically integrated business model, including the fact that approximately 77% of our 2,137 employees as of December 31, 2011 were employed in our manufacturing operations. We may not adjust these fixed costs quickly enough to adapt to rapidly changing market conditions. Our gross profit, in absolute dollars and as a percentage of net sales, is impacted by our sales volume, the corresponding absorption of fixed manufacturing overhead expenses and manufacturing yields. In addition, because we are a vertically integrated manufacturer and design and manufacture our key specialty components,



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insufficient demand for our products may subject us to the risks of high inventory carrying costs and increased inventory obsolescence. If our capacity and production levels are not properly sized in relation to expected demand, we may need to record write-downs for excess or obsolete inventory. Because we are vertically integrated, 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. Changes in our level of inventory lead to an increase in cash generated from our operations when inventory is sold or a decrease in cash generated from our operations at times when the amount of inventory increases.

*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>, YAG, disc and direct diode lasers, as these makers of laser solutions may lower prices to maintain or increase current market share and have committed significant research and development resources to pursue opportunities related to these technologies.

In addition, we face competition from a growing number of fiber laser makers, including Rofin-Sinar Technologies, Inc., Trumpf GmbH + Co. KG, GSI Group Inc., Coherent Inc., Hypertherm, Inc., Newport Corporation, The Furukawa Electric Co., Ltd., Keopsys SA, Mitsubishi Cable Industries, Ltd., Miyachi Unitek Corporation, Raycus Fiber Laser Technologies Co. Ltd. and JDS Uniphase Corporation. Competition from other fiber laser makers has increased and some have introduced fiber lasers or announced plans to introduce fiber lasers that compete with our products. We may not be able to successfully differentiate our current and proposed products from our competitors' products and current or prospective customers may not consider our products to be superior to competitors' products. To maintain our competitive position, 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 to 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 manufacturing capacity and operations may not be appropriate for future levels of demand and may adversely affect our gross margins.*

In response to an increase in demand for our fiber lasers, we added substantial manufacturing capacity at our facilities in the United States, Germany and Russia in the period from 2005 to 2008. Beginning in 2010, we entered another phase of expanding capacity at those manufacturing facilities. We continue to expand our capacity further in Russia. A significant portion of our manufacturing facilities and production equipment, such as our semiconductor production and processing equipment, diode packaging equipment and diode burn-in stations, are special-purpose in nature and cannot be adapted easily to make other products. If the demand for fiber lasers or amplifiers does not increase or decreases from current levels, we may have significant excess manufacturing capacity and under-absorption of our fixed costs, which could in turn adversely affect our gross margins and profitability.

To maintain our competitive position as the leading developer and manufacturer of fiber lasers and to meet anticipated demand for our products, we invested significantly in the expansion of our manufacturing and

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operations throughout the world and will do so in the future. We incurred in the past and will incur significant costs associated with the acquisition, build-out and preparation of our facilities. We had capital expenditures of \$53.0 million and \$28.4 million in 2011 and 2010, respectively, and we expect to incur approximately \$55 million to \$60 million in capital expenditures, excluding acquisitions, in 2012. In connection with these projects, we may incur cost overruns, construction delays, labor difficulties or regulatory issues which could cause our capital expenditures to be higher than what we currently anticipate, possibly by a material amount, which would in turn adversely impact our operating results. Moreover, we may experience higher costs due to yield loss, production inefficiencies and equipment problems until any operational issues associated with the opening of new manufacturing facilities are resolved.

*The laser and amplifier industries are experiencing 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, are experiencing and may in the future continue to experience a decline in average selling prices, or 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 further 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 have experienced and we may experience in the future material adverse fluctuations in our operating results on a quarterly or annual basis if the ASPs of our products continue to decline.

*Because we lack long-term purchase commitments from our customers, our sales can be difficult to predict, which could lead to excess or obsolete inventory and 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 \$6.1 million, \$2.7 million and \$5.3 million in 2011, 2010 and 2009, respectively. These provisions were recorded as a result of changes in market prices of certain components, the value of those inventories that was realizable through finished product sales and uncertainties related to the recoverability of the value of inventories due to technological changes and excess quantities. If our OEM customers, end users or distributors fail to accurately forecast the demand for our products, fail to accurately forecast the timing of such demand, or are unable to consistently negotiate acceptable purchase order terms with customers, our results of operations may be adversely affected.

*We may experience lower than expected manufacturing yields, which would adversely affect our gross margins.*

The manufacture of semiconductor diodes and the packaging of them is a highly complex process. Manufacturers often encounter difficulties in achieving acceptable product yields from diode and packaging operations. We have from time to time experienced lower than anticipated manufacturing yields for our diodes and packaged diodes. This occurs during the production of new designs and the installation and start-up of new process technologies. If we do not achieve planned yields, our product costs could increase resulting in lower gross margins, and key component availability would decrease.



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