



YLR-U Series

Super Grade Mid Power 1 μm Lasers

NEW PRODUCT

High Peak Power Option for Increased Process Speed, Quality, Repeatability and Waste Reduction

Fast Clean Piercing and Drilling, Precision Cutting and Welding of Highly Reflective Metals



Applications

- ▶ 2D & 3D Metal Cutting, Welding and Drilling
- ▶ High Peak Power Precision Cutting
- ▶ Conduction and Keyhole Welding
- ▶ Various Steels, Al, Cu, Ti Alloys, and Other Metals
- ▶ High Peak Power Through and Blind Hole Drilling
- ▶ Pulsed Welding of Highly Reflective Materials



Features

- ▶ Average Power up to 2 kW*
 - ▶ High Peak Power QCW Option
 - ▶ Exceptional Operation in High Humidity Environment
 - ▶ Built-in Diagnostics with Web Connectivity
 - ▶ Record Wall-plug Efficiency >40 %
 - ▶ Extremely Small Size and Low Weight
- * Power up to 4 kW available soon

YLR-U Series are the smallest kW-class CW ytterbium fiber lasers in the industry that offer unmatched performance in record-breaking, ultra-compact form factors with the highest power to volume ratios. The new generation of IPG flagship YLR fiber lasers takes their legendary performance to a whole new level. The unrivaled combination of high CW power, exclusive High Peak Power option, ideal beam quality, unsurpassed reliability and industry-leading wall-plug efficiency delivers the best value on the market.

YLR-U lasers are ideal for a wide range of metal cutting, welding and drilling applications. The High Peak Power Option enables fast clean repeatable piercing and drilling in thicker materials, precision quality cutting, additional pulsed welding capabilities, and cutting and welding of highly reflective metals. YLR-U lasers improved piercing quality enables shorter lead-ins with denser part nesting that reduces overall material waste. Available exclusively from IPG, the High Peak Power Option provides improved process quality and speed, increased overall throughput, while saving material, time and operating costs.

YLR-U Series incorporates the latest advancements in IPG world-leading industrial pump diode packaging technology and are the only hermetically sealed mid-power lasers on the market that can operate in extremely high humidity environments up to 90% relative humidity. Remote control options include Analog, RS-232 or Ethernet, and built-in self-diagnostics with internet connectivity. The user-friendly rack mount configuration is the most cost effective and adaptable solution for integration into Industry 4.0, Smart Manufacturing production lines.

UNMATCHED PERFORMANCE IN ULTRA-COMPACT PACKAGING

■ The Power to Transform®

YLR-U Series

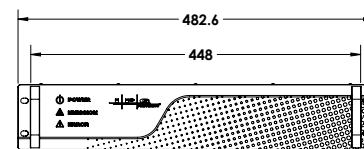
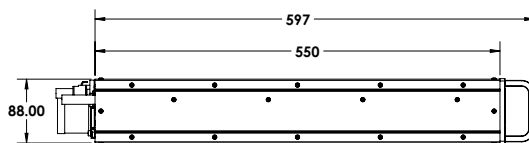
The World's Smallest kW-class Fiber Lasers

Optical Characteristics	YLR-1000-U	YLR-1500-U	YLR-2000-U
Central Wavelength Range, nm	1070 ±10		
Mode of Operation	CW/Modulated, Pulsed QCW Option		
Modulation Frequency, kHz	Up to 50		
Max. Average Power CW Mode*, W	1000	1500	2000
Max. Peak Power in Pulsed Mode, W	1600	2500	3300
Duty Cycle in Pulsed Mode, %	Up to 20		
Max Average Power in Peak Mode, W	400	600	800
Power Tunability, %	10-100		
Power Stability, %	±0.5		
Output Fiber Core Diameter, µm	50, 100 and 200		
Beam Parameter Product, mm × mrad	2, 5, 10		

* Output Power 3 and 4 kW available soon

General Characteristics			
Dimensions, WxDxH, mm	448x550x88		448x760x88
Weight, kg	<30		<40
Cooling	Water		
Supply Voltage, VAC	Single-phase 50/60 Hz, 200-240		
Power Consumption, W	2500	3700	5000
Operating Humidity Range, %	10 to 90		
Operating Temperature Range, °C	10 to 50		

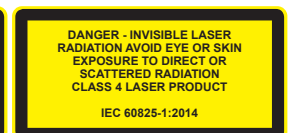
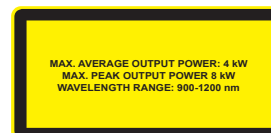
YLR-U lasers are CE certified. Standard YLR-U lasers terminate to an HLC-8 connector. IPG manufactures a complete line of optical beam delivery components including delivery fiber and optics, collimators, beam couplers, switches and sharers, and processing heads and scanners, as well as process control and tooling solutions. Interchangeable collimators and processing heads connect easily to the HLC-8.



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

www.ipgphotonics.com

Legal notices: All product information is believed to be accurate and is subject to change without notice. Information contained herein shall legally bind IPG only if it is specifically incorporated into the terms and conditions of a sales agreement. Some specific combinations of options may not be available. The user assumes all risks and liability whatsoever in connection with use of a product or its application. IPG, IPG Photonics, The Power to Transform and IPG Photonics' logo are trademarks of IPG Photonics Corporation. © 2020 IPG Photonics Corporation. All rights reserved.



The Power to Transform®