



# YLPN 1-10 mJ, 100-300 W

## Nanosecond Rack-mount Fiber Lasers

NEW PRODUCT



### Features

- ▶ 1-10 mJ Pulse Energy
- ▶ 100-300 W Average Power
- ▶ 2-2000 kHz Repetition Rate
- ▶ 30 ns-1.5  $\mu$ s Pulse Duration
- ▶ Fixed or Variable Pulse Durations
- ▶ CW Mode of Operation Option
- ▶ Single Pulse/Burst Mode
- ▶ Water-cooling
- ▶ Typical Wall-plug Efficiency 30%
- ▶ Optical Power Monitor
- ▶ Extended Electrical Interfaces
- ▶ Solid State Safety Electronics
- ▶ Extended Laser Monitoring and Diagnostics
- ▶ Industrial Field Bus Interfaces Option
- ▶ Solid State Safety – Unlimited Number of Power on Cycles



### Applications

- ▶ Deep Engraving
- ▶ Foil Cutting
- ▶ Ablation
- ▶ Cleaning
- ▶ Surface Treatment

**IPG Photonics offers YLPN Pulsed Ytterbium Fiber Lasers in 100-300 Watt** output power range with pulse energy up to 10 mJ and pulse duration from 30 ns to 1.5  $\mu$ s. These powerful high-brightness models are optimized for high throughput micromachining applications such as foil cutting, ablation, drilling, and are also used for deep engraving, marking and surface treatment applications. Repetition rates vary from 2 to 2000 kHz. These highly efficient water-cooled fiber lasers are packaged in compact rugged in 4 RU 19" rack-mounted units and feature extended interfaces and powerful user friendly control software. Coming soon is new 6RU platform with output powers up to 1 kW (1mJ-100mJ).

#### 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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## Nanosecond Rack-mount Fiber Lasers

Optical Characteristics	100 Watt Series	200 Watt Series	300 Watt Series
Wavelength, nm	1064 ±2		
Mode of Operation	Pulsed		
Average Power, W	100	200	300
Pulse Energy, mJ	0.2-5	0.2-10	0.2-1
Pulse Duration, ns	30-1500	30-1500	30-240
Repetition Rate Range, kHz	20-2000	2-2000	30-2000

General Characteristics			
Console Dimensions (W × D × H), mm	449 × 678 × 177		
Optical Head Dimensions (W × D × H), mm	Ø × Length, 67 × 317		
Weight, kg	~ 42		
Cooling	Water		
Supply Voltage, VAC	90-240		220-240
Power Consumption, W	<450	<800	<1200

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MAX. AVERAGE OUTPUT POWER: 600 W  
 MAX. PEAK OUTPUT POWER: 600 kW  
 PULSE DURATION: 30-1500 ns  
 PULSE REPETITION RATE: 2-2,000 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®**