

830nm Uncooled MM Laser Module

up to 1W, 50/125 fiber



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Features

- Single-emitting-point Laser Module
- High Output Power of 1W
- High Stability
- 0.14NA 50 μ m Core MM Fiber
- Parallel Seam Welded 2-pin Hermetically Sealed Package
- Standard Center Wavelength of 830nm

Applications

- Instrument
- Medical
- Printing
- Lighting
- Materials Processing



Agiltron offers an 830 nm multimode semiconductor laser diode module series manufactured using precision optical coupling technology. These compact modules deliver high power and high efficiency in packaging optimized for fiber laser systems and direct-use applications. All manufacturing processes are fully tested and burn-in aged to ensure long-term reliability, stability, and extended service life, supporting Agiltron's commitment to delivering high-quality, cost-effective laser solutions.

Specifications

Parameter	Min	Typical	Max	Unit
Output Power		1		W
Center Wavelength	830 \pm 10 nm	820	830	840
	830 \pm 5 nm	825	830	835
Spectral Width (FWHM)		3.5	6	nm
Threshold Current		0.25	0.4	A
Operating Current		1.2	1.4	
Operating Voltage		1.85	2.2	V
Conversion Efficiency		45		%
90% Power		0.12		NA
Wavelength Temperature Coefficient		0.28		nm/°C
Differential Efficiency		0.95		W/A
Operating Temperature	-20	25	+55	°C
Storage Temperature	-40	25	+85	°C
Numerical Aperture		0.14		NA
Fiber Optic Connectors		ST		

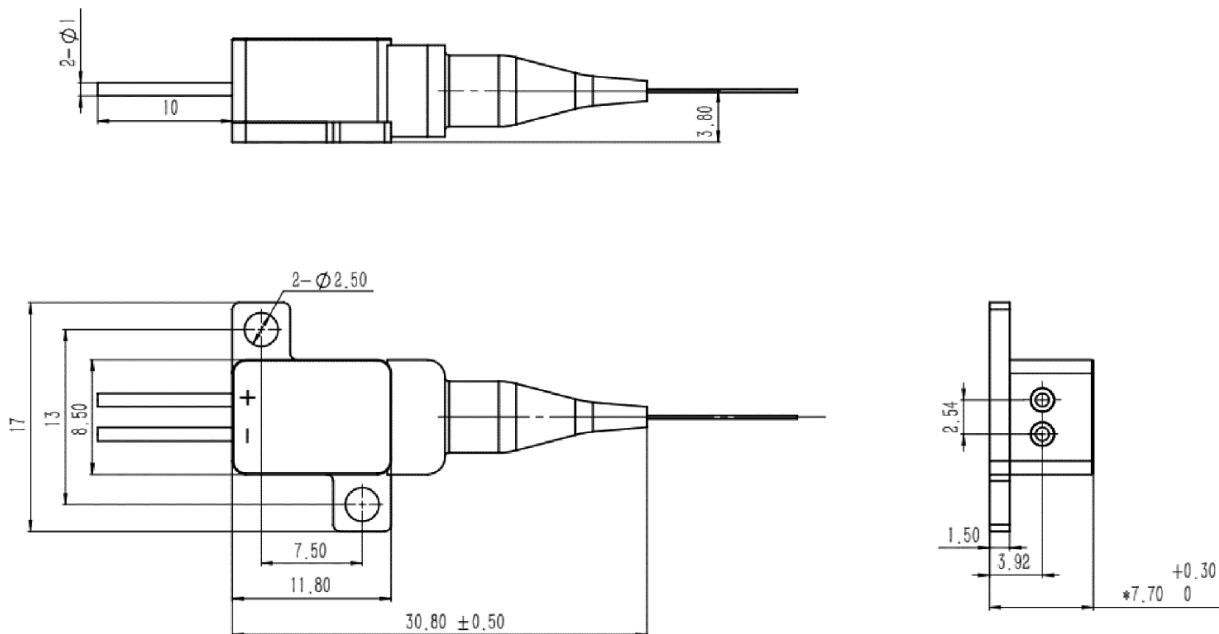
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Mechanical Dimension (mm)



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

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Information contained herein is deemed to be reliable and accurate as of the issue date. We reserve the right to change the design or specifications at any time without notice.
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Typical Spectrum

Ordering Information

	83	1	3	2	1	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prefix	Wavelength	Output Power	Linewidth	TEC Cooling	PD	Fiber Type	Fiber Buffer	Fiber Length	Connector
FCMH-	830nm = 83 Special = 00	1W = 1	3nm = 3	No = 2	None = 1 Yes = 2	50/125 = 5 105/125 = 2 Special = 0	0.9mm Tube = 3 Special = 0	1.0 m = 1 Special = 0	FC/PC = 2 Special = 0

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Caution Electrostatic Sensitivity

- Never touch laser diode and the module using hands
- Always use protections when handle a laser diode
- Recommend mounting the laser diode using an ionic gun and ESD finger cots



Laser Safety

This product meets the appropriate standard in Title 21 of the Code of Federal Regulations (CFR). FDA/CDRH Class 1M laser product. This device has been classified with the FDA/CDRH under accession number 0220191. All versions of this laser are Class 1M laser products, tested according to IEC 60825-1:2007 / EN 60825-1:2007. An additional warning for Class 1M laser products. For diverging beams, this warning shall state that viewing the laser output with certain optical instruments (for example eye loupes, magnifiers, and microscopes) within a distance of 100 mm may pose an eye hazard. For collimated beams, this warning shall state that viewing the laser output with certain instruments designed for use at a distance (for example telescopes and binoculars) may pose an eye hazard.

Wavelength = 1.3/1.5 μ m.

Maximum power = 30 mW.



*Caution - Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

*IEC is a registered trademark of the International Electrotechnical Commission.

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