ASE 1550nm Broadband Light Sources

(SM, PM, 1528 -1615nm, up to 10W)

DATASHEET

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The ASE (Amplified Spontaneous Emission) light source series provides a singlemode broadband emission with low coherence and randomized polarization, making it ideal for high-precision measurement applications. The design utilizes rare-earth-doped fibers pumped by a cooled laser source, enhancing longevity and reliability. Featuring precision feedback control, the unit ensures high stability. The ASE 1550 is available in two wavelength bandwidth configurations: C-band (1528–1563 nm) and C+L band (1528–1615 nm). We offer both OEM modules with a driving PCB and plug-and-play benchtop units. We make flat spectral output versions that integrate special filters in both C-band and C+L-Band. The ASE is also an excellent polarization light source with high and stable polarization extinction ratio. These ASE light sources are widely used in telecom component testing, fiber Bragg grating (FBG) sensors, optical coherence tomography (OCT), fiber optic gyroscopes, gas sensing, fluorescence excitation, and optical component characterization.

Applications

- Sensor
- Testing
- Instrumentation

Features

- High Stability
- Low Cost
- Ease to Use

Specifications

Parameter		Min	Typical	Max	Unit
Operation Wavelength	C+L	1528		1610	nm
	C	1528		1563	nm
Output Power		30 *		10000	mW
Polarization Dependence (SM)				0.01	dB
Polarization Extinction (PM)		20	26	31	dB
Output Power Stability		0.05	0.1	0.2	dB
Spectral Ripple				0.1	dB
Spectral Flatness (with filter)		2	3	6	dB
Output Isolation		35			dB
Input Voltage (AC)		110	110	220	V
Computer Interface			USB		
Operating Temperature		-5		55	°C
Storage Temperature		-45		85	°C

Notes:

***** This low-power configuration has no USB controller

RoHS COMPLIANT

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.

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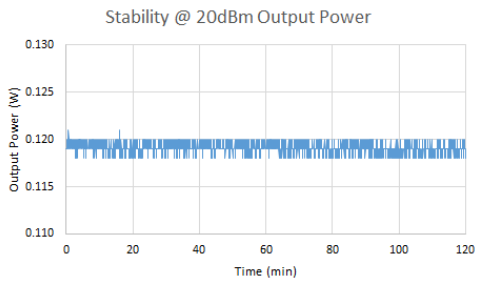
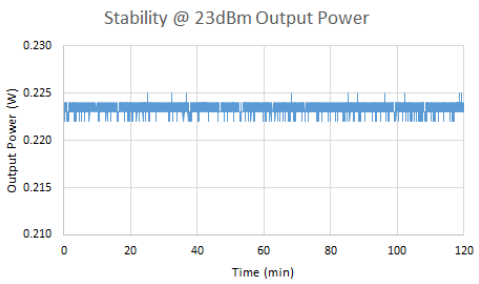
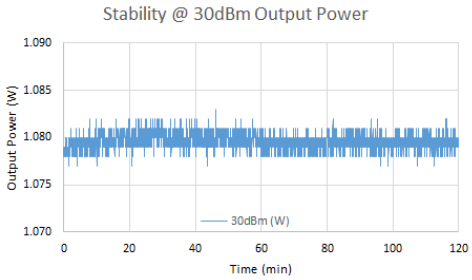
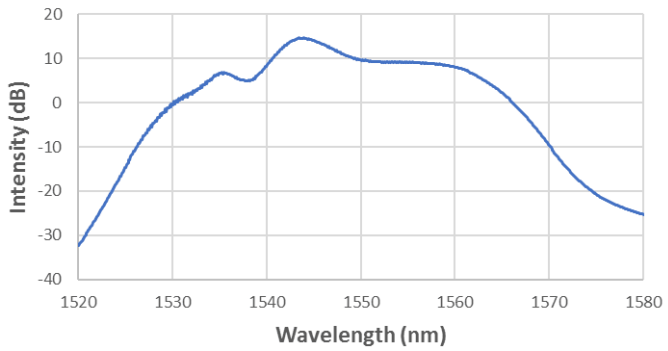
Output Power Stability (33dBm Benchtop)

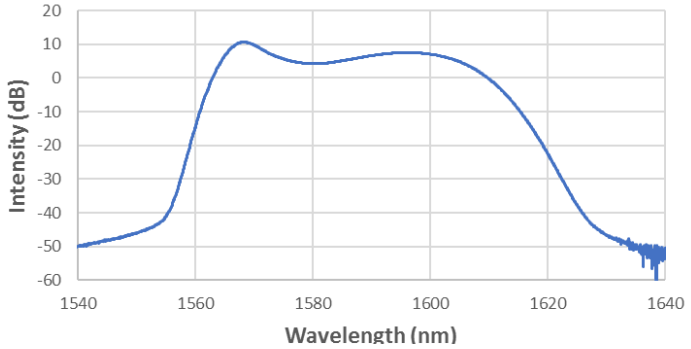




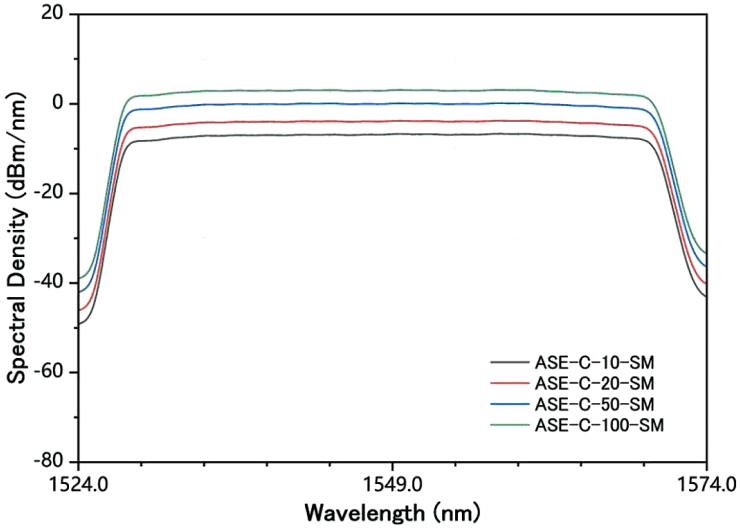


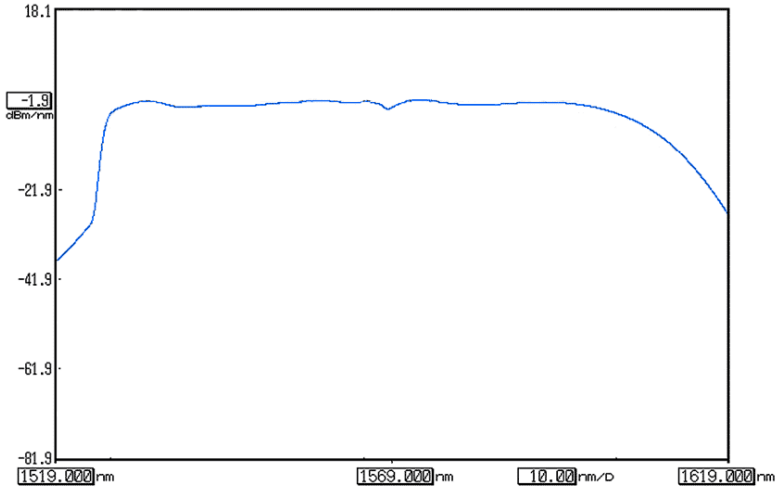
Typical Spectrums (without filter)





Typical Spectrums (with filter)





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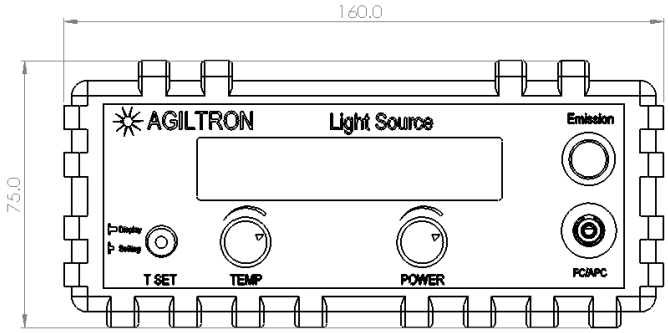
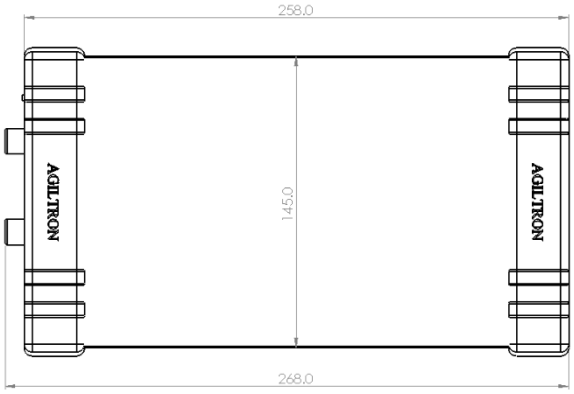
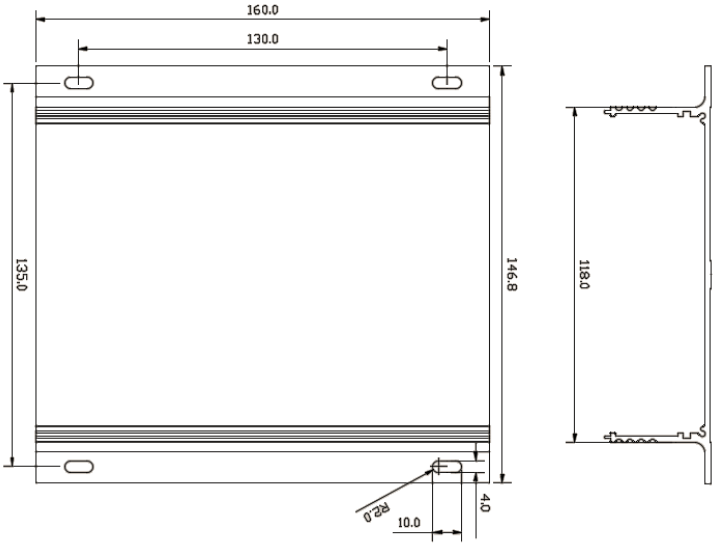
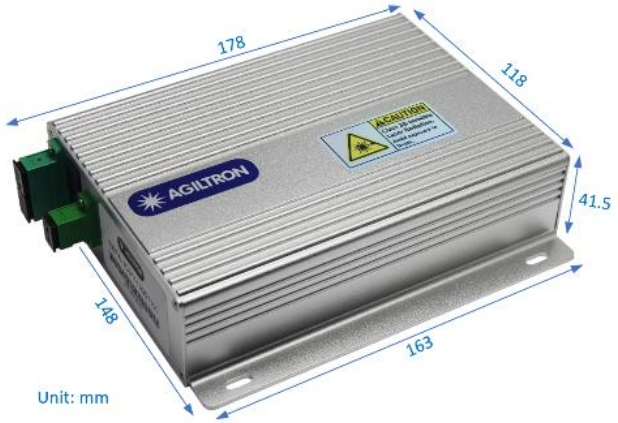
Dimensions (Unit: mm) >20dBm





Mini Benchtop for 17dBm





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

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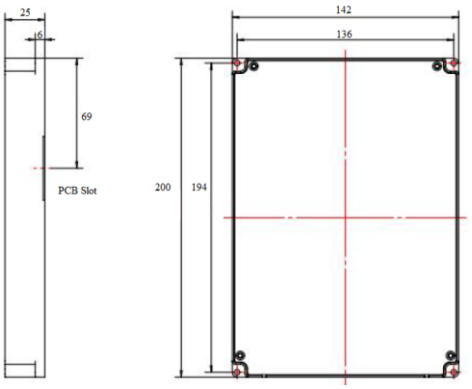
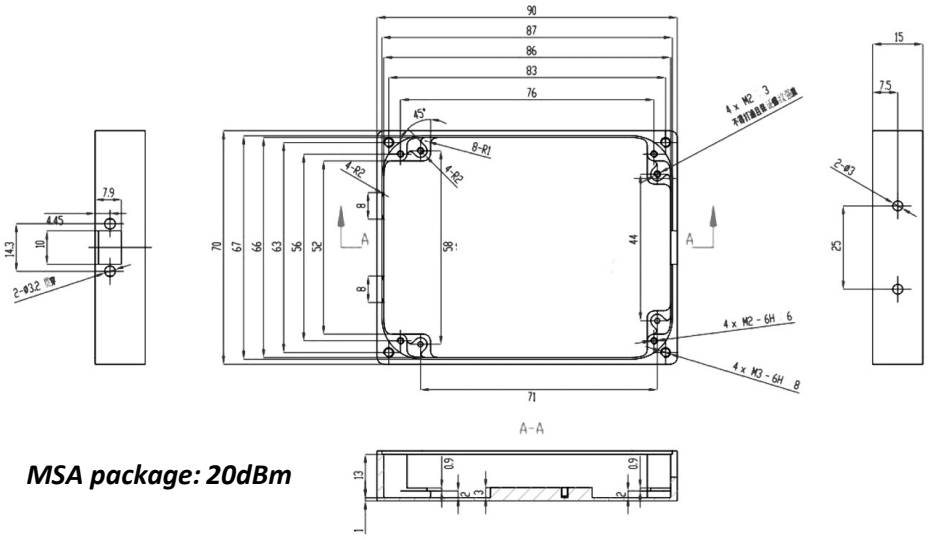
Mechanical Dimensions (mm) Components



High-power: >20dBm



MSA package: 20dBm

Ordering Information (Part Number)

	☐☐	☐	☐	☐	☐	☐☐	☐
Prefix	**Power**	**Wavelength**	**Polarization**	**Config[7]**	**Interface [2]**	**Flatness Filter[5]**	**Connector [3][6]**
ASES-	10mW [1]= 01 30mW [1] = 05 100mW = 10 200mW = 20 500mW = 50 1W = 1W 2W = 2W 5W = 5W 10W = WW	C = C C+L = B Special = 0	SM28 = 1 PM1550 = 2	Mini-benchtop = 1 Benchtop = 2 Component = C Special = 0	Non [4] = 1 USB = 2 RS232 = 3 Special = 0	Non = 11 6dB = 66 3dB = 33 2dB = 22	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 LC/PC = 7 LC/APC = A LC/UPC = U Special = 0

[1]. The low-cost/low-power C-band is packaged in a plug-play mini-benchtop, operates with a fixed output only and does not include a computer interface.

[2]. Benchtop units feature USB/RS232 connectivity with a GUI for enhanced control. The component version includes pin connections, and an optional matching adapter PCB for USB/RS232 interface with a wall-pluggable power supply is available for easy control and power management ($278 each).

[3]. Standard connectors support up to 0.5W; exceeding this limit may damage the connector and, in turn, the laser core due to strong reflections. For high-power applications, we offer high-power connectors, which must be used in pairs.
Regular fiber connector has PER ~22dB. Connector with PER >27 dB is available using special process

[4]. Non-interface option is only available for fixed output power 10mW and 30mW versions.

[5]. Fixed output power 10mW and 30mW versions only have non-flatness-filter option.

[6]. The default connector configuration uses fiber with 0.9 mm buffer protection. The connector cannot be installed directly onto bare fiber because the bare fiber is prone to damage during shipping. However, the connector can be assembled on bare fiber if a 3 cm protective loose tube is added for reinforcement. The customer may remove this protective tube after testing. The optical power handling of a standard connector is less than 0.5 W for SMF-28 fiber and decreases further for smaller-core fibers.

[7]. The component format is designed for OEM integration. For laboratory and university use, only the benchtop protected version has one year warranty.

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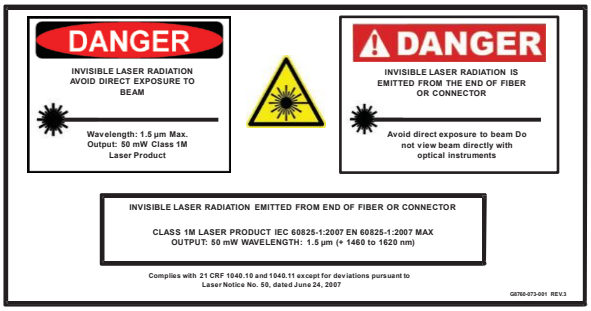
Laser Safety

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.

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