YLPN 0.2-10 mJ, 100-500 W

High Power Pulsed Lasers for Micromachining

FEATURES

- Pulse Duration 30 ns-1.5 µs
- Average Power 100-500 W
- Pulse Energy up to 10 mJ
- Repetition Rate up to 8 MHz
- Optical Power Monitor
- Typical Wall-Plug Efficiency 30%
- Extended Electrical Interfaces
- Solid State Safety Electronics
- Extended Laser Monitoring and Diagnostics
- Solid State Safety - Unlimited Number of Power on Cycles
- Water-cooling
- Industrial Field Bus Interfaces Option

APPLICATIONS

- Deep Engraving
- Foil Cutting
- Ablation
- Cleaning
- Surface Treatment
- Paint Removal
- Spot Welding

IPG Photonics offers **high power YLPN nanosecond pulsed ytterbium fiber lasers** with pulse energy up to 10 mJ and pulse duration from 30 ns to 1.5 µs. The excellnt beam mode quality makes these lasers ideal for micromachining applications such as high speed cutting, scribing, drilling and engraving. The high output power maximizes the throughput. The average output powers vary from 100 to 500 W and the repetition rates vary from 2 kHz to 8 MHz. Powerful user friendly software interface and full laser control/monitoring/diagnostics enable operation of multiple lasers in a network. These highly efficient water-cooled fiber lasers are packaged in compact rugged in 4U 19" rack-mounted units.

Control Interfaces:

- Optically linked remote controller
- Ethernet, RS232, Parallel I/O (for scan controllers), Fieldbus, Auxillary; Modulation, PRR IN, PRR OUT, Analog IN

New Powerful User Friendly Software Interface:

- Full laser control/monitoring/diagnostics
- Can be used to operate multiple lasers in a network
- Individual interface assignment for every laser control signal

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Optical Characteristics	100 Watt Series	200 Watt Series	300 Watt Series	500 Watt Series
Wavelength, nm	1064 ±2			
Mode of Operation	Pulsed			
Average Power, W	100	200	300	500
Pulse Energy, mJ	0.2-5	0.2-10		0.25-2
Pulse Duration, ns	30-1500		30-400	30-240
Repetition Rate Range, kHz	2-2000		3-2000	25-8000
Beam Quality, M^2	1.5 up to 1 mJ 1.5 or 3 @ 2 mJ 3 @ 5 mJ	1.5 up to 1 mJ 1.5 or 3 @ 2 mJ 3 @ 5 mJ 9 or 12 @ 10 mJ		~1.5

Optical Characteristics				
Console Dimensions (W × D × H), mm	449 × 678 × 177			
Optical Head Dimensions (W × D × H), mm	Ø × Length, 48 × 370 or Ø × Length, 67 × 317			48 × 62 × 370 or × 383
Weight, kg	~ 41			~ 45
Cooling	Water			
Supply Voltage, VAC	90-240		220-240	
Power Consumption, W	<450	<800	<1200	<2000

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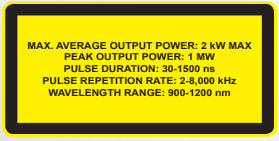

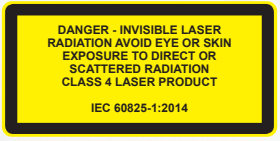

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