

World Leadership in High Power Fiber Lasers

IPG Photonics Corporation

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www.ipgphotonics.com

The statements in this presentation that relate to future plans, events or performance are forward-looking statements. These statements involve risks and uncertainties, including, but not limited to, risks associated with strength or weaknesses in industries or geographic markets we serve, effects of economic downturns, reduction in capital expenditures, potential order cancellations and push-outs, the Company's ability to penetrate new applications for fiber lasers and increase market share, the rate of acceptance and penetration of the Company's products, effective management of growth, level of fixed costs from its vertical integration, intellectual property infringement claims and litigation, interruption in supply of key components, contract cancellations, manufacturing risks, competitive factors including declining average selling prices, building and expanding field service and support operations and other risks identified in the *Company's SEC filings. Readers are encouraged to refer to the risk factors* described in the Company's Annual Report on Form 10-K and its periodic reports filed with the SEC, as applicable. Actual results, events and performance may differ materially. Readers are cautioned not to rely on the forward-looking statements, which speak only as of the date hereof. The Company undertakes no obligation to release publicly the result of any revisions to these forwardlooking statements that may be made to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.



Investment Highlights

- #1 supplier of fiber lasers with estimated 65+% of world sales
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Fiber Lasers: A Truly Disruptive Technology



Source: EALA, Automatic Feed Co., ALAW 2009



2009 World Market For Fiber Lasers

Area	All Lasers (in USD millions)	Fiber Lasers (in USD millions)	Share % of Fiber Lasers
Materials Processing	1,730	165	9.5%
Medical Therapy	360	20	5.6%
Other Application Areas*	3,377	57	1.7%
Total	\$5,467	\$242	4.4%

* - Other application areas exclude telecom fiber amplifiers and comprise mainly graphics (flexographic printing), measurement, defense, R&D and laboratory.

Date source: Optech Consulting. Fiber Laser Report 2010, April 2010. Laser Focus World January 2010



2009/10 World Market For All Lasers Material Processing

Area Material Processing	2008 (in USD millions)	2009 (in USD millions)	2010E (in USD millions)
Laser Source	3,060	1,730	2,000
Laser Systems	9,420	5,240	6,000
Laser Source* % Change Y-o-Y	11.8%	-43.5%	15.6%
Source / Systems	32.5%	33.0%	33.3%

- The laser source market for material processing went down -44% in 2009;

but the fiber laser source material processing market went down by less than half, -21%

Date source: Optech Consulting. Fiber Laser Report 2010, April 2010



Laser 101 Primer



Source: IPG Photonics



IPG Fiber Lasers: The New Standard for Industry



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Please note: Internal components are not sold separately

IPG Keeps Pushing the Evolution of Diodes and Packaging



Source: IPG Photonics



Broad Advantages Versus Traditional Solutions

Compared to traditional lamp/diode pumped Nd:YAG and CO_2 lasers, fiber lasers deliver many benefits:

- Superior beam quality
- Greater output power
- Higher electrical efficiency
- Lower maintenance
- Higher reliability
- More competitive on cost/watt
- Smaller footprint and size
- More mobile and rugged
- Ease of integration with robots

Bottom line: Dramatically lower total ownership costs

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3rd Party Comparison of High-Power Multimode Lasers

6KW Fiber Laser vs. 4KW YAG (base index: 100)



Source: ArcelorMittal June 2008



Materials Processing: IPG is Closing the Gap



Customer Case Study: Large Producer of Flat Sheet Cutting Systems

- European OEM began using IPG's fiber lasers in March 2008 for cutting.
 Company previously used CO₂ slab resonator
- Realized performance benefits by using IPG's fiber laser:
 - 2x the cutting speed of a 4-kW CO₂ laser. Cutting 5/8 Inch thick steel
 - Wavelength allows more precise laser-beam spot size (half the diameter of CO₂)
 - Wavelength now allows to cut materials like brass and copper (anti-reflectivity)
 - Lower complexity/maintenance (beam path alignment, mirrors, collimators, resonator)

	Operating Benefits			
		4-kW CO ₂	2-kW Fiber Laser	
	Electric Costs/hour	\$3.19	\$0.56	
	Chiller Costs/hour	\$2.21	\$0.21	
	Total Opex/hour	\$5.40	\$0.77	86% Savings/hour
Source: FFJournal.r	net, February 2010			

Fiber Lasers Consume 70% Less Energy than CO2

Energy consumption



Graph Source: Salvagnini Italia s.p.a., November 2009

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Fiber Lasers Cutting Speed is Faster than CO2

Linear cutting speed 2kW fiber 40 +<mark>12</mark>0% +180% +75% 2kW fiber 30 3kW 20 co, 3kW 2 kW co, fiber 10 3kW C0, 2 kW 3kW 2kW fiber 2kW CO, fiber fiber 0 minin 2 mm 5 mm COPPER 0.8 mm 2 mm 15 mm 1 mm GALVANIZED ALUMINIUM STAINLESS STEEL BRASS STEEL

Graph Source: Salvagnini Italia s.p.a., November 2009



IPG Competitive Advantages

- Proprietary technologies developed over 20 years
- Vertical integration of critical components (diodes, specialty fibers)
- Significant manufacturing scale and low manufacturing cost
- Integrated internal process (development, manufacturing, testing)
- Technology validated by a diverse base of users/OEMs
- No fiber laser competitors at high-power levels
- No laser competitors at super high-power
- Important early-stage IP portfolio
- 150+ people in R&D



IPG's Diode Manufacturing



IPG Has Significant Barriers to Entry in Fiber



Strategy – Growing the Addressable Market



- Continue to displace existing laser and non-laser technologies (plasma, EDM, electron beam, gas welding)
- Target new HP applications for fiber lasers (cutting, drilling, hybrid welding, cladding)
- Target new wavelengths (Mid-IR)
- Expand product portfolio & develop turnkey integrated laser systems business (COSY)
- Optimize manufacturing for higher quality and lower cost
- Continue to expand global reach in emerging markets (BRIC's)
- Manufacture simple, more usable lasers

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Date source: Optech Consulting, Fiber Laser Report 2010

New Product Introduction Fueling Future Growth

Nano-Pulsed Fiber Lasers

>100mj, up to 1KW

535nm Pulsed Green Lasers

Solar, marking, semi, micro-machining

532nm CW SM Green Lasers

- Replace YAG in solar, micro-machining
- Pumping Ti:sapphire in scientific apps

High Power Pulsed Lasers

- 50mj, up to 500W
- LCD display, solar

100W Packaged Diodes

50% WP efficiency

Diode Modules

- Medical and material processing
- 100W 2kW

Long-Pulse High Power Lasers

- Replace lamp pump SSL
- Cr:ZnSe Single Frequency Tunable
 - Medical, sensing

Cladding Lasers

Up to 4KW, replace direct diode lasers

RF over Glass Amplifiers

2-way EDFA FTTH

DWDM EDFAs for CATV

980nm SM, 2W

10kW SM (IPGL)

Military DE applications

2-6 Way Beam Switch Delivery

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In-sourcing cost reduction

Expanding our Global Reach



Application Diversity | Global Customer Base





Winning Market Sales in Materials Processing



Advanced Applications Drive Tomorrow's Products







Applications

- Directed energy
- Obstacle avoidance
- LIDAR
- **Optical pumping**
- Counter-measures
- Sensing and instrumentation

Customers

EADS





Unique Products for Telecom/Medical Markets

Telecom Applications

- Broadband-fiber to the premises
- Broadband-cable video signal transport
- Metro and long-haul DWDM systems

Medical Applications

- Skin rejuvenation and wrinkle removal
- Dental and ophthalmology
- Surgery/Urology





Financial Update

www.ipgphotonics.com

First Quarter Financial Results

- Q1-10 revenues increased 13% year-over-year to \$51.2 million
- Increased gross margin by 520 basis points year-over-year to 40% due to improved margin contribution, manufacturing absorption, sales volume and product mix
- Reported net income of \$3.4 million, or \$0.07 EPS, in Q1-10 compared with net income of \$1.3 million, or \$0.03 EPS, in Q1-09
- Materials processing sales increased 23% on a year-over-year basis; grew 4% sequentially, driven by increased sales of pulsed lasers for marking/engraving and high-power for cutting
- Medical applications market delivered its second-consecutive quarter of 100%+ growth
- Low-power laser sales grew 56% year-over-year on the strength of medical applications and micro materials processing
- During Q1-10, generated \$7.9 million in operating cash flow or 15% OCF margin
- Announced two technology acquisitions: Cosytronic KG and Photonics Innovations, Inc.
- Strong balance sheet with \$84.4 million cash/cash equivalents at March 31, 2010



A Diverse Mix with Year-over-Year Growth



Sales by Product Lines (\$mm and % for Q1 FY 2010 (1))

Product Lines	% change Q1-10 vs. Q1-09	% change Q1-10 vs. Q4-09
Pulsed Lasers	51%	30%
High-Power Lasers	-5%	-15%
Medium-Power Lasers	-24%	-8%
Low-Power Lasers	56%	-14%
Total Revenue	13%	-6%

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(1) For the quarter ended 3/31/10

Please note Other includes: amplifiers, components, diode lasers, accessories and leases

Acceptance Drives High-Power Growth

05-09 Total Units Sold CAGR: 17% 05-09 KW Power Sold CAGR: 42%



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Note: KiloWatt of power sold only represents medium and high-power sales. Units excludes telecom components and component PLDs

Sales and Gross Margin



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(1) Gross margin excludes stock-based compensation of \$0.8mm, \$0.6mm and \$0.2mm for 2002, 2003, 2004, respectively. Gross margin includes stock-based compensation of \$0.0mm, \$0.1mm, \$0.3mm, and \$0.6mm for 2005, 2006, 2007, 2008, and 2009 respectively

Operating Leverage



(1) Operating income excludes stock-based compensation of \$21.7mm, \$2.2mm and \$0.9mm for 2002, 2003 and 2004, respectively, and a contract settlement charge of \$9.5mm in 2002. Operating income includes stock-based compensation of \$0.0mm, \$0.5mm, \$1.3mm, \$2.1mm, and \$2.8mm for 2005, 2006, 2007, 2008, and 2009 respectively.



Balance Sheet Highlights

(\$ in thousands)	As of December 31, 2008	As of December 31, 2009	As of March 31, 2010
Cash and cash equivalents	\$51,283	\$82,920	\$84,407
Total assets	\$313,218	\$312,636	\$315,207
Revolving line-of-credit facilities	\$19,769	\$6,007	\$7,098
Long-term debt, including current portion	\$19,330	\$18,000	\$17,667
Stockholders' equity	\$238,172	\$256,430	\$252,285

- Growing cash flow position
- Continued debt repayments
- Managing the balance sheet through reduced CapEx
- M&A activities are expected to be a small use of cash
- No significant debt maturities within the next 12 months



Implications for the Future

- Fiber displacing other technologies
- Technology leadership
- Economies of scale
- Deeper integration
- Revenue growth
 - New products
 - New customers
 - New applications
 - New geographies
- Proven operating leverage in the model
- Conservative capital structure











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THANK YOU FOR YOUR KIND ATTENTION







Timeline of IPG Growth



Lasers 101 – Function and Applications



- All lasers produce light energy at various wavelengths
 - Light energy is applied for various purposes like welding, cutting, brazing, annealing, cladding or marking materials, removing blemishes from skin, amplifying telecom signals etc.

Light wavelengths are measured in nanometers (or microns which are 1,000 nanometers). Fiber lasers typically operate at **1 micron**, in the infrared spectrum. The visible spectrum is from 400 nanometers to 700 nanometers

- Different materials react better or worse to different wavelengths
 - For example, the 1 micron wavelength is particularly well suited to various types of metals, but not particularly well suited to organic materials such as paper, cloth or wood
- Beyond wavelength, different applications require different levels of power output that is either pulsed or continuous wave ("CW")

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