

# YLR-U2

## Ultra-Compact & Ultra-Reliable

The Ultimate Performance  
The Highest Return  
on Investment



The new generation of IPG flagship YLR fiber lasers takes their famous performance to a whole new level. The unrivaled combination of high power, ideal beam quality, unsurpassed reliability and industry-leading wall-plug efficiency delivers the best value on the market. YLR-U2 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 interface options include 5 and 24 Volt Analog, RS-232 or Ethernet, field bus, 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. YLR-U2 lasers are ideal for a wide range of metal cutting and welding applications.



### FEATURES

- ▶ Average Power up to 8 kW
- ▶ Single-mode Option up to 3 kW
- ▶ Exceptional Operation in High Humidity
- ▶ Built-in Diagnostics with Web Connectivity
- ▶ 5 and 24 Volt Control Interfaces
- ▶ Field Bus Option
- ▶ Energy Efficiency 40 %
- ▶ Extremely Small Size and Low Weight



### APPLICATIONS

- ▶ 2D & 3D Metal Cutting and Welding
- ▶ High Speed Cutting
- ▶ Conduction and Keyhole Welding
- ▶ Various Steels, Al, Cu, Ti Alloys, and Other Metals
- ▶ Conduction and Keyhole Welding

# YLR-U2

## Ultra-Compact & Ultra-Reliable

Optical Characteristics	
Central Wavelength Range, nm	1070 ±10
Mode of Operation	CW/Modulated
Modulation Frequency, kHz	Up to 50
Max. Average Power Mode, kW	1.0, 1.5, 2.0, 3.0, 4.0, 6.0, 8.0
Power Tunability, %	10-100
Power Stability, %	±0.5
Output Fiber Core Diameter	50, 100 and 200 µm or Single-mode*
Beam Mode Quality	Multi-mode BPP mm × mrad: 2, 5, 10      Single-mode: M <sup>2</sup> < 1.1*

\* Single-mode option up to 3 kW output power is available upon request

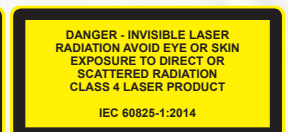
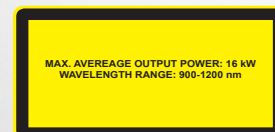
General Characteristics	YLR-1000-U2	YLR-1500-U2	YLR-2000-U2	YLR-3000-U2	YLR-4000-U2	YLR-6000-U2	YLR-8000-U2
Dimensions*, W×D×H, mm	448×550×88		448×760×88			448×760×177	
Weight, kg	<30	<40	<45	<80			
Cooling	Water						
Supply Voltage, 50/60 Hz, VAC	Single-phase, 200-240				3-phase, 400-480		
Power Consumption, kW	2.5	3.7	5.0	7.5	10	15	20
Operating Humidity Range, %	10 to 90						
Operating Temperature, °C	10 to 40						

\*The rack unit dimensions refer to sizes of consoles without handles, connectors and other extending parts

YLR-U2 lasers are CE certified. Standard YLR-U2 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.



[IPGPhotonics.com/contact](https://www.ipgphotonics.com/contact)  
[www.ipgphotonics.com](https://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. © 2024 IPG Photonics Corporation. All rights reserved.