

# DLR-976-1500

## High Brightness Diode-to-fiber Laser



### FEATURES

- ▶ Output Power up to 1.5 kW
- ▶ High Brightness
- ▶ Modulated up to 50 kHz
- ▶ Stabilized Central Wavelength
- ▶ Narrow Emission Linewidth
- ▶ Compact and Low Cost
- ▶ High Wall-plug Efficiency
- ▶ Industrial Performance



### APPLICATIONS

- ▶ Optical Pumping
- ▶ Plastics Welding
- ▶ Metal Hardening
- ▶ Soft Soldering
- ▶ Brazing
- ▶ FPD Bonding
- ▶ Silicon Surface Modification

**IPG Photonics' DLR 976 Series** is a newly developed high brightness diode laser system featuring a 976 nm wavelength stabilized narrow line diode-to-fiber laser. These industrial grade lasers are available in various power levels up to 1.5 kW.

IPG's advanced technology is based on the use of highly reliable entirely sealed single-emitter diodes. These diodes have an efficiency approaching 60%. IPG's DLR 976 diode laser is brighter, higher quality and more reliable than any other diode laser on the market. Air- or water-cooled, this compact DLR platform is cost-effective and virtually maintenance-free.

IPG's DLR 976 lasers are used in a number of materials processing applications including soft soldering, metal hardening, plastics welding, silicon surface modification and FPD bonding. The high brightness DLR 976 series is also an ideal source for optical pumping of various laser configurations.

# DLR-976-1500

## High Brightness Diode-to-fiber Laser

Optical Characteristics	DLR-976-100	DLR-976-300	DLR-976-500	DLR-976-1000	DLR-976-1500
Wavelength, nm	976 ±1				
Linewidth FWHM, nm	0.5				
Wavelength Stability, nm	±0.2				
Mode of Operation	CW/Modulated				
Modulation Frequency, kHz	≤50				
Average Power, W	100	300	600	1000	1500
Power Tunability, %	10-100				
Power Stability*, %	±1				
Optical Noise**, % RMS	1				
Output Fiber Core Diameter, μm	110			200	
Output Fiber NA	<0.1				

\* Over 4 hours, T= ±1°C

\*\* 10 kHz - 20 MHz

### General Characteristics

Cabinet Dimensions (W × D × H), mm	448 × 403 × 132	448 × 580 × 132	448 × 677 × 177		
Cooling	Air-cooled	Water-cooled			
Supply Voltage, VAC	100-240, 50-60 Hz	200-240, 50-60 Hz			
Power Consumption, W	<300	<900	<1800	<3000	<4500



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MAXIMUM OUTPUT POWER: 1,400 W  
WAVELENGTH RANGE: 900-980 nm

DANGER - INVISIBLE LASER  
RADIATION AVOID EYE OR SKIN  
EXPOSURE TO DIRECT OR  
SCATTERED RADIATION  
CLASS 4 LASER PRODUCT

IEC 60825-1:2014

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