

High Power Single Mode 1060nm Pulsed Laser

(Up to 300 W SM or PM, Benchtop)



The HPPL High Power Single Mode Laser is a user-friendly benchtop unit designed to deliver up to 500W in single-mode operation or 200W in polarization-maintaining mode. It maintains stable laser output and can operate in pulsed mode with linewidth about 2nm and repetition rate up to 2 kHz. The laser output is collimated and includes an optional built-in isolator. The unit features a front power control knob and a USB computer interface for easy operation. A safety emission switch is also included. In polarization-maintaining mode, half of the power is diverted by a beam splitter, necessitating the use of a heat sink. Despite the light being randomly polarized within the laser, the polarization extinction ratio for the polarization-maintaining (PM) output remains stable and does not drift over time.

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	1055	1060	1072	nm
Operation Mode		Pulsed		
Output Power	2		300	W
Beam Quality	1.2	1.3	1.3	M2
Beam Diameter (with collimator)		4		mm
Spectral Linewidth		2	2	nm
Pulse Width*	12		150	ns
Polarization Extinction Ratio	18	26	35	dB
Output Power Adjust Range	10		100	%
Modulation Range	0		10	kHz
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			

Note:

* We offer two types, MOPA ~10, Q-Switch ~100ns



Rev 01/24/26

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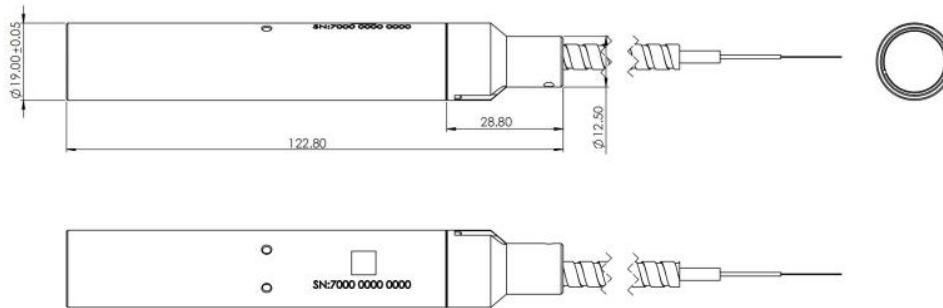
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Operation Manual

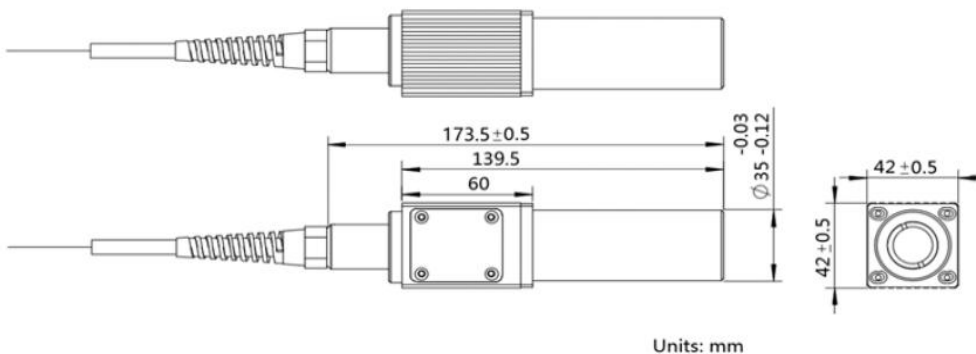
- Plug AC power
- Turn ON The Power Switch
- Adjust The Output Power to Minimum by Turning The Knob All Way Counter Clockwise
- Turn On The Emission Switch
- Increase The Out Put Power by Turning The Knob Clockwise
- To Modulator The Laser, Turn On The Modulation Switch at the Back, Input a 0-5V Modulation Signal Via The BNC Connector
- The Laser Can Also Be Controlled By a Computer via The USB/GUI Interface

Mechanical Dimension

- Collimator with isolator. 7.5mm diameter beam M2<1.2



- Collimator with isolator. 4mm diameter beam M2<1.2

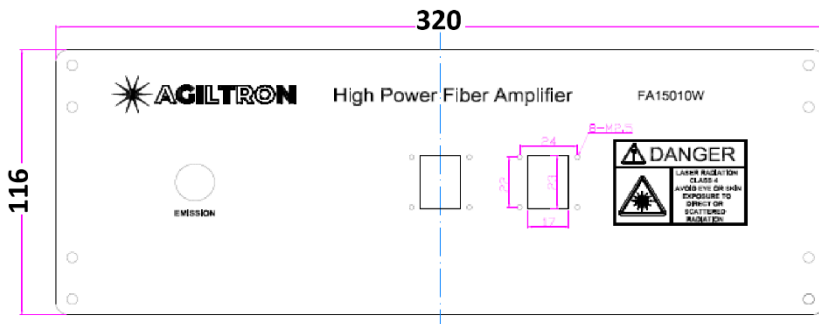
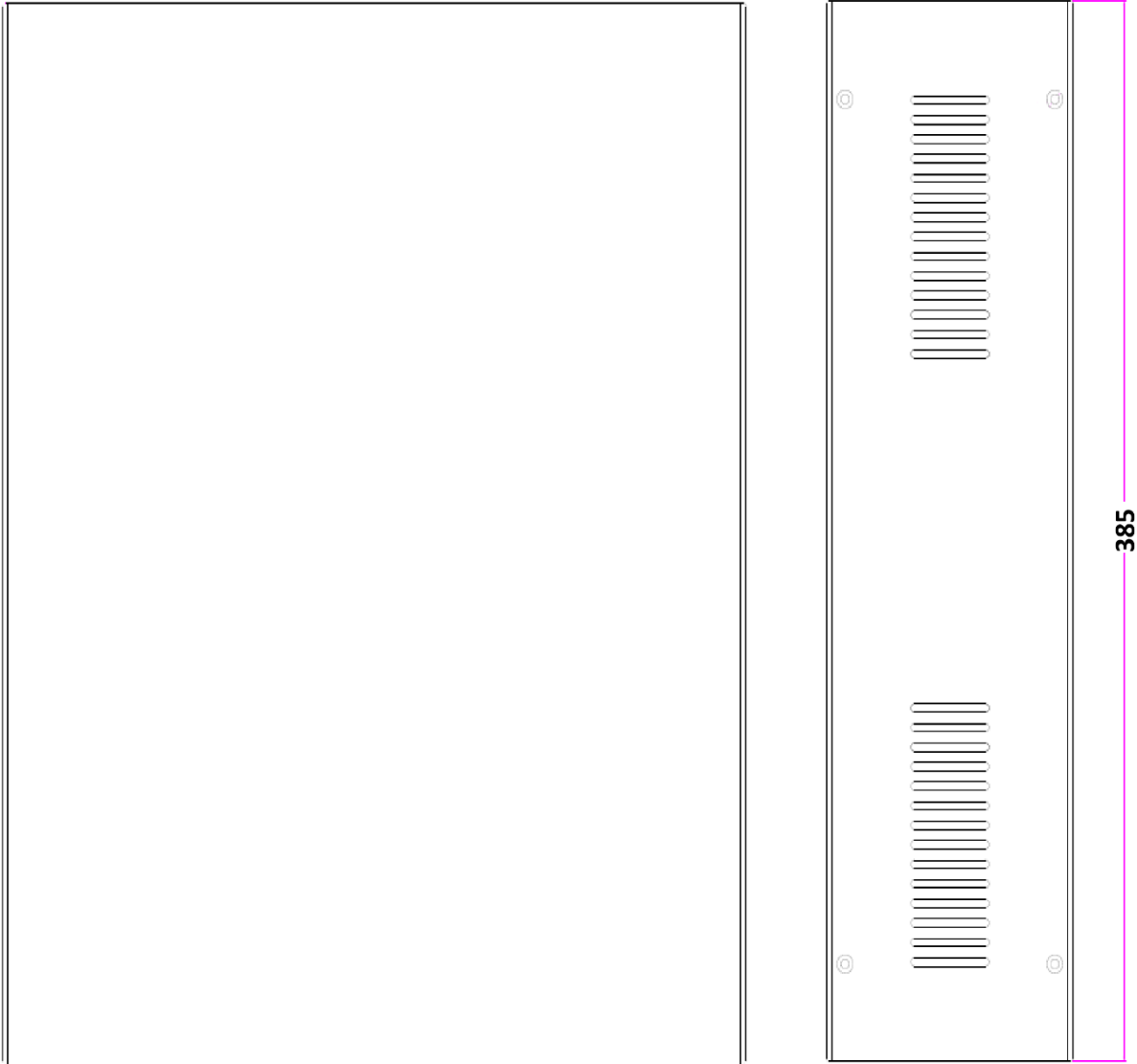


*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

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Mechanical Dimension



Large-size
Benchtop

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Typical Spectrum

Ordering Information (Part Number)

Prefix	Wavelength	Output Power	Pulse Width	Polarization Mode ^[1]	Output Type	Power Supply	Interface	
1		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	111
HPPL-	1060nm = 1	20W = 2 10W = 1 30W = 3 40W = 4 50W = 5 80W = 8 100W = A 150W = B 200W = C 250W = D 300W = E	120ns = 1 12ns = 2	Random = 1 PMER18dB = 2 PMER25dB = 3 PMER30dB = 4	Collimator = 1 Isolator/Collimator = 2 Isolator/Fiber = 3	120-220V = 1	USB = 1 RS232 = 2	

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

[1]. PMER- Polarization Maintaining Extinction Ratio

Red is Special Order

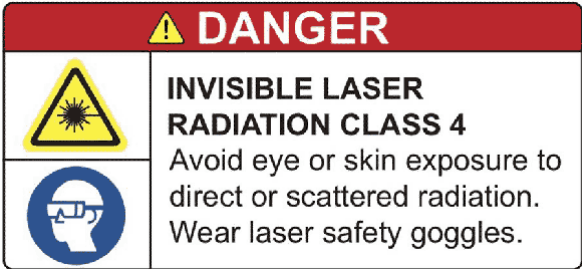
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USB Command List

Laser Safety

A 20W 1060nm laser is a high-power infrared laser capable of causing serious injury or damage if not handled properly. This wavelength is invisible to the human eye, making it particularly hazardous as users may not realize they are being exposed. Direct exposure to the laser beam can result in severe burns or permanent eye damage, including blindness. Reflected beams can also pose significant risks. It's essential to use appropriate protective eyewear rated for 1060nm, implement proper beam enclosures, and follow all safety protocols to minimize the risk of accidental exposure. Additionally, ensure that the laser is operated by trained personnel familiar with its specific hazards.



*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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Questions and Answers

Q: