

# YLPF-10-500-10-R

## Ytterbium Femtosecond Fiber Laser

500 fs Fiber Laser

NEW PRODUCT



### Applications

- ▶ Life Sciences
- ▶ Ophthalmology
- ▶ Medical Device Manufacturing
- ▶ Microdrilling
- ▶ Fine Tube Cutting
- ▶ Thin-film Ablation
- ▶ LED Dicing
- ▶ Solar Cell Structuring
- ▶ Photomask Cutting and Repairing
- ▶ Specialty Marking



### Features

- ▶ Wavelength 1030 nm
- ▶ Pulse Energy up to 10  $\mu$ J
- ▶ High Peak Power up to 20 MW
- ▶ Output Power >10 W
- ▶ Pulse Duration 400-600 fs
- ▶ Repetition Rate up to 1 MHz
- ▶ Low-maintenance
- ▶ Rugged Design

**IPG Photonics' NEW YLPF Series** femtosecond fiber lasers provide high peak power with scalable average output power of 10 W, short pulse duration of 500 fs at full operational repetition rate range of 20-1000 kHz. 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's novel fiber laser is much more efficient and compact than conventional lasers now on the market. It is ideal for applications in ophthalmology, life sciences and precision micromachining.

The excellent beam quality, ultrashort pulse duration and high pulse energy combine to provide peak power densities suitable for micromachining virtually any material: metal, glass, ceramic, silicon, plastics. The ultrashort pulse duration results in a very small heat affected zone. Higher output powers are planned.

# YLPF-10-500-10-R\*

## Ytterbium Femtosecond Fiber Laser

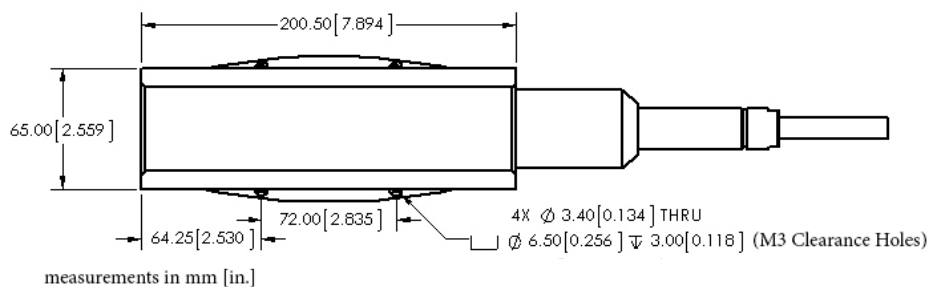
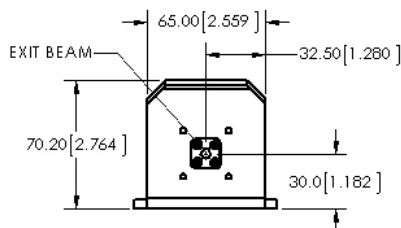
### Optical Characteristics

Wavelength, nm	1030
Average Power, W	10
Pulse Energy, $\mu\text{J}$	10
Pulse Duration, fs	400-600
Peak Power, MW	up to 20
Repetition Rate, kHz	20-1000
Beam Quality, $M^2$	<1.4

### General Characteristics

Control Unit Dimensions, mm	448 x 431 x 132
Optical Head Dimensions, mm	65 x 201 x 70
Cooling	Air-cooled
Supply Voltage, VAC	100-240, 50/60 Hz
Power Consumption, W	50

\*Preliminary Specifications



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MAX. CONTINUOUS OUTPUT POWER:	15 W
MAX. PEAK OUTPUT POWER:	150 MW
PULSE DURATION:	400 - 600 fs
PULSE REPETITION RATE:	20 - 3000 kHz
WAVELENGTH RANGE:	1000 - 1200 nm
VISIBLE AND/OR INVISIBLE LASER RADIATION	
AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION	
CLASS 4 LASER PRODUCT	
Per IEC 60825-1:2007 - 21 CFR 1040.10 (g)	