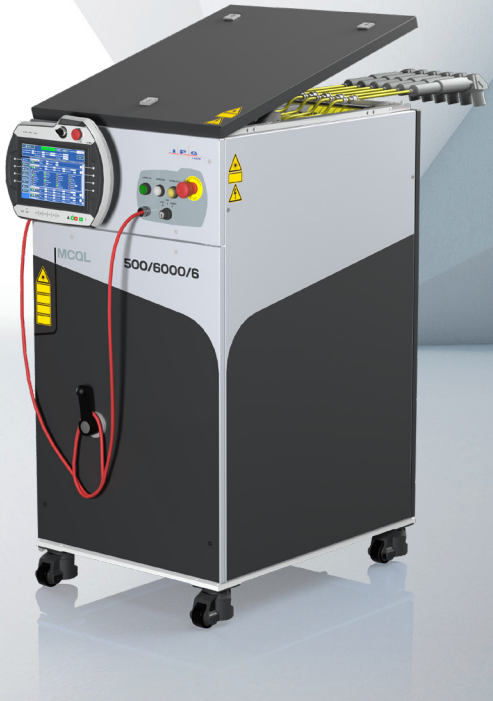
MCQL SERIES

Multi-Channel Quasi-CW Lasers

2 to 6 Output Channels

NEW



FEATURES

- From 2 to 6 Optical Output Channels
- Average Output Power per Channel up to 500 W
- Individually Programmable Optical Outputs
- Peak Output Power per Channel up to 6 kW
- Flexible Fiber Delivery
- Maximum Pulse Energy per Channel 60 J
- No Beam Switches or Mirror Adjustments
- Maximum Pulse Repetition Rate 10 kHz
- Adjustable Focal Spot Size
- Maintenance-free
- Small Footprint
- Energy Efficient

APPLICATIONS

- High Speed Spot Welding
- Welding Stamped Parts and Electrical Connectors
- Welding Steel, CuNiSi Alloys, Aluminum, Copper and Dissimilar Metals

MCQL lasers feature from 2 to 6 individually programmable flexible fiber delivered optical outputs. These QCW fiber lasers provide peak powers up to 6 kW, pulse energies up to 60 J and average powers up to 500 W per channel. High-quality processing across a variety of metals - steel, CuNiSi alloys, aluminum, copper and dissimilar metals - MCQL lasers are an ideal replacement for lamp-pumped lasers in pulsed welding applications such as welding stamped parts and electrical connectors.

With high beam quality, small spot sizes and low heat input resulting in better welding quality, MCQL lasers are an order of magnitude more productive, energy efficient, virtually maintenance-free, and have a much smaller footprint than legacy lasers.

MCQL SERIES

Multi-Channel Quasi-CW Lasers

Optical Characteristics*	MCQL-450/4500/x	MCQL-500/6000/x
Number of Optical Outputs	2,3,4,6	
Wavelength, nm	1070	
Mode of Operation	Pulsed	
Pulse Repetition Rate, Hz	up to 10000	
Pulse Duration*, ms	0.05-50	
Max. Peak Power per Channel, W	4500	6000
Max. Average Power per Channel, W	450	500
Max. Pulse Energy per Channel, J	45	60
Power Stability over 4 hrs, %	<±3, ±1 typ.	
Plug & Play Process Fiber Diameter, µm	200, 300, 400, 600	

General Characteristics	MCQL-450/4500/x	MCQL-500/6000/x
Cabinet Dimensions (W × D × H)*, mm	630 × 815 × 1150	
Weight, kg	2-channel 3-channel 4-channel 6-channel	230 265 300 370
Cooling	Water	
Supply Voltage, VAC	400-480, 50/60 Hz	

* Nominal cabinet dimension not accounting for external parts

+1 (508) 373-1100;
IPGPhotonics.com/contact
www.ipgphotonics.com

2.7 R1 11/23