

YLPF/YLPP up to 50 W

Ultrafast Fiber Lasers

Ultra-compact
All-fiber Head



FEATURES

- ▶ Wavelength 1030 nm
- ▶ Output Power up to 50 W
- ▶ Pulse Duration 200 fs – 3 ps
- ▶ Pulse Energy up to 40 μ J
- ▶ Repetition Rate up to 5.5 MHz
- ▶ Burst Mode Option
- ▶ Up to 2 m Remote Head Delivery Fiber
- ▶ Easy Integration
- ▶ Ultra-compact Lightweight Head
- ▶ Integrated Scanner Option
- ▶ Cold and Warm Start in Minutes
- ▶ Low Maintenance



APPLICATIONS

- ▶ Precision Micromachining
- ▶ Medical Device Manufacturing
- ▶ Solar Cell Structuring
- ▶ Photomask Cutting
- ▶ Specialty Marking
- ▶ Microdrilling
- ▶ Thin Metal Scribing
- ▶ Thin Film Ablation
- ▶ Life Sciences
- ▶ Ophthalmology



These **IPG YLPF/YLPP** ultrafast fiber lasers feature all-fiber ultra compact head convenient for easy integration into customer applications and OEM machinery. These lasers provide pulses with up to 40 μ J pulse energy with scalable average output power up to 50 W and pulse durations in the range of 200 fs to 3 ps in 50-5500 kHz repetition rate range. The all-fiber format allows for the adjustment of peak power and/or pulse repetition rate without affecting any of the output beam parameters. IPG novel fiber lasers are much more efficient and compact than conventional lasers now on the market and are ideal for applications in precision micromachining. The excellent beam quality, ultrashort pulse duration and high pulse energy combine to provide peak power densities for micromachining metal, glass, ceramic, silicon or plastic.

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Optical Characteristics*	YLPF-20-250-10	YLPF-40-350-20	YLPP-25-3-50	YLPP-50-1-50**
Wavelength, nm	1030			
Max. Average Power, W	10	20	50	
Pulse Energy, μ J	20	40	25	50
Pulse Duration, ps	0.25	0.35	3	1
Repetition Rate, kHz	50-5500			
Beam Quality, M^2	<1.4 (1.2 typ.)			

* This table introduces typical models. Models with custom specifications are available on request.

** The YLPP-50-1-50 model has larger 160x330x100 mm optical head and delivery cable up to 5 m.

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 370 x 70
Cooling	Water
Supply Voltage, VAC	Single-phase 50-60 Hz 100-240
Optical Head Weight, kg	2.2
Power Consumption, W	<500

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MAX. CONTINUOUS OUTPUT POWER: 100 W
 PEAK OUTPUT POWER: 150 MW
 PULSE DURATION: 200-5 ps
 PULSE REPETITION RATE: 5-5500 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

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