High Power Fiber Coupled Laser Source - Multimode

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

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The HPML Series High Power Fiber-Coupled Laser Source is a turn-key benchtop unit designed for ease of use and cost efficiency, with manual and USB/GUI control options. This all-in-one system integrates a laser, output tap monitor, controller, and heat dissipator, ensuring a reliable high-power laser source. The HPML offers three control modes: a low-cost constant current mode and a feedback-based constant output mode with an integrated output monitor. Output power can be adjusted manually via the front rotary knob or remotely through USB with a GUI. A TTL-controlled BNC input enables synchronized pulse generation. Additional features include an optional red-laser fiber output for visual alignment and a collimator at the fiber end. A safety interlock is provided on the back panel. Units with power up to 200W use an internal efficient metal-block thermal management system with fan cooling, making them convenient. Higher power models require water cooling, with an optional matching chiller available.

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		%
Linewidth		3		nm
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% od the max output.

Applications

- Optical Systems
- Mechanical Systems
- Lab Use
- Instruments

Rev 03/13/25

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Mechanical Dimensions (mm) size is related to the power

- M

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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 520nm = C 638nm = D Special = 0	5W = AA5 8W = AA8 10W = A10 20W = A20 22W = A22 ... 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

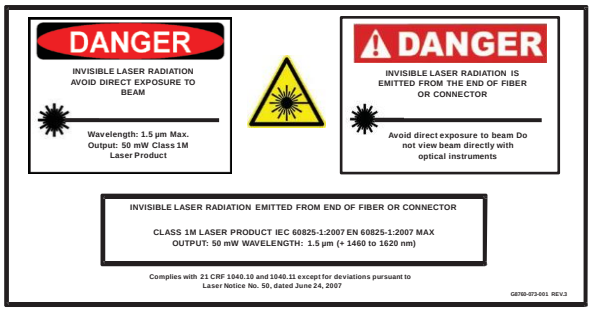
***** Feedback control automatically maintains a constant laser power $2350
****** This option provided visual of the laser spot. $980
******* Collimator selections go to https://agiltron.com/product/high-power-fiber-optic-collimator/

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.