

Fiber-Coupled Red and Near-Infrared Diode Lasers

57 ICS Series



Melles Griot 57 ICS series fiber-coupled lasers provide excellent beam quality in a thermoelectrically cooled turnkey package. Precision drive electronics provide stable output power for applications requiring the ultimate in performance. Analog modulation with a bandwidth of 5 MHz is standard. Bandwidth of up to 350 MHz is an available option. Each device is thoroughly characterized using proprietary test equipment and is supplied with full characterization documentation. A full spectrum of diodes, fibers, and beam-delivery terminations is available.

Features

- ▶ Excellent beam quality
- ▶ Thermoelectric cooling
- ▶ Pointing stability $<1 \mu\text{rad}/^\circ\text{C}$
- ▶ Turnkey 5-Vdc operation
- ▶ CDRH and CE compliant
- ▶ Standard and high-speed modulation
- ▶ Optional collimated beam with $M^2 < 1.1$
- ▶ Performance certification documentation

MELLES GRLOT

Specifications

Modulation Bandwidth (typical):

Standard unit: 5 MHz (-3 db), 70-nsec rise/fall time

High-speed option: 350 MHz, 1-nsec rise/fall time

Beam Quality (with optional collimator):

$M^2 < 1.1$

Polarization Extinction Ratio:

Polarization-maintaining fiber: >50:1

Standard fiber: N/A

Beam Pointing Stability: <1 μ rad per $^{\circ}$ C

Power Stability at ambient $\pm 2^{\circ}$ C (8 hrs): $\pm 2\%$

Amplitude Noise:

<2% peak to peak (10 Hz to 2 MHz)

Standard Fiber Jacket: 3-mm protective jacket

Fiber Length: 1 meter

Output Connector: FC/PC

Fiber Bend Radius: 25 mm

Electrical Specifications

Input: 5 ± 0.3 Vdc at 1.5 A

Recommended Power Supply: 56 IMA 019

Environmental Specifications

Cooling: Thermoelectric

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

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

Operating Relative Humidity:

0 to 95% noncondensing

Options

- Diodes: 635 nm to 1550 nm
- Connectors: ST, SMA, ferrule
- Output beam collimators
- Custom configurations

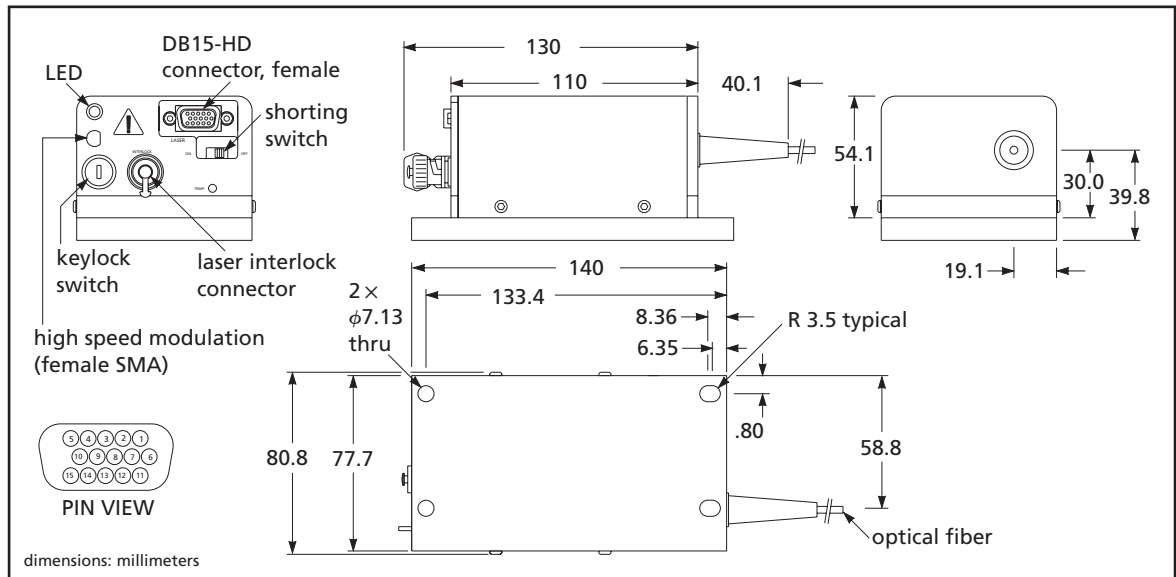
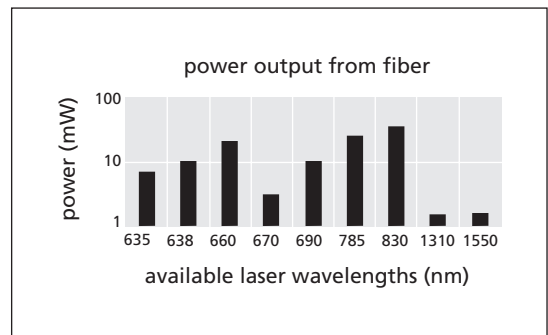
Minimum Delivered Output Power

Wavelength (nm) (± 15 nm)	Minimum Output Power (mW)	PRODUCT NUMBER*
635	7.0	57 ICS 062/XX/YY
638	10.0	57 ICS 064/XX/YY
660	20.0	57 ICS 054/XX/YY
670	3.0	57 ICS 012/XX/YY
690	10.0	57 ICS 052/XX/YY
785	25.0	57 ICS 010/XX/YY
830	35.0	57 ICS 070/XX/YY
1310	1.5	57 ICS 043/XX/YY
1550	1.5	57 ICS 045/XX/YY

*XX = S for single-mode fiber

SP for single-mode polarization-maintaining fiber

YY: HS for high-speed modulation option, blank for standard modulation



57 ICS-series laser outline and mounting

MELLES GRIOT

www.mellesgriot.com

Electro-Optics Group 2605 Trade Center Avenue, Suite A • Longmont, CO 80301 • 1-800-326-4363 • (720) 494-9420 • FAX (720) 494-9432 • sales@boulder.mellesgriot.com

Laser Group 2051 Palomar Airport Road, 200 • Carlsbad, CA 92011 • 1(800) 645-2737 • (760) 438-2131 • FAX (760) 438-5208 • sales@carlsbad.mellesgriot.com

France (01) 3012-0680 **Germany** (06251) 84060 **Japan** (03) 3407-3614 **Netherlands** (0316) 333041 **Singapore** 6392-5368

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