1270-1650nm Ultra Broadband Light Source

SM, PM, >350nm range, > -35dBm/nm

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Return to the Webpage

The UBLS series of Fiber Coupled Broadband Light Source delivers stable, single-mode light output across an extensive wavelength range of over 350 nm at greater than -35 dBm/nm, with minimal polarization. The UBLS integrates multiple broadband lasers. When equipped with all wavelength peak options (1300 nm, 1400 nm, 1480 nm, 1550 nm, 1620 nm), a single unit can cover all communication bands: O, E, S, C, and L. External modulation enables lock-in amplifiers for highly sensitive measurements, while the low polarization ensures accurate, consistent readings for high-PDL components.

Features

- Wideband High Power Light Source
- Low Degree of Polarization
- Power Output: > -35dBm/nm

Applications

- Material Spectral Analysis.
- WDM Components Manufacturing and Testing.
- Telecomm and Datacomm System
- Optical Coherence Tomography.

Specifications

Parameter	Min	Typical	Max	Unit
Wavelength Range	1270		1650	nm
Power Output		-35		dBm/nm
Peak Power Density	> -25		> -20	dBm/nm
Degree of Polarization		<10		%
Power Stability (15 minutes)		< 0.02		dB
External Modulation Bandwidth		DC ~ 2MHz		
Weight		< 10		lb
Power Consumption			20	W
Voltage Input	100		240	VAC
Operation Temperature	-5		40	℃
Storage Temperature	-40		85	℃

Note: 800, 920, 980, and 1045nm sources, as well as other power level options are available upon request.

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]:

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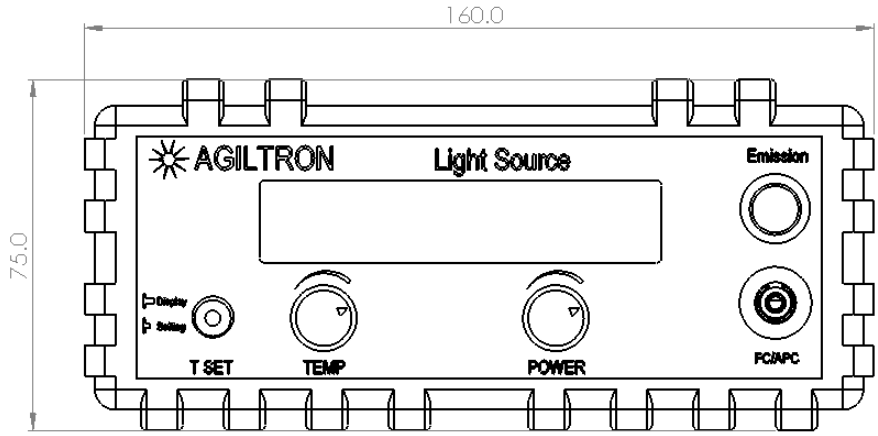
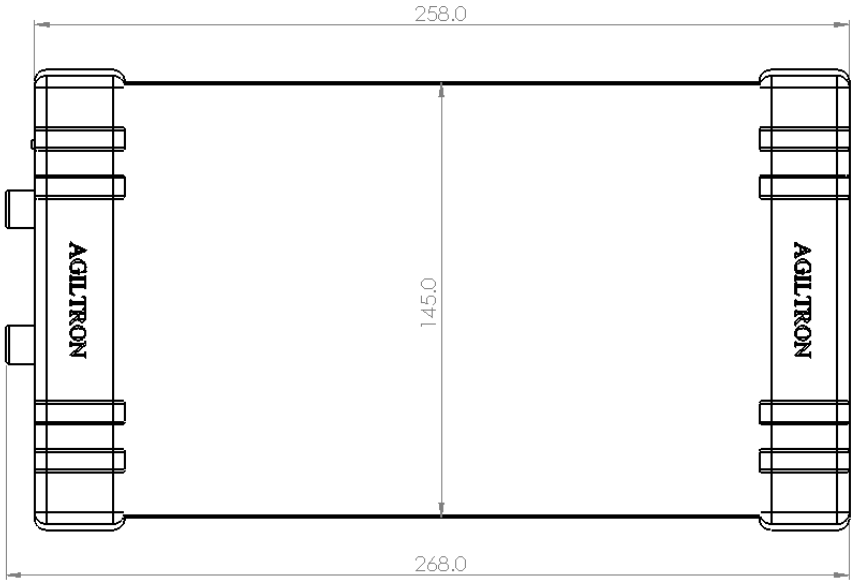
Mechanical Dimension (mm)





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

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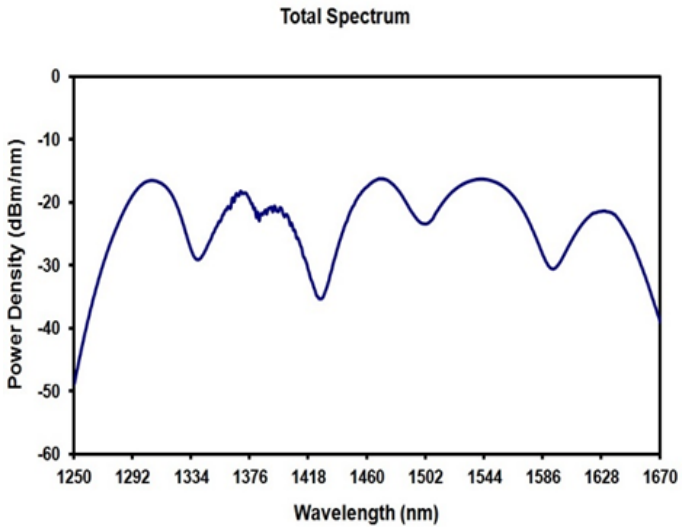
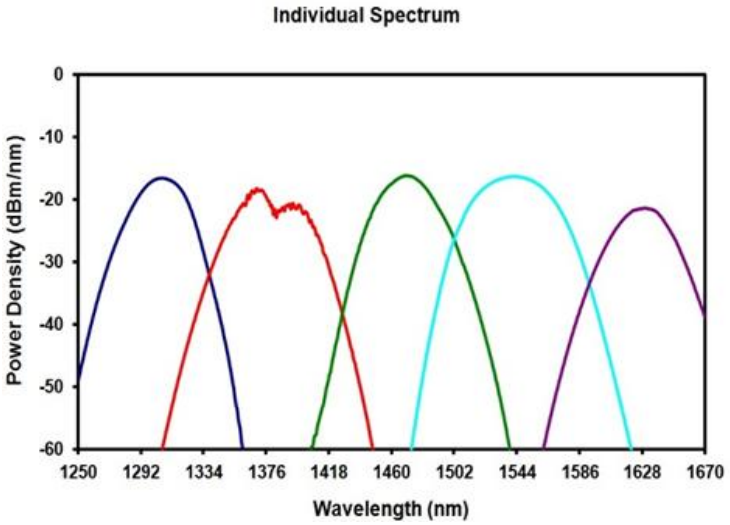
Operation Manual

- Plug in power cable
- Turn on Power Switch
- Connect a fiber path cable with matching connector (FC/APC is the default)
- Push the Emission switch to turn on the laser
- Connect the modulation signal to the BNC connector

Typical Spectrum





Ordering Information (Part Number)

	☐	☐	☐	☐	☐	☐	☐	☐	☐
Prefix	**Configuration**	**1310nm**	**1400nm**	**1480nm**	**1550nm**	**1620nm**	**Modulation**	**Fiber Type**	**Connector [1]**
UBLS-	Standard = 1	Yes = 3 No = 2	Yes = 4 No = 2	Yes = A No = 2	Yes = 5 No = 2	Yes = 6 No = 2	No = 2 Yes = 1	SM28 = 1 PM1550 = 2	FC/APC = 3 SC/PC = 4

[1]. 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.

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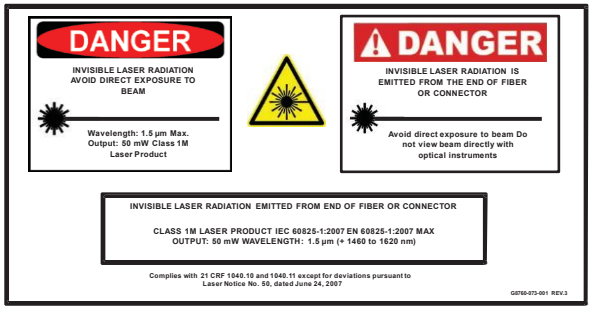
Laser Safety

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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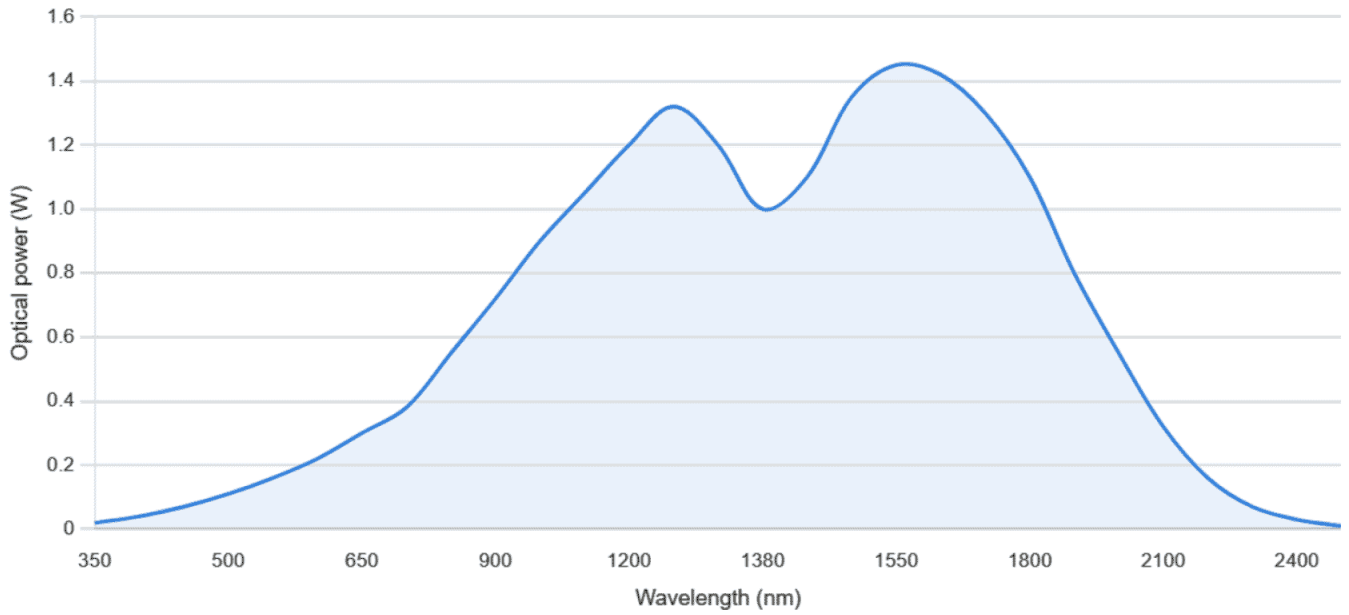
Regular Single Mode / Polarization Maintaining Fiber Optical Power Handing vs Wavelength



Single mode fiber optical power is limited by nonlinear effects in addition to absorption that increase loss and generate heat. The curve shows the approximate safe CW power envelope for standard single-mode fiber. Actual limits depend on fiber design, core size, length, and laser characteristics. Specialty fibers can significantly increase the power limit.

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