

YLR QCW

Quasi-CW Ytterbium Lasers



FEATURES

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



APPLICATIONS

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

IPG's quasi continuous wave (QCW) fiber lasers are available for requalifying existing lamp-pumped processes at IPG's application facilities and applications labs. QCW fiber lasers are ideal for spot welding, seam welding & drilling in the long pulse operation mode. These air-cooled, compact units are substantially more cost-effective than conventional YAG lasers due to >30% wall-plug efficiencies and maintenance-free operation. Retrofit services, including engineers familiar with system integration, are available to help customers replace older production lasers with energy-efficient fiber lasers from IPG. The QCW Series features 19" rack mounted units and highly cost-effective OEM modules.

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Optical Characteristics	150/1500-QCW	300/3000-QCW	450/4500-QCW
Wavelength, nm	1070 ±5		
Mode of Operation	Pulsed / CW		
Modulation Frequency, kHz	0 - 50		
Maximum Average Power, W	150	300	450
Maximum Peak Power, W	1500	3000	4500
Maximum Pulse Energy, J	15	30	45
Pulse Duration*, ms		0.05 - 50	
Power Tunability, %	10 - 100		
Power Stability**, %	±0.5		
Beam Quality, M ²	1.05	N/A	
Output Fiber Core Diameter, μm	50, 100 and 200		
Beam Parameter Product, mm × rad	2, 5, 10		

*The minimum pulse duration is 10 microseconds upon request. Please contact your IPG Representative.

** Over 4 hours, T=const

*** Single-mode model is available at 1.5 kW peak power

General Characteristics	150/1500-QCW	300/3000-QCW	450/4500-QCW	
			AC	WC
Dimensions (W × D × H), mm	448 × 502 × 177	448 × 502 × 177	448 × 502 × 177	448 × 502 × 177
Weight, kg	30	50	55	
Cooling	Air	Air	Water	
Supply Voltage, single-phase, VAC	100 - 240, 50 - 60 Hz			
Wall-plug Efficiency, %	>30			

*Water cooling is available upon request.



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