

High Power Single Mode 1550nm Laser

(Up to 10W SM or 5W PM, Benchtop)



The HPSL High Power Single Mode Laser is a user-friendly benchtop unit that delivers up to 10W of single-mode output and 5W of polarization-maintaining stable laser output at 1550nm. It operates in constant power mode (CW) and offers selectable spectral widths, including broadband, 10nm, and 0.03nm. The standard output is fiber-based, with options for a high-power connector or a collimator. The unit includes a front power control knob and a USB computer interface for easy operation. An emission switch is also provided for added safety. The laser is susceptible to damage from strong back reflections; the included output isolator protects up to 0.5W of back reflection. For enhanced protection in applications prone to unintended reflections, a 5W back reflection protector is available as an option.

Warning: The laser is vulnerable to damage from strong back reflection. Therefore, the one-year warranty applies only if the back reflection protector is included.

Features

- Low Cost
- High Reliability
- High Power
- Single Mode
- USB
- Turn-Key Benchtop

Applications

- Lab
- OEM
- Sensor
- Instrumentation

Specifications

Parameters	Min	Typical	Max	Unit
Operation Wavelength	1545	1550	1575	nm
Operation Mode		CW		
Output Power *	0.2		10	W
Bam Quality	1.1	1.2	1.3	M2
Spectral Linewidth		4	40	nm
Polarization Extinction Ratio	18	26	35	dB
Output Power Adjust Range	10		100	%
Output Power Stability (within 48 hr)		± 2	± 5	%
Operating Temperature	-5		35	°C
Storage Temperature	-40		85	°C
Electrical Power Consumption			150	W
Power Input	110		120	VAC
Computer Interface	USB			
Package Dimension				

* PM output maximum is 5W

Note: The specifications provided are for general applications with a cost-effective approach. If you need to narrow or expand the tolerance, coverage, limit, or qualifications, please [click this link](#):

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 01/16/25



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Operation Manual

- Plug AC power
- Turn ON The Power Switch
- The Laser Can be Controlled By a Computer via The USB/GUI Interface
- Turn On The Emission Switch

For Manual Operation (option)

- Adjust The Output Power to Minimum by Turning The Knob All Way Counter Clockwise
- Increase The Out Put Power by Turning The Knob Clockwise

Special Feature

- To Modulator The Laser, Turn On The Modulation Switch at the Back, Input a 0-5V Modulation Signal Via The BNC Connector

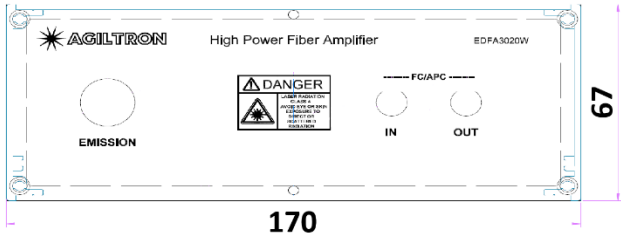
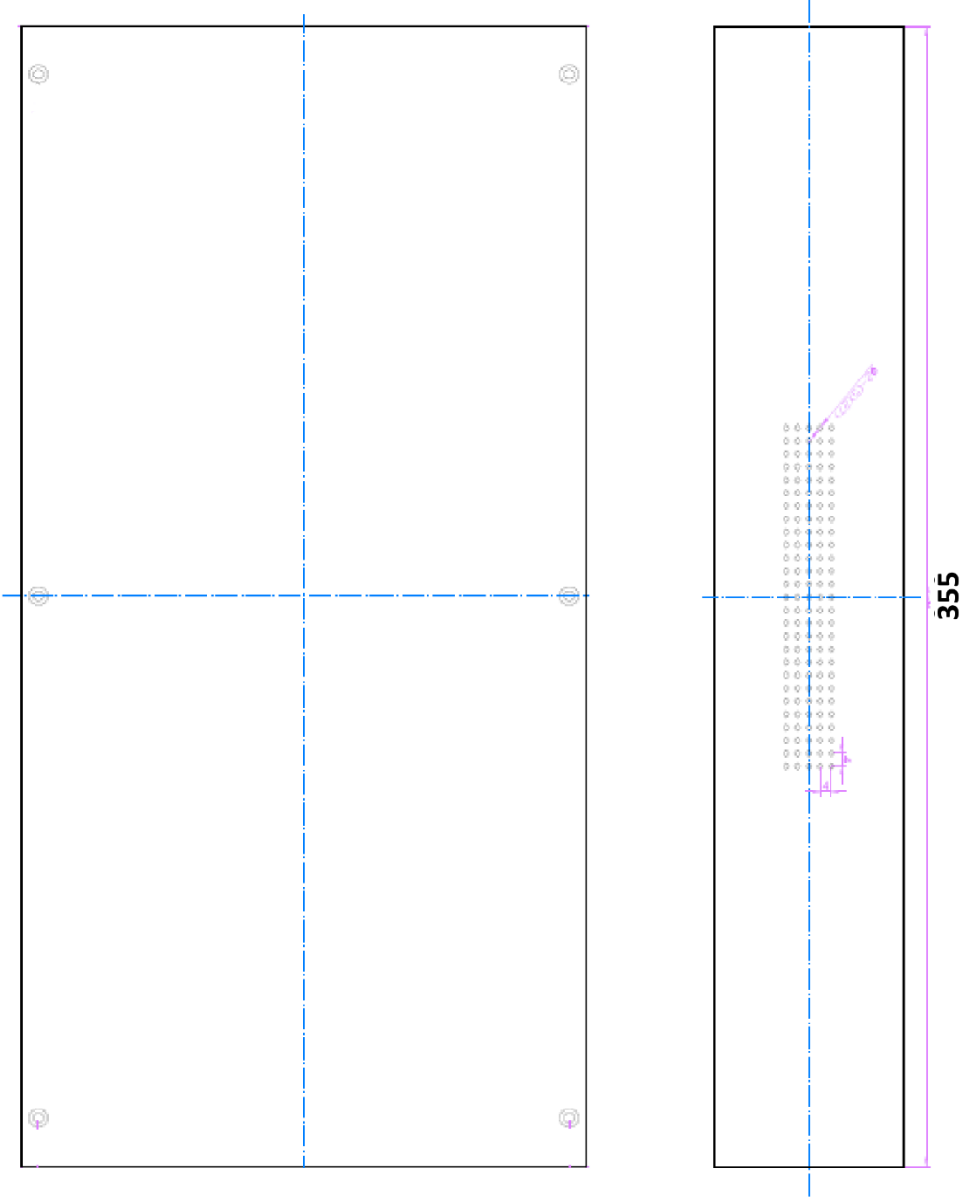
Mechanical Dimension

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

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Mechanical Dimension



**Mid-size
Benchtop**

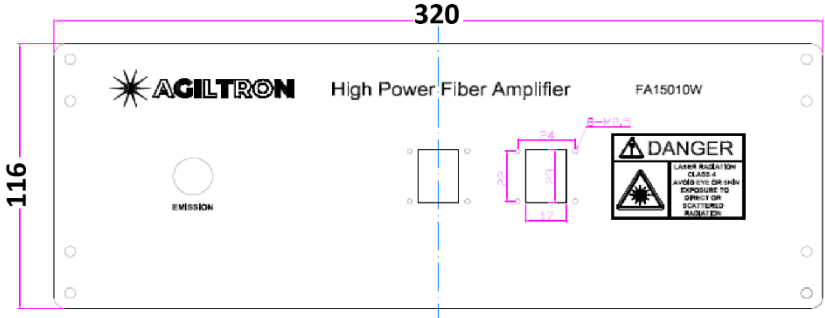
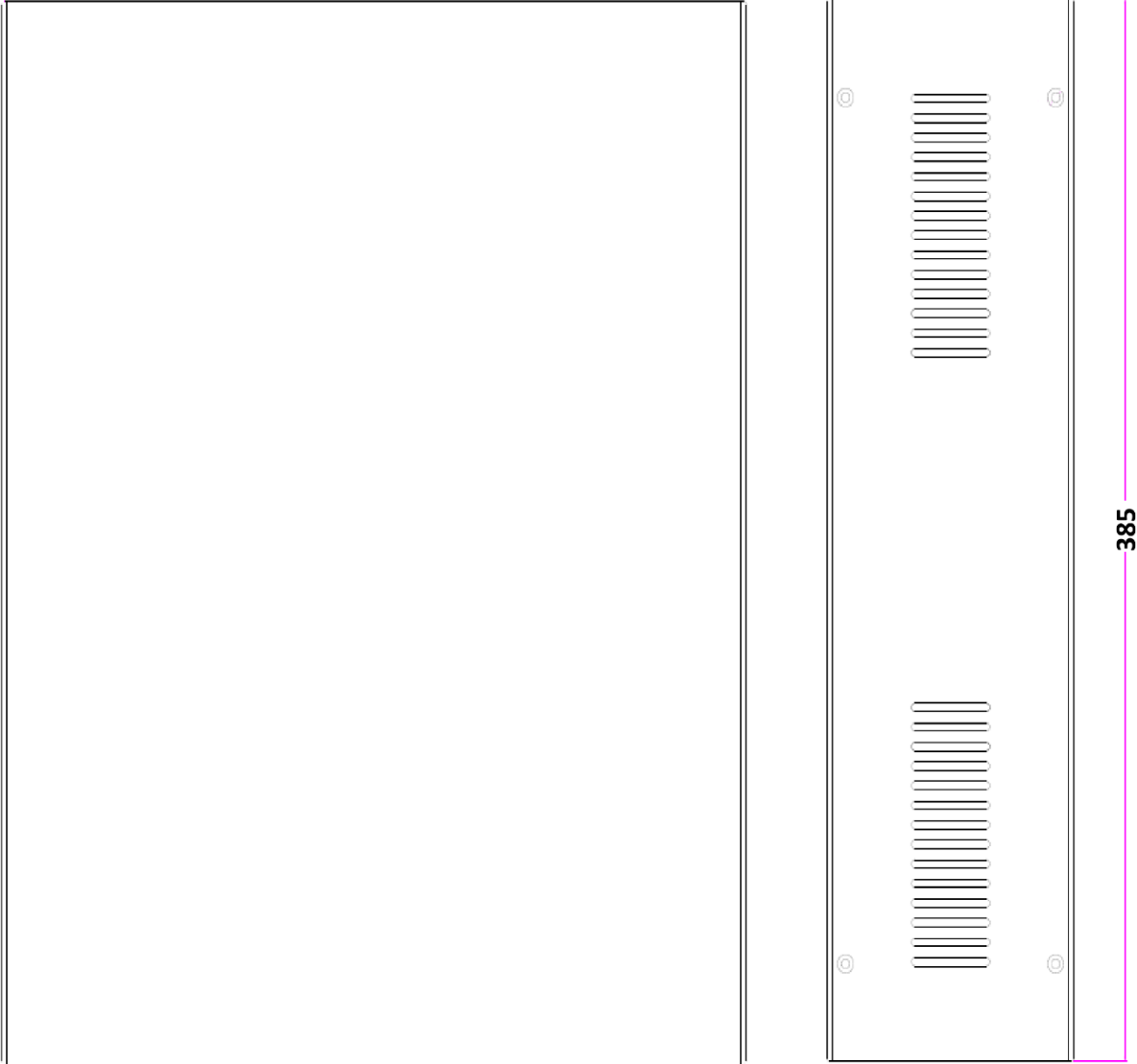
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Mechanical Dimension



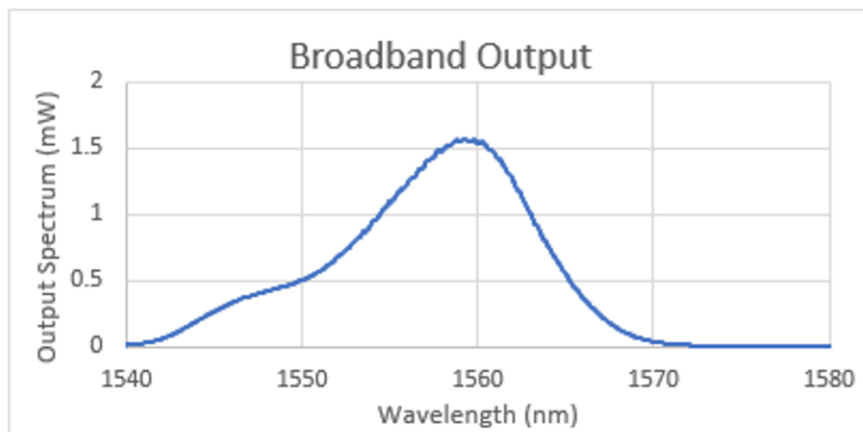
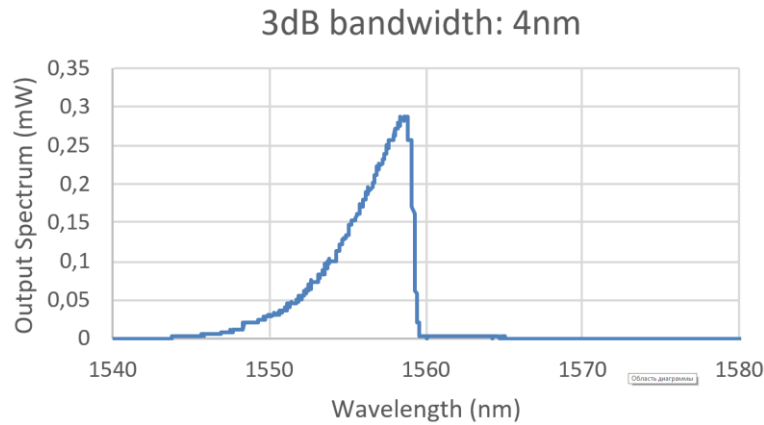
Large-size
Benchtop

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Typical Spectrum



Ordering Information

Prefix	Wavelength	Output Power	Mode ^[1]	Linewidth	Interface	Fiber Type	Fiber Cover	Fiber Connector ^[2]	Back reflection Protector ^[3]
HPSL-	1550nm = 5	10W = T 5W = 5 2W = 2 1W = 1 Special = 0	Random = 1 PMER18dB = 2 PMER25dB = 3 PMER30dB = 4	Broad = 1 4nm = 2 Special = 0	USB = 1 RS232 = 2	SM28 = 1 PM1550 = 2	0.9mm tube = 1 3mm tube = 2 Special = 0	Non = 1 High Power FC/PC = 2 Special = 0	Non = 1 Yes = B

[1]. PMER- Polarization Maintaining Extinction Ratio. When select PM fiber, the max output is 5W

[2]. High-power FC/PC connector works in pairs with maximum rating of 5W. The system includes a front panel connector and a matching patch cable, where one end features the high-power FC/PC connector, and the other end is bare fiber for splicing. This product is priced at \$950

[3] 'Back Reflection Protector' will increase 1.5dB extra loss

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USB Command List

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.