Ultrabroad Band Single Mode Supercontinuum Laser

(450-2300nm, single mode, perfect white light source, >3W)

DATASHEET

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The SUPL is an ultra-broadband, single-mode supercontinuum laser spanning the 450-2300 nm spectral range, delivering over 3W of average power with exceptional stability (<0.5% standard deviation). It utilizes a 1060 nm pulsed fiber laser to pump a strand of photonic fiber, which maintains single-mode output over a broadband range. The SUPL is a turn-key benchtop plug-and-play unit. Its spatial coherence and broad spectrum make it an excellent alternative to traditional lamps, single-line lasers, LEDs, and ASE sources. This versatile white light source is ideal for a wide range of scientific and industrial applications, including absorption/transmission measurements for material characterization, VIS, NIR, and IR spectroscopy, single-molecule spectroscopy, and fluorescence excitation.

Features

- VIS+NIR Power Balanced
- Outstanding Power Stability
- 150 mW Average Power in Visible Range

Applications

- Microscopy (FRET, TIRF, CLSM…)
- Absorption /Transmission / Reflection Spectroscopy
- Optical Device Characterization
- Metrology
- Hyperspectral Imaging

Specifications

Parameter	Min	Typical	Max	Unit
Spectrum Range	450		2300	nm
Average Power		> 3		W
Repetition Rate		80		MHz
Visible Range Average Power		150		mW
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			
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

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]:

Rev 11/08/24

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Dimensions (Unit: mm)

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

Accessory - Tunable Output

The SUPLF is the accessory for supercontinuum lasers to choose any wavelength in the visible range for bioimaging, nanophotonic and more.

- Spectral Range: 450-750 nm
- Optical Output: Free Space or 50/125 Multimode Fiber Output (1m) with FC/PC connector
- Linewidth: 10 nm to 300 nm
- Selectable lines: 1
- Resolution: 1 nm
- Power Transmissions: >75% (free space output) / > 25% (fiber output)
- USB computer control interface with GUI

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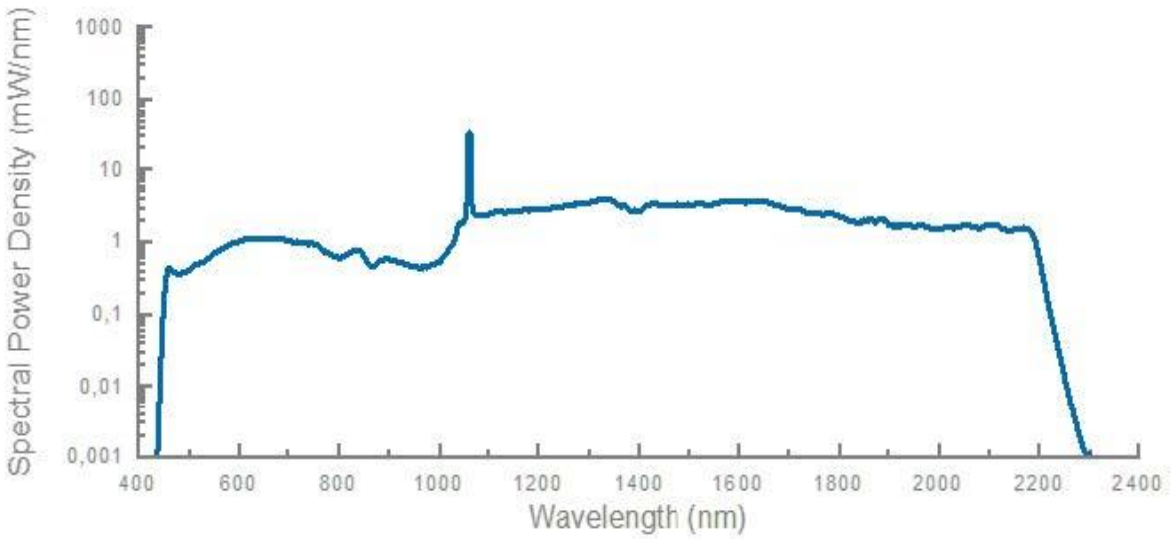
Typical Spectrum



Ordering Information

	☐☐	☐☐	☐	☐	☐	☐
Prefix	**Config**	**Total Output Power**	**Interface**	**Tunable***	**Output**	**Connector**
SUPL-	Standard = 11 Special = 00	3W = 03 5W = 05 10W = 10 15W = 15 20W = 20 25W = 25 Special = 0	Non = 1 USB = 2 RS232 = 3 Special = 0	Non = 1 Yes = 2	Photonic Fiber = 1 50/125 Fiber = 2 105/125 Fiber = 3 Special = 0	None = 1 FC/PC = 2 Special = 0

***** This selection includes accessory SUPLF which is a grating based tunable filter with USB control $4550

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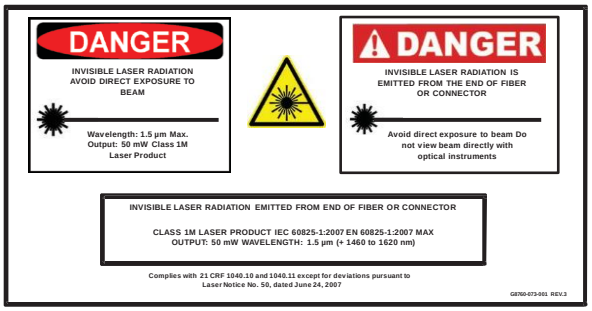
Laser Safety

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.



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