



PLD-93-200-878-WS-SMA, 80 W

Multi-mode Fiber-coupled Diode Lasers



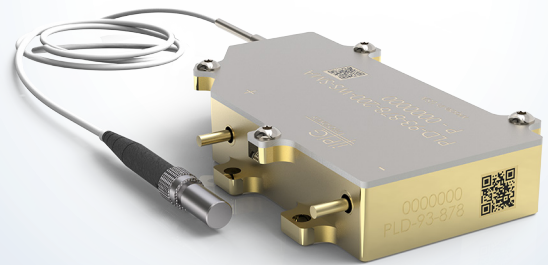
Applications

- ▶ Vanadate-based Solid-state Laser Pumping
- ▶ Ultrashort Pulse Laser Pumping
- ▶ Ultraviolet Laser Pumping



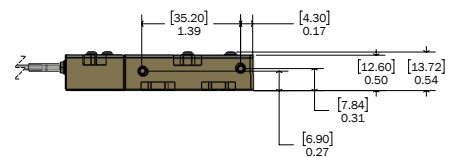
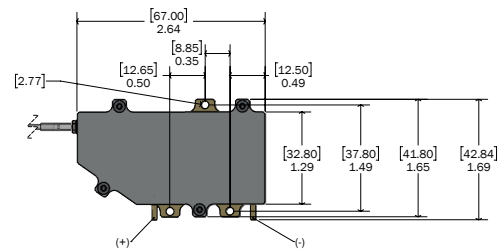
Features

- ▶ 878.6+/-0.5 nm Center Wavelength
- ▶ Wavelength-stabilized Across Wide Current Range
- ▶ 80 W Maximum Output Power at 16 Amperes
- ▶ High (99% power-in-band) Spectral Purity
- ▶ Typical Wallplug Efficiency >50%
- ▶ 200 μm Fiber Pigtail (400 μm fiber option), SMA-Connector
- ▶ Compact Fiber-coupled Package
- ▶ Dichroic Filter Option for Back-reflection Protection



IPG Photonics' line of 878.6 nm fiber-coupled diode lasers provides a complete pumping solution for Vanadate-based solid-state lasers. IPG's wavelength-stabilized diodes are differentiated by an unmatched level of spectral purity and stability. We offer an ideal combination of power, reliability and form factor with solutions ranging from 30 Watts to 150 Watts maximum fiber-coupled output power.

At IPG, 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. IPG's line of 878.6 nm fiber-coupled diode lasers becomes the new de-facto standard for Vanadate-based solid-state laser pumping.



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Multi-mode Fiber-coupled Diode Lasers

Optical and Electrical Characteristics*

PLD-93-200-878-WS-SMA

Center Wavelength, nm	878.6
Center Wavelength Tolerance, nm	+/- 0.5
Output Power, W	60 - 80
Spectral Width (FWHM), nm	<0.3
Slope Efficiency, W/A	>5
Efficiency, %	50
Threshold Current (I_{TH}), A	2
Operating Current (I_{OP}), A	13 - 16
Forward Voltage, V	<10
Recommended Case Temperature, °C	25
Wavelength Shift with Temperature, nm/°C	<0.01

*Typical performance data measured at 16 A, 25°C.

Fiber Characteristics

Fiber Core Diameter, μm	200
Fiber Cladding Diameter, μm	227
SMA Connector	SMA 905
Beam Numerical Aperture (90% power)	<0.2
Fiber Length, m	2
Minimum Fiber Bend Radius, mm	60

Maximum Ratings

Operating Current (I_{OP}), A	18
Reverse Voltage, V	5
Case Temperature, °C	5 - 70
Storage Temperature, °C	-2 to 60
Lead Soldering Temperature (10 s max) °C	300
Relative Humidity, %	85

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MAX. AVERAGE OUTPUT POWER: 160 W
 WAVELENGTH RANGE: 800-1000 nm

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

IEC 60825-1:2014

The Power to Transform®

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