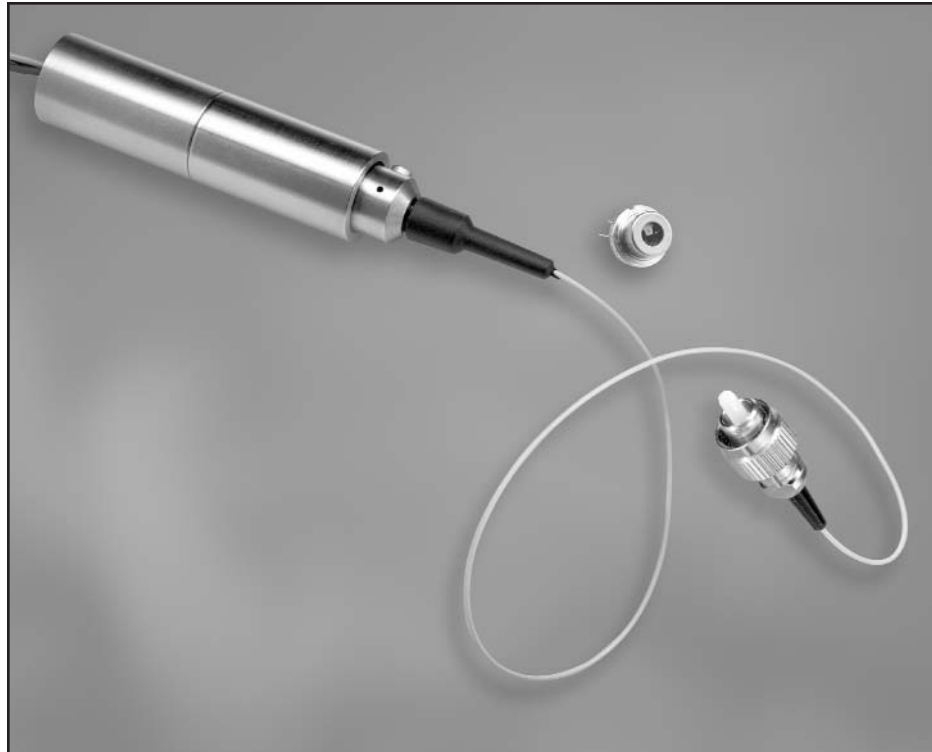


# Fiber-Coupled Red and Near-Infrared Diode Lasers



**57 PNL Series**

*Melles Griot 57 PNL series fiber-coupled lasers provide excellent beam quality in a compact, thermally tested, and ESD-protected stainless-steel package. Automatic power control (APC) ensures long-term power stability through the fiber. Available options include standby capability, for extended diode lifetime, and analog and digital modulation capability. Each device is thoroughly characterized using proprietary test equipment and supplied with full characterization documentation. A full spectrum of diodes, fiber, and beam-delivery terminations is available.*

## **Features**

- ▶ Excellent beam quality
- ▶ Automatic power control
- ▶ Standby capability for long lifetime
- ▶ Pointing stability  $<1 \mu\text{rad}/^\circ\text{C}$
- ▶ Factory-preset output power
- ▶ Thermal cycled for stability
- ▶ ESD protected for safe, easy handling
- ▶ Analog and digital modulation
- ▶ Optional collimated beam with  $M^2 < 1.2$
- ▶ Performance certification documentation

**MELLES GRIOT**

## Specifications

### Beam Quality (with optional collimator):

$M^2 < 1.2$

### Polarization Extinction Ratio:

Polarization-maintaining fiber: >20:1

Non-polarization maintaining fiber: N/A

### Beam Pointing Stability: <1 $\mu$ rad/°C

### Power Stability (w/APC):

$\pm 2\%$  maximum at ambient  $\pm 2^\circ\text{C}$

### Amplitude Noise:

<2% peak to peak (10 Hz–2 MHz)

### Standard Fiber Jacket:

900  $\mu\text{m}$  (teflon loose tube)

### Fiber Length: 1 meter

### Output Connector: FC/PC

### Fiber Bend Radius: 20 mm

### Housing Material: Stainless steel

## Electrical Specifications

**Input:**  $5 \pm 0.5$  Vdc @200 mA max current

### Electrical:

Laser diode case is grounded to assembly case

## Environmental Specifications

**Cooling:** Convection

**Operating Temperature:**  $+5^\circ\text{C}$  to  $+40^\circ\text{C}$

**Storage Temperature:**  $-10^\circ\text{C}$  to  $+60^\circ\text{C}$

**Operating Relative Humidity:**

0 to 95% noncondensing

## Options

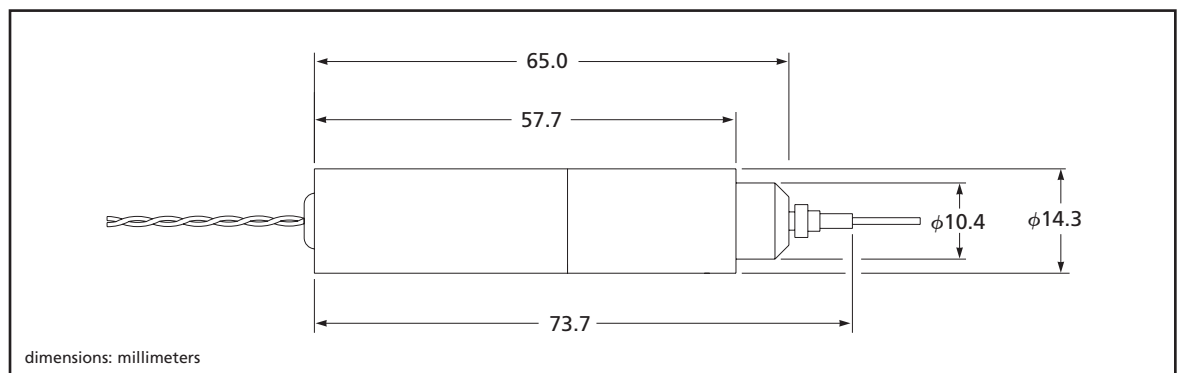
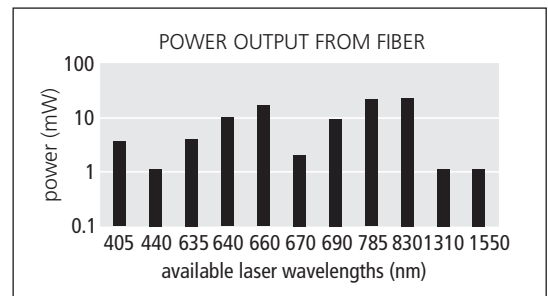
- Diodes: 405 nm to 1550 nm
- Connectors: FC, ST, SMA
- Output beam collimators
- Analog and/or digital modulation
- 3-mm fiber jacket
- Custom configurations

## Minimum Delivered Output Power

Wavelength (nm) ( $\pm 15$ nm)	Minimum Output Power (mW)	PRODUCT NUMBER
635	7.0	57 PNL 062/P4/XX
640	12.0	57 PNL 064/P4/XX
660	22.0	57 PNL 054/P4/XX
670	3.0	57 PNL 012/P4/XX
690	10.0	57 PNL 052/P4/XX
785	35.0	57 PNL 010/P4/XX
830	40.0	57 PNL 070/P4/XX
1310	1.5	57 PNL 043/P4/XX
1550	1.5	57 PNL 045/P4/XX

XX = S for single mode non-PM fiber

SP for single mode PM fiber



57 PNL series laser outline and mounting

# MELLES GRIOT

[www.mellesgriot.com](http://www.mellesgriot.com)

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