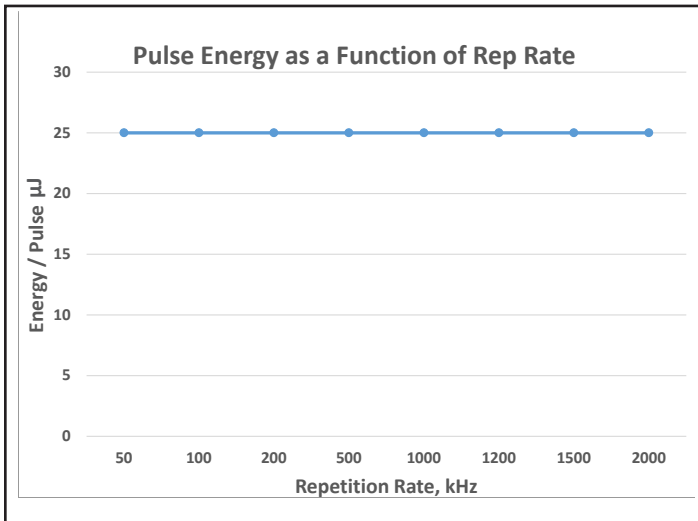




YLPP-25-1-50-R

Ytterbium Picosecond Fiber Laser



50 W, 1-5 ps



Applications

- ▶ Precision Micromachining
- ▶ Black Marking of Stainless Steel or Aluminum
- ▶ Surface Microstructuring and Texturing
- ▶ Multilayer Polymer Film Cutting
- ▶ Sattery and Thin Metal Foil Cutting
- ▶ Sapphire LED Wafer Scribing
- ▶ Thin Film Ablation for Solar/PV/ Flat Panel Display
- ▶ Cutting & Drilling Glass/Sapphire
- ▶ Precise Marking of Metals/Polymers/Glass
- ▶ Micromachining of Ceramics



Features

- ▶ Ultra-compact, 1.5 kg Laser Head
- ▶ Broad Frequency of Operation 50 kHz – 2 MHz
- ▶ Pulse Duration Options 1-5 ps
- ▶ Pulse Energy 25 μ J
- ▶ Warm Start in Seconds
- ▶ Power up to 50 W, 25 MW Peak
- ▶ Cold Start in Seconds
- ▶ Integrated Delivery Fiber to Remote Head
- ▶ Integrated Scanner Option Available

IPG Photonics **NEW YLPP-25-1-50-R** ultrashort pulse fiber laser provides pulses with 25 μ J pulse energy with scalable average output power of 50 W and customer selected pulse durations in the range of 1 to 5 ps at full operational repetition rate range of 50-2000 kHz. Our monolithic-all-spliced-fiber design is “beyond state-of-the-art,” enabling an incredibly compact laser that is inherently more power efficient, reliable and robust than conventional bulk-rod or disk based DPSS USP lasers yet priced significantly lower than the industries legacy products. The novel design architecture together with our flexible control electronics provides conveniently short warm-up times and allows adjustment of both pulse energy and repetition rate without affecting the output beam parameters. Laser pulses with durations of just a few picoseconds create peak intensities so high that non-linear/multiphoton absorption takes place, resulting in an ultra-precise “cold” process with very small heat affect.

YLPP-25-1-50-R

Ytterbium Picosecond Fiber Laser

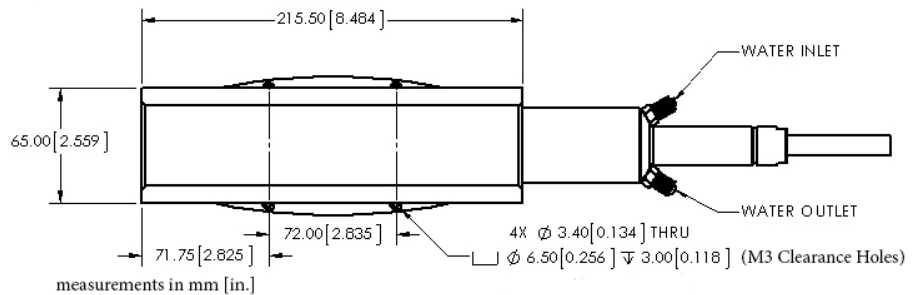
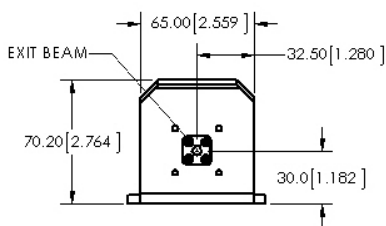
Optical Characteristics*

Wavelength, nm	1030
Mode of Operation	Pulsed
Average Power, W	50
Pulse Energy, μ J	25
Pulse Duration*, ps	1-5
Peak Power, MW	up to 25
Repetition Rate, kHz	50-2000
Beam Quality, M^2	<1.4 (1.2 Typ.)

*Customer can select models within specified maximum power, maximum pulse energy and pulse durations in 1 to 5 ps range. Shorter pulsed durations and higher pulse energies are available upon request.

General Characteristics

Control Unit Dimensions (W x D x H), mm	448 x 580 x 132
Optical Head Dimensions (W x D x H), mm	65 x 216 x 70
Cooling	Water
Supply Voltage, VAC	100-240, 50/60 Hz
Power Consumption, W	<300



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MAX. AVERAGE OUTPUT POWER: 100 W
 MAX. PEAK OUTPUT POWER: 50 MW
 PULSE DURATION: 1-5 ps
 PULSE REPETITION RATE: 50-2,000 kHz
 WAVELENGTH RANGE: 900-1200 nm

DANGER - INVISIBLE LASER RADIATION AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION CLASS 4 LASER PRODUCT
 IEC 60825-1:2014

The Power to Transform®