

PLD-80-974: 966-974 nm, 60 W

Multi-mode Fiber-coupled Diode Lasers



Applications

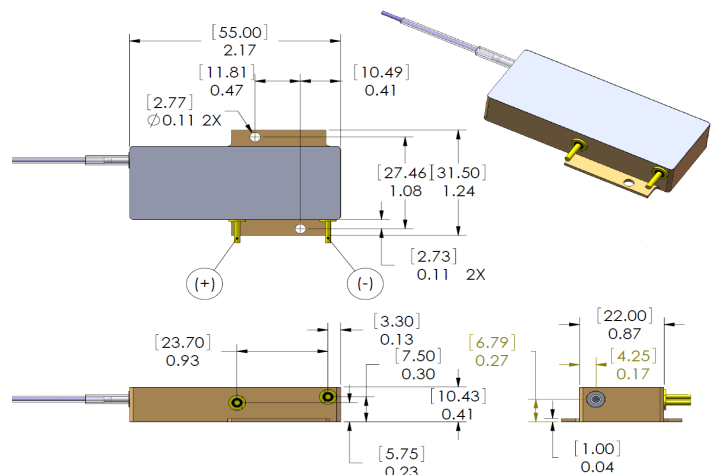
- ▶ Amplifier Pumping
- ▶ Laser Pumping
- ▶ Graphic Arts / Printing
- ▶ Illumination
- ▶ Direct Diode Lasers
- ▶ Material Processing
- ▶ Medical & Dental
- ▶ Photovoltaics

Features

- ▶ 969 Center Wavelength
- ▶ 59 W Minimum Output Power
- ▶ High Reliability
- ▶ Robust Compact Package
- ▶ Wavelength Stabilization and Dichroic Options
- ▶ 0.13 NA into 105 or 110 μm Fiber Core Diameter

IPG Photonics' PLD-80-974 fiber-coupled diode lasers provide a minimum output power of 59 W within 0.13 NA. The PLD-80-974 diode laser includes 105 μm or 110 μm fiber core diameter and a center wavelength of 969 ± 3 nm. Wavelength stabilization and dichroic options are also available.

IPG's best-in-class diode technology offers an ideal combination of power, reliability and form factor. We manufacture to rigorous telecom-grade standards in the world's largest high power diode fab. Each wafer is individually qualified, which sets IPG apart from alternative industrial pump products using short-lived diode bars and bar-stack technologies. PLD-80-974 diode lasers are preferred for fiber amplifier and laser pumping, material processing, and direct diode applications.



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Optical Characteristics¹

Center Wavelength, nm	969
Center Wavelength Tolerance, nm	± 3
Minimum Output Power, W	59
Spectral Width (FWHM), nm	4
Slope Efficiency, W/A	5
Conversion Efficiency, %	55.5
Threshold Current (I_{TH}), A	0.7
Operating Current (I_{OP}), A	12
Forward Voltage, V	9.22
Recommended Case Temperature, °C	25
Wavelength Shift with Temperature, nm/°C	0.35
Wavelength Shift with Operating Current, nm/A	1

¹Typical performance data measured at 12A, 25°C.

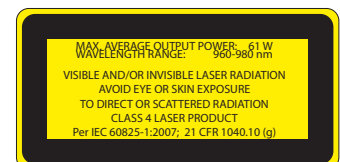
Fiber Characteristics

Fiber Core Diameter, μm	105 or 110 options available
Fiber Cladding Diameter, μm	125
Fiber Buffer Diameter, μm	250
Beam Numerical Aperture (90% power)	0.13
Fiber Length, m	1.2
Minimum Fiber Bend Radius, mm	30

Maximum Ratings

Operating Current (I_{OP}), A	12
Reverse Voltage, V	2.5
Case Temperature, °C	5 to 70
Storage Temperature, °C	-20 to 60
Lead Soldering Temperature (10 s max) °C	300
Relative Humidity, %	85

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