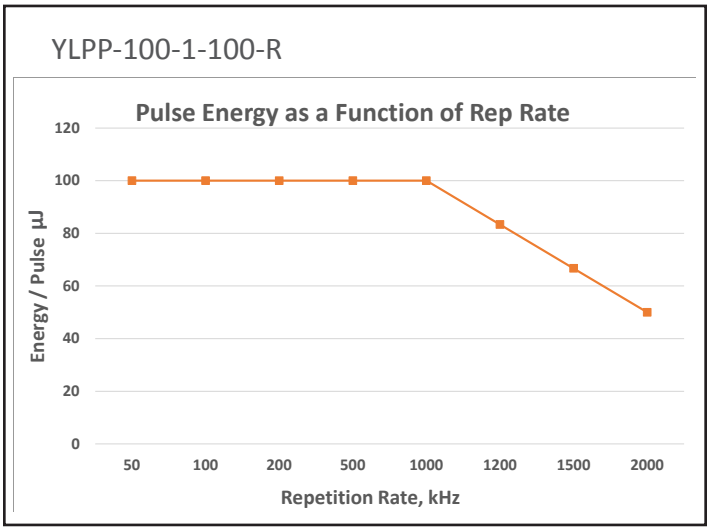
YLPP-100-1-100-R

Ytterbium Picosecond Hybrid Laser

NEW PRODUCT



Up to 100 W, 1-5 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
- Pulse Duration Options 1-5 ps
- Pulse Energy up to 100 µJ
- Warm Start in Seconds
- Up to 100 W Average Power
- Cold Start in Seconds
- Integrated Delivery Fiber to Remote Head

IPG Photonics **NEW YLPP-100-1-100-R** ultrashort pulse hybrid-fiber laser provides pulses with 100 µJ pulse energy with scalable average output power of 100 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 fiber design is “beyond state-of-the-art,” enabling an incredibly compact laser head 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-100-1-100-R

Ytterbium Picosecond Fiber Lasers

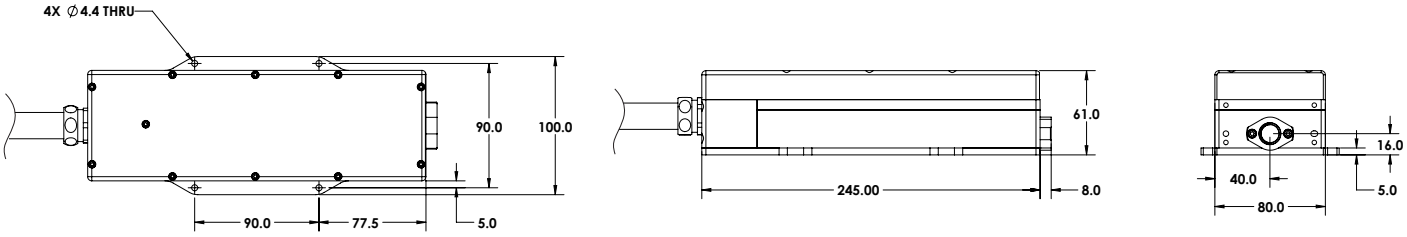
Optical Characteristics*

Wavelength, nm	1030
Mode of Operation	Pulsed
Average Power, W	100
Pulse Energy, µJ	100
Pulse Duration*, ps	1-5
Peak Power, MW	up to 100
Repetition Rate, kHz	50-2000
Beam Quality, M^2	<1.5 (1.3 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 × D × H), mm	448 × 580 × 132
Optical Head Dimensions (W × D × H), mm	80 × 245 × 61
Cooling	Water
Supply Voltage, VAC	100-240, 50/60 Hz
Power Consumption, W	<750



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MAX. AVERAGE OUTPUT POWER: 200 W
MAX. PEAK OUTPUT POWER: 200 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®