

# ULPF/ULPP-343

## Ultraviolet Ultrafast Fiber Lasers

Compact  
Lightweight Head



### FEATURES

- ▶ Wavelength 343 nm
- ▶ Output Power up to 50 W
- ▶ Pulse Duration 600 fs – 3 ps
- ▶ Pulse Energy up to 50  $\mu$ J\*
- ▶ Repetition Rate up to 2 MHz
- ▶ Up to 4 m Remote Head Delivery Fiber
- ▶ Easy Integration
- ▶ Ultra-compact Lightweight Head
- ▶ Integrated Scanner Option
- ▶ Cold and Warm Start in Seconds
- ▶ Low Maintenance

\*150  $\mu$ J in development



### APPLICATIONS

- ▶ Precision Micromachining
- ▶ Medical Device Manufacturing
- ▶ Solar Cell Structuring
- ▶ Photomask Cutting
- ▶ LED Dicing
- ▶ Specialty Marking
- ▶ Thin Film Ablation
- ▶ Microdrilling
- ▶ Fine Tube Cutting
- ▶ Glass, Silicon, Ceramics, Polymer and Composite Material Processing



**ULPF** and **ULPP** green ultrashort lasers provide high peak power with scalable average output power up to 50 W and customer selected pulse durations in the range of 600 fs to 3 ps in 50-2000 kHz repetition rate range. IPG novel fiber lasers are much more efficient, compact and easy to integrate into OEM equipment than conventional lasers now on the market.

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. Models can be designed within specified maximum power, maximum pulse energy and pulse durations in 600 fs to 5 ps range. Burst mode option, shorter pulse durations and higher pulse energies are available upon request.

# ULPF/ULPP-343

## Ultraviolet Ultrafast Fiber Lasers

Optical Characteristics*	ULPF-50-750-30	ULPP-50-1-30	ULPF-150-750-20	ULPP-150-1-20
Wavelength, nm	343			
Max. Average Power, W	30		20	
Pulse Energy, $\mu$ J	50		150**	
Pulse Duration, ps	0.75	1	0.75	1
Repetition Rate, kHz	50-2000			
Beam Quality, $M^2$	<1.3 (1.2 typ.)			

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

\*\* Preliminary specifications

### General Characteristics

Control Unit Dimensions (W x D x H), mm	448 x 580 x 133
Optical Head Dimensions (W x D x H), mm	160 x 337 x 100
Cooling	Water
Supply Voltage, VAC	Single-phase 50-60 Hz 100-240
Optical Head Weight, kg	5.5
Power Consumption, W	<1200



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MAX. AVERAGE OUTPUT POWER: 60 W  
 MAX. PEAK OUTPUT POWER: 80 MW  
 PULSE DURATION: 600 fs - 5 ps  
 PULSE REPETITION RATE: 50-2000 kHz  
 WAVELENGTH RANGE: 330-1200 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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