The statements in this presentation that relate to future plans, market forecasts, events or performance are forward-looking statements. These statements involve risks and uncertainties, including, risks associated with the strength or weakness of the business conditions in industries and geographic markets that IPG serves, particularly the effect of downturns in the markets IPG serves; uncertainties and adverse changes in the general economic conditions of markets; IPG’s ability to penetrate new applications for fiber lasers and increase market share; the rate of acceptance and penetration of IPG’s products; inability to manage risks associated with international customers and operations; foreign currency fluctuations; high levels of fixed costs from IPG’s vertical integration; the appropriateness of IPG’s manufacturing capacity for the level of demand; competitive factors, including declining average selling prices; the effect of acquisitions and investments; inventory write-downs; intellectual property infringement claims and litigation; interruption in supply of key components; manufacturing risks; government regulations and trade sanctions; 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 forward-looking statements that may be made to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.
Making our fiber laser technology the tool of choice in mass production
Key Takeaways

1. Global market leader in fiber laser technology across multiple end markets and applications

2. Vertical integration, manufacturing scale, and technology driving industry-leading margins

3. Expanding multi-billion dollar addressable market opportunity

4. Rapidly growing earnings and cash flow
Dual Secular Growth Strategies

(1) Conversion from Non-Laser to Laser Technologies

Global Machine Tool Consumption in 2017: ~$78B
Laser Systems 18% of Worldwide Machine Tools and Growing

(2) Conversion from Traditional Lasers to Fiber Lasers

Fiber Lasers a Growing Percentage of Annual Demand for High-Power Industrial Laser Sources

Source: Oxford Economics, Optech Consulting and IPG Photonics Corporation

Source: Optech Consulting and IPG Photonics Corporation
### Broadest Portfolio of Fiber Lasers

**Any wavelength, mode of operation, power, beam quality or application**

<table>
<thead>
<tr>
<th>X-Ray</th>
<th>Ultraviolet</th>
<th>Visible</th>
<th>Near-Infrared</th>
<th>Mid-Infrared</th>
<th>Far-IR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak Power (Megawatts)</td>
<td>Throughput</td>
<td>Precision</td>
<td>Peak Power</td>
<td>Applications</td>
<td>Pulse Rate</td>
</tr>
<tr>
<td>10 nm</td>
<td>10 µm</td>
<td>1.5 µm</td>
<td>Diode Lasers</td>
<td>Holmium Lasers</td>
<td>Fe:ZnSe/S Lasers</td>
</tr>
<tr>
<td>X-Ray Lasers</td>
<td>UV Lasers</td>
<td>Ytterbium Lasers</td>
<td>Erbium Lasers</td>
<td>Thulium Lasers</td>
<td>Cr:Zn/Se/S Lasers</td>
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<td>Thulium Lasers</td>
<td>Cr:Zn/Se/S Lasers</td>
</tr>
</tbody>
</table>

**Peak Power (Megawatts):**
- **Continuous Wave**
  - Peak Power: 120kW
  - Applications: cutting, welding, soldering, drilling, brazing
- **Quasi-Continuous Wave**
  - Peak Power: 23kW
  - Applications: cutting, welding, soldering, drilling, brazing, annealing
- **Nanosecond Pulsed**
  - Peak Power: 1.5 µm
  - Pulse Rate: 0.05-50 ms
  - Applications: cutting, welding, soldering, drilling, brazing, annealing
  - Pulse Rate: 1-200 ns
  - Applications: cutting, welding, soldering, drilling, brazing, annealing
  - Pulse Rate: 0.7-5 ns
  - Applications: cutting, welding, soldering, drilling, brazing, annealing
  - Pulse Rate: ~2 ps
  - Applications: cutting, welding, soldering, drilling, brazing, annealing
  - Pulse Rate: <500 fs
  - Applications: cutting, welding, soldering, drilling, brazing, annealing

**Applications:**
- Thick steel cut with a continuous wave laser
- Drilling using a quasi-continuous wave laser
- Surface Cleaning using a pulsed laser
- Micromachining using an ultrafast laser

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Advantages of Our Fiber Lasers

- Monolithic Design
- Highest Power
- Record Power Efficiency
- Beam Quality
- MOPA Configuration
- Reliability
- Modular / Scalable Architecture
- Faster Processing Speed
- Lower Operating Costs
- Easy Systems Integration
- Small Footprint
- Efficient Cooling
Significant Barriers to Entry

Technology:
- IP & Process
- Know-How

Business:
- Vertical Integration & Scale

Continuous Innovation
- >270 Patents
- >420 Pending

Vertically Integrated
- Lowest-Cost Provider

Manufacturing, Distribution & Service Scale
- Thousands of Lasers Shipped Each Quarter
Highest Volume, Lowest Cost Diode Producer

Source: IPG Photonics Corporation

Tested Chips Produced


Tested Chip Production

Cost/Watt Decrease (2009 Base Year)

Source: IPG Photonics Corporation
Global Presence

Oxford & Marlborough, MA, USA
- Wafer fab operation, chip-on-submount assembly, wafer packaging, components and final assembly
- ~2,000 employees

Fryazino, Russia
- Components and final assembly
- ~1,600 employees

Burbach, Germany
- Components and final assembly
- ~1,300 employees

Current Employees:

<table>
<thead>
<tr>
<th>Country</th>
<th>Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>12%</td>
</tr>
<tr>
<td>Germany</td>
<td>8%</td>
</tr>
<tr>
<td>Other Europe</td>
<td>21%</td>
</tr>
<tr>
<td>China</td>
<td>44%</td>
</tr>
<tr>
<td>Other Asia</td>
<td>15%</td>
</tr>
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<td>Other Europe</td>
<td>21%</td>
</tr>
<tr>
<td>China</td>
<td>44%</td>
</tr>
</tbody>
</table>

Sales by Region, 2017:

- China: 44%
- Other Asia: 15%
- Other Europe: 21%
- US: 12%
- Germany: 8%
- Russia: 30%
- Other: 5%

Manufacturing:

- US: 37%
- Germany: 24%
- Other Asia: 15%
- China: 5%
- Other: 5%

Clean Room Percent:

- Oxford & Marlborough, MA, USA: 650,000 sq. ft.
- Fryazino, Russia: 580,000 sq. ft.
- Burbach, Germany: 415,000 sq. ft.

Contractors
- R&D: 6%
- G&A: 6%
- Sales: 4%

Sales:
- R&D: 4%
- G&A: 6%
- Sales: 4%
Total Addressable Market

Estimated $6.5B Market in 2017

New Laser Applications $3.9B

Industrial Lasers $2.6B

Source: Optech Consulting, Strategies Unlimited and IPG Photonics Corporation
Industrial Laser Market

Source: Optech Consulting, Strategies Unlimited and IPG Photonics Corporation
Metal Cutting

Source: Optech Consulting and IPG Photonics Corporation
Metal Joining (Welding & Brazing)

Traditional Welding Equipment, $4.6B

Laser Welding $0.7B

> $5B Annual Demand For Welding Equipment Globally

Source: Optech Consulting, Freedonia Group and IPG Photonics Corporation
New Laser Applications

Source: Strategies Unlimited and IPG Photonics Corporation

The Power to Transform®

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Strong Growth and Industry-Leading Margins

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue ($ Millions)</th>
<th>Operating Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>$563</td>
<td>37%</td>
</tr>
<tr>
<td>2013</td>
<td>$600</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>$650</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>$700</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>$800</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>$1,409</td>
<td>39%</td>
</tr>
</tbody>
</table>
Rapidly Growing Cash Flow

- Free Cash Flow
- Capex

$ Millions

- 2012: $68
- 2013: $107
- 2014: $127
- 2015: $150
- 2016: $278
- 2017: $127

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Return Profile

Return on Equity
Return on Invested Capital, Excluding Cash

2012: 24%
2013: 20%
2014: 20%
2015: 43%
2016: 40%
2017: 19%
## Target Business Model

<table>
<thead>
<tr>
<th>GAAP Metrics</th>
<th>2012-16</th>
<th>2017</th>
<th>2018</th>
<th>Long-Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue Growth</td>
<td>16% CAGR</td>
<td>40%</td>
<td>10%-15%</td>
<td>Market Growth</td>
</tr>
<tr>
<td>Gross Margin</td>
<td>54% Average</td>
<td>57%</td>
<td>50%-55%</td>
<td>50%-55%</td>
</tr>
<tr>
<td>Operating Margin</td>
<td>36% Average</td>
<td>39%</td>
<td>32%-37%</td>
<td>32%-37%</td>
</tr>
</tbody>
</table>
Thank You