

High Power Fiber Coupled Laser Source - Multimode



Turn-Key Benchtop, Power Adjustable, Feedback Constant Output Power Control, Pulse Output Option

DATASHEET

BUY NOW



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, TEC cooler, 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 a tap monitor). The unit can generate pulse output via modulating the laser directly (power and duration are settable via USB interface). TEC cooling is an option can change the laser center wavelength slight. Moreover, we offer a red-laser integrated fiber output for visual aid as well as a collimator at the fiber end options. Safety interlock is provided at the back.

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	°C
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 04/17/24

© Photonwares Corporation

P +1 781-935-1200

E sales@photonwares.com

W www.agiltron.com

Information contained herein is deemed to be reliable and accurate as of the issue date. Photonwares reserves the right to change the design or specifications at any time without notice. Agiltron is a registered trademark of Photonwares Corporation in the U.S. and other countries.

High Power Fiber Coupled Laser Source - Multimode



Turn-Key Benchtop, Power Adjustable, Feedback Constant Output Power Control, Pulse Output Option

DATASHEET

Mechanical Dimensions (mm)

■ M

High Power Fiber Coupled Laser Source - Multimode



Turn-Key Benchtop, Power Adjustable, Feedback Constant Output Power Control, Pulse Output Option

DATASHEET

Ordering Information

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

Fiber Core Alignment

Note that the minimum attenuation for these devices depends on excellent core-to-core alignment when the connectors are mated. This is crucial for shorter wavelengths with smaller fiber core diameters that can increase the loss of many decibels above the specification if they are not perfectly aligned. Different vendors' connectors may not mate well with each other, especially for angled APC.

Fiber Cleanliness

Fibers with smaller core diameters (<5 µm) must be kept extremely clean, contamination at fiber-fiber interfaces, combined with the high optical power density, can lead to significant optical damage. This type of damage usually requires re-polishing or replacement of the connector.

Maximum Optical Input Power

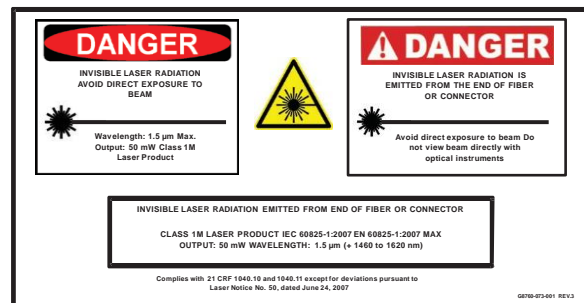
Due to their small fiber core diameters for short wavelength and high photon energies, the damage thresholds for device is substantially reduced than the common 1550nm fiber. To avoid damage to the exposed fiber end faces and internal components, the optical input power should never exceed 20 mW for wavelengths shorter 650nm. We produce a special version to increase the handling by expanding the core side at the fiber ends.

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.