



YLM-QCW-MM Series

Multi-mode Quasi-CW Fiber Lasers

NEW PRODUCT

Up to 6 kW Peak Power



Applications

- ▶ Replacement for Lamp-pumped Lasers
- ▶ Spot Welding
- ▶ Seam Welding
- ▶ Microwelding
- ▶ Drilling
- ▶ Cutting
- ▶ Batteries
- ▶ Medical Devices
- ▶ Computer Components



Features

- ▶ Outstanding Pulse Power/ Energy Stability
- ▶ >30% Wall-plug Efficiency
- ▶ CW and Pulsed Modes
- ▶ Beam Quality Optimized for Applications
- ▶ Internal Pulse Generator and Pulse Shaping
- ▶ Low Cost High Peak Power

IPG has expanded its quasi continuous wave (QCW) fiber laser series which includes models with average power up to 600 W and peak power up to 6 kW. The new modules are more powerful and feature compact size and lower price per Watt. Short modulation time and temporal pulse shaping enable improved control and quality in micromachining applications. The QCW fiber lasers are ideal for spot welding, drilling and cutting in the long pulse operation mode. These compact units are substantially more cost-effective than conventional YAG lasers due to >30% wall-plug efficiency and maintenance-free operation. The QCW fiber lasers are available for requalifying existing lamp-pumped processes. Retrofit services, including engineers familiar with system integration, are available to help customers replace older production lasers with energy-efficient fiber lasers from IPG.

YLM-QCW-MM Series

Multi-mode Quasi-CW Fiber Lasers

Optical Characteristics	YLM-150/1500-QCW	YLM-300/3000-QCW	YLM-450/4500-QCW	YLM-600/6000-QCW
Wavelength, nm	1070 ±5			
Mode of Operation	Pulsed/CW			
Modulation Frequency, kHz	0-50			
Max. Average Power, W	600			
Max. Peak Power, W	6000			
Max. Pulse Energy, J	60			
Pulse Duration*, ms	0.05-50			
Power Tunability, %	10-100			
Power Stability**, %	±0.5			
Output Fiber Core Diameter, μm	50, 100, 200			
Beam Parameter Product, mm × mrad	2.5, 5, 10			

* The minimum pulse duration is 10 microseconds upon request

** Over 4 hours, T=const

General Characteristics		
Dimensions (W × D × H), mm	416 × 566 × 148	411 × 509 × 85
Weight, kg	<35	
Cooling	Air-cooled	Water-cooled
Supply Voltage, VDC	48	
Power Consumption, W	<2100	

+1 (508) 373-1100; sales.us@ipgphotonics.com
 +49 2736 44200; sales.europe@ipgphotonics.com (European Inquiries)

www.ipgphotonics.com

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MAX. AVERAGE OUTPUT POWER: 1200 W
 MAX. PEAK OUTPUT POWER: 12 kW
 PULSE DURATION: 0.01-100 ms
 PULSE REPETITION RATE: 0-50 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®