

BroadLighter-M-VA Benchtop Broadband Light Source with internal VOA. Product Technical Specification.



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Date of release: 08 June 2015

All specifications are subject to change without notice.

Product Description:

Superlum BroadLighter-M-S devices are high power, broadband and very low coherence AC powered bench-top light sources based on fiber coupled superluminescent diode modules (SLD).

The internal structure of any BroadLighter-M has modular design consisting of an optical unit with SLD and other optical components, driver unit and main unit. The driver unit has an integrated DC power supply, as well as driving electronics and temperature control for SLDs. Main unit acts as a motherboard for optical and driver units.

Any M-S series Broadlighter have one SLD module inside, which determines output optical parameters of the device. The design of integrated SLD module controller ensures excellent operation stability of the light sources.

Built-in Output Level Control with Optical Attenuator:

BroadLighter-M-VA offers an output control via integrated variable optical attenuator. Optical attenuator provides ten discrete power levels from 10% to 100% output without a significant spectral distortion¹. Level control is available via front panel interface and a remotely via control software.

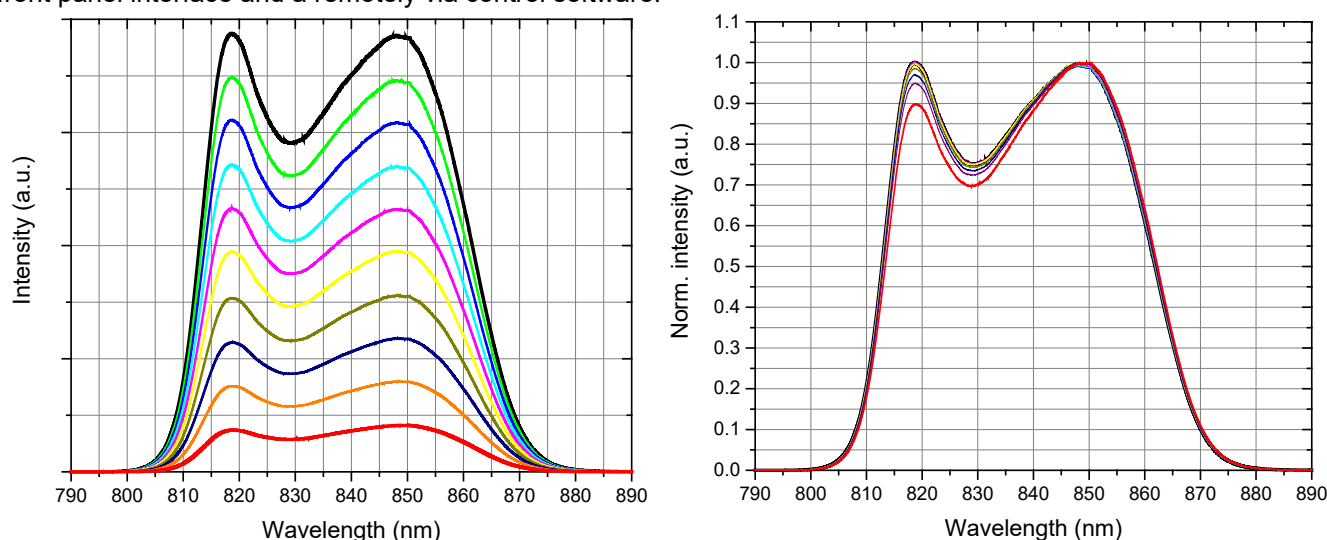


Figure. Sample spectra of BroadLighter-M-S840.50.25-VA output. Left – optical spectra at different output powers from 100% (black line) to 10% (red line) with 10% step. Right: the same normalized: black line – 100% output; red line – 10% output; other colors – levels between 20%...90%.

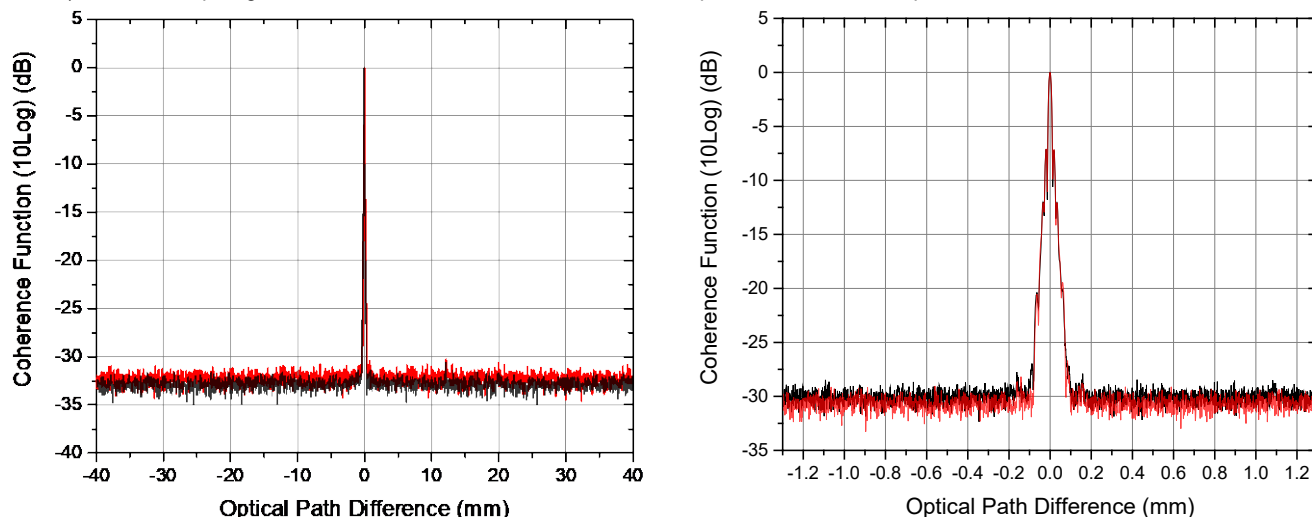


Figure. Sample coherence measurements of BroadLighter-M-S840.50.25-VA output. Left: coherence at different output power of 100% (black line) and 10% (red line) measured with 40 mm span. Right: the same with 1.3 mm span .

¹ Spectral distortion of up to 25% is possible at low power levels.

Product Features:

- LCD screen with easy to use graphical user interface
- Built-in multichannel highly stable driver and temperature controller
- Built-in optical isolator (optional)
- Built-in optical attenuator
- USB interface
- 9-pin DSUB connector for remote control with TTL logic
- Wide range voltage power supply suitable for the 100-240 V AC power lines
- FC/APC fiber optic connector
- Remote interlock

Physical Specifications:

- Overall dimensions (WxHxD): 251x112x192 mm
- Weight (max): 4 kg
- Metal case enclosure

Electrical Power Requirements:

- 100-240VAC, 50/60Hz 40 VA MAX
- IEC 320 compatible AC power cord plug

Environmental Specifications:

- Operating temperature range²: +5 °C to +35 °C
- Storage temperature range³: -30 °C to +70 °C
- Relative humidity < 80%

Package Contents:

- BroadLighter-M Broadband SLD Light Source
- AC Power Cord
- Master Key
- Optical Patchcable
- Quick Start Guide
- Acceptance Test Report
- CD-ROM
- USB interface cable

² Operating temperature range may vary depending on the configuration.

³ Storage temperature range may vary depending on configuration.

Sample Optical Performance Parameters:

Model number	Power, mW		Center wavelength, nm			3 dB spectrum width, nm		Ripple, %		Spectral flatness, %
	Min.	Typ.	Min.	Typ.	Max.	Min.	Typ.	Typ.	Max.	
M-S840.50.25-VA	15	16	830	840	850	48	53	2.0	5.0	<45

[CUSTOM VERSIONS AVAILABLE UPON REQUEST.](#)

Fibers and Connectors:

Parameter	Type	Comments
Fiber type	SM	Corning HI780 fiber
Mode field diameter / Numerical Aperture (NA)	5 μ m / 0.14	
Connector type	FC/APC	
Connector key type	Tight-fit/narrow	



**WARNING – CLASS 3B INVISIBLE LASER RADIATION AVOID
EXPOSURE TO BEAM
CLASS 3B LASER PRODUCT
Wavelength: 750-1100 nm
CW/Pulsed: CW
Max Average Power: < 25 mW
Complies with IEC/EN 60825-1:(2014)**