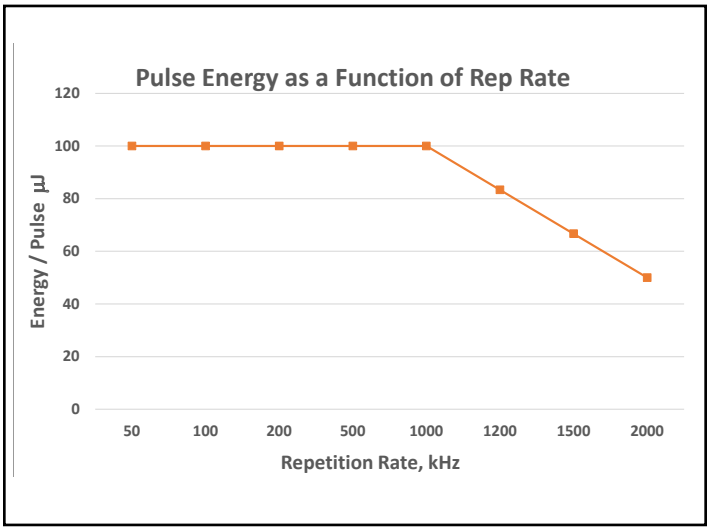
YLPP-100-3-100-R

Ytterbium Picosecond Fiber Laser

NEW PRODUCT



100 W, <3 ps

Applications

- Precision Micromachining
- Surface Microstructuring and Texturing
- Multilayer Polymer Film Cutting
- Battery and Thin Metal Foil Cutting
- Sapphire LED Wafer Scribing
- Thin Film Ablation for Solar/ PV/Flat Panel Display
- Cutting & Drilling Glass/ Sapphire
- Micromachining of Ceramics

Features

- Ultra-compact Head
- Broad Frequency of Operation 50 kHz – 2 MHz
- Pulsewidth <3 ps Typically ~2 ps
- Pulse Energy up to 100 µJ
- Warm Start in Seconds
- Power 100 W Average, 100 MW Peak
- Cold Start in Seconds
- Integrated Delivery Fiber to Remote Head
- Integrated Scanner Option Available

IPG's NEW YLPP-100-3-100-R Ultra Short Pulse fiber laser produces sub 3 ps pulses with 100 µJ pulse energy delivered across its entire operational frequency range from 50 kHz to 2 MHz, producing up to 100 W of average power and extremely high peak powers up to 100 MW. Our 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.

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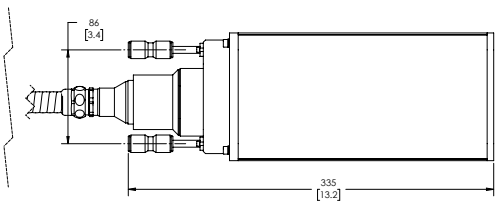
Ytterbium Picosecond Fiber Laser

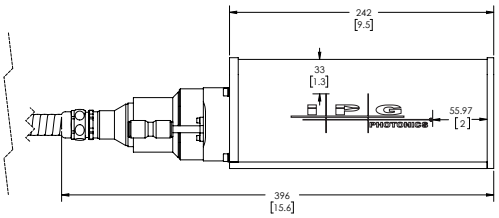
Optical Characteristics

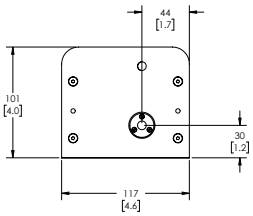
Wavelength, nm	1030
Mode of Operation	Pulsed
Average Power, W	100
Pulse Energy, µJ	100
Pulse Duration, ps	1-3 (2 Typ.)
Peak Power, MW	up to 100
Repetition Rate, kHz	50-2000
Beam Quality, M^2	<1.5 (1.3 Typ.)

General Characteristics

Control Unit Dimensions (W × D × H), mm	448 × 580 × 132
Optical Head Dimensions (W × D × H), mm	117 × 242 × 101
Cooling	Water
Supply Voltage, Single-phase 50-60 Hz, VAC	100-240
Power Consumption, W	<750







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MAX. AVERAGE OUTPUT POWER: 200 W
MAX. PEAK OUTPUT POWER: 200 MW
PULSE DURATION: 1-3 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®