

High Power Fiber Coupled Laser Source - Multimode



Turn-Key Benchtop, 440-980nm, up to 500W, Power Adjustable, Constant Output Power, Pulse Output Option

DATASHEET

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The HPML series High Power Fiber Coupled Laser Source is a turn-key unit, featuring **ease of use** and **low cost** with a manual or USB/GUI control. These all-in-one benchtop lasers integrate a laser, output tap monitor, controller, and heat dissipator, providing a convenient and reliable high-power laser source. The control has three options: low-cost constant current mode, and feedback constant output mode (having an output monitor). The unit can generate pulse output via modulating the laser directly (power and duration are settable via USB interface). Moreover, we offer a red-laser integrated fiber output for visual aid as well as a collimator at the fiber end options. A safety interlock is provided at the back. For power below 50W, the unit is cooled with internal fans. For higher power water cooling is required. We further offer matching chiller.

Features

- All-In-One Unit
- USB Controller Integrated
- Ease Use GUI
- Feedback Power Stabilization
- Visual Red Laser Option
- Pulse Mode Option
- Long Life

Specifications

Parameter	Min	Typical	Max	Unit
Center Wavelength	440		980	nm
Output Power	1		500	W
Output Power Stability (feedback mode)		± 2		%
Pulse Duration (pulse mode) ^[1]	2			ms
Repetition (pulse mode) ^[1]			1	kHz
Red Laser Power (option)	1			mW
Fiber Core Diameter	0.15		0.8	mm
TEC Cooling			-5	
Operating Temperature	-10		35	°C
Power Supply Input	100		240	ACV

Notes:

[1]. The residual laser power floor is about 10% of the max output.

Applications

- Optical Systems
- Mechanical Systems
- Lab Use
- Instruments

Legal notices: All product information is believed to be accurate and is subject to change without notice. Information contained herein shall legally bind Agiltron only if it is specifically incorporated into the terms and conditions of a sales agreement. Some specific combinations of options may not be available. The user assumes all risks and liability whatsoever in connection with the use of a product or its application.

Rev 10/15/24

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Mechanical Dimensions (mm) size is related to the power

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Ordering Information

Prefix	Wavelength	Power	Feedback *	Red Laser **	Cooling	Modulation	Fiber Core	Fiber Length	Connector	Collimator ***
HPML-	980nm = 9 880nm = 8 808nm = 7 650nm = 6 532nm = 5 455nm = 4 355nm = 3 967nm = B 915nm = A Special = 0	5W = AA5 8W = AA8 10W = A10 22W = A12 ... 100W = 100 ... 200W = 200 280W = 280 500W = 500	No = 1 Yes = 2	No = 1 Yes = 2	Fan = 1 Water = 2	No = 1 Yes = 2	135µm = 1 200µm = 2 105µm = 5 400µm = 4 Special = 0	0.25m = 1 0.5m = 2 1m = 3 1.5m = 4 2m = 5 Special = 0	No = 1 SMA = 2 Special = 0	No = 1 Yes = 2

- * Feedback control automatically maintains a constant laser power \$2350
- ** This option provided visual of the laser spot. \$980
- *** Collimator selections go to <https://agiltron.com/product/high-power-fiber-optic-collimator/>

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 µm.

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.