

Ultrabroad Fiber Coupled ASE Source

450-2300nm single mode, perfect white light source, up to 7W



DATASHEET

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Features

- Ultra-Broad 500 -1900nm
- Singel Mode Output
- 3W Total Power as Default
- 7W Total Output available
- No Polarization Dependence

Applications

- Sensor
- OTC
- Spectroscopy
- Testing/Characterization
- Metrology

The UASE is an ultrabroadband amplified spontaneous emission (ASE) source available as a ready-to-use benchtop unit. It offers a continuous spectral range from 500 nm to 1900 nm with minimal polarization dependence, delivering up to 7 W of average optical power with a power density exceeding 15 dBm/nm and stability better than 0.5% RMS. The UASE can also be configured as a highly stable polarized light source with an extinction ratio up to 35 dB and minimal variation with time or temperature, making it ideal for polarization-sensitive applications. The standard output is SM28 fiber, while other fiber options are available. The UASE is based on a supercontinuum laser architecture with two selectable repetition rate options—100 kHz and 4 MHz. An optional output isolator is available to ensure long-term stability in systems subject to back reflections.

Specifications

Parameter	Min	Typical	Max	Unit
Spectrum Range	450		2300	nm
Average Power (over the entire spectrum)		> 3	7	W
Repetition Rate *	40	100	4000	kHz
Visible Range Average Power		150		mW
Power Density (800-1700nm)	15			dBm/nm
Pulse Duration (at 1060nm)		< 10		ps
Average Power Stability (std. dev.)		< 0.5		%
Output Power Adjustability	1		100	%
Beam Diameter		< 4		mm
Spatial Mode Quality (M ²)		< 1.2		
Polarization	Unpolarized			
PCF	SC-5.0-1040 (NKT)			
PCF 1 st Zero Dispersion Wavelength		1050		nm
PCF Mode Field Diameter		4.6		μm
PCF Background Loss @1606nm		14		dB/km
PCF Background Loss @1550nm		10		dB/km
PCF Cladding Diameter		125		μm
PCF Outer Coating Diameter		245		μm
Output Port	Single Mode Fiber. 1m length			
Optical Output	Collimated(in the range 450-1000nm), Single-mode across full spectrum			
Cooling	air cooling			
Power Requirements	220 V / 110V - 50/60 Hz			
Operating Temperature	20		30	°C
Storage Temperature	-40		80	°C

* Two types of pump lasers: one with max repetition of 100kHz, another with 4000kHz.

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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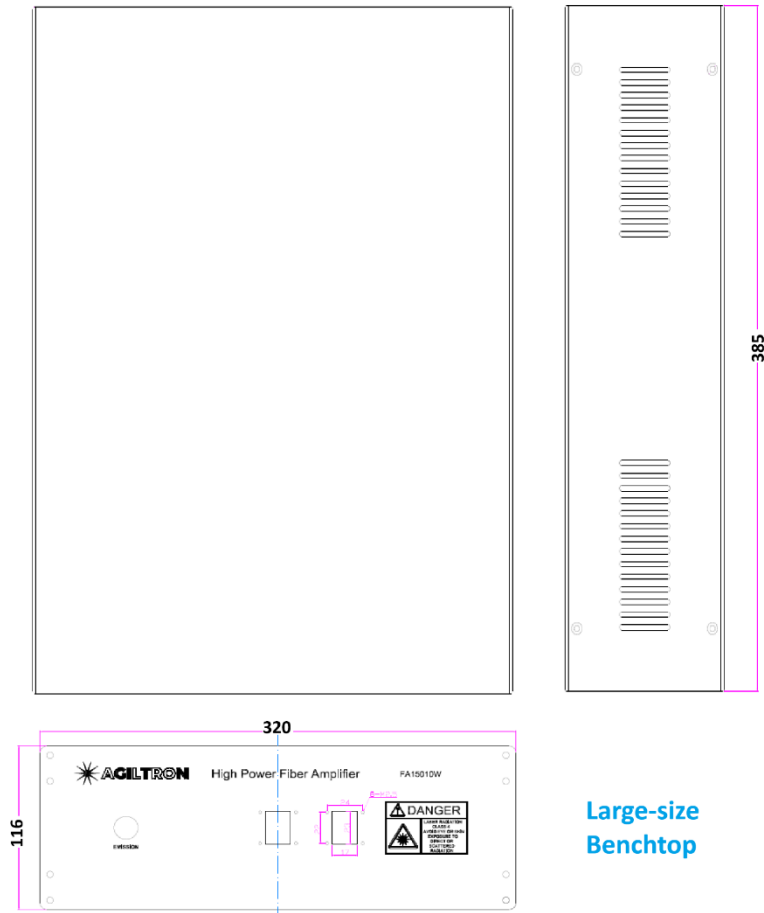
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Dimensions (mm)



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

Accessory - Tunable Output

We have a tunable laser version for both free space and fiber output

<https://agiltron.com/product/fiber-coupled-single-mode-tunable-laser-450-2200nm/>

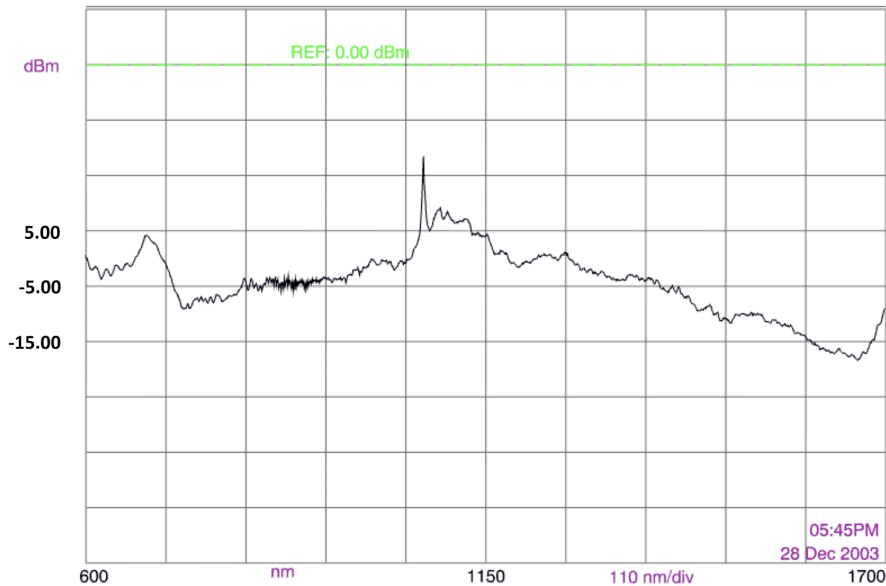
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Typical Spectrum



Ordering Information

Prefix	Wavelength	Output Power	Interface	Repetition	Isolator	Output ^[1]	Connector ^[2]	Collimator ^[3]
UASE-	500-1800 = 1 450-2100 = 2 Special = 0	3W = 03 5W = 05 7W = 07 10W = 10 15W = 15 20W = 20 Special = 00	Non = 1 USB = 2 RS232 = 3 Special = 0	< 100 kHz = 1 < 4 MHz = 2	Non = 1 Yes = 2	SM28 = 1 Photonic Fiber = 1 50/125 Fiber = 2 105/125 Fiber = 3 Hi1060 = A Special = 0	None = 1 FC/PC = 2 Special = 0	Non = 1 4mm/50mm = 2 Special = 0

[1]. The Photonic Crystal Fiber (PCF) output configuration provides a free-space output. Adding a connector is intended solely for end-face protection, not for mating with another fiber, as mode mismatch can cause severe optical damage. We can splice a standard fiber to the PCF to allow coupling into a regular fiber via a connector; however, if SM28 fiber is selected, the connector can only handle up to about 1 W of optical power. Therefore, bare fiber output is recommended for SM28 applications requiring further splicing without output power limitation.

[2]. The connector is only for regular fiber. For PCF connector can be used to protect the end face, but not for butt coupling. Photonic crystal fiber requires a mode field adaptor to couple into a glass fiber, which we produce.

Regular fiber connector has PER ~22dB. Connector with PER >27 dB is available using special process.

[3]. 4mm/50mm- 4mm diameter parallel beam with a beam waist at a distance of 50mm

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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.

