SUPERLUM

S840.35.5S-MINIBUT. Uncooled SM fiber SLD modules at 840 nm with bell-shaped spectrum

Superluminescent Diodes are semiconductor emitters combining the high brightness of laser diodes with a broad spectrum of LEDs. They are light sources of choice for numerous applications based on low coherence measurements, spectroscopy, low speckle illumination, and others.

Superlum offers a wide range of SLD modules and SLD-based light sources. Please also check our SLD controllers and light source modules to ensure safe and stable SLD operation in your system.

Electro-Optical Specifications

Parameter	MIN	TYP	MAX
Output power ex SM fiber at +25 °C case, P_{op}, mW,	-	5.0	8.0
Output power ex SM fiber at +55 °C case, P_{op}, mW,	2.0	2.5	-
Forward current*, mA	-	150	-
Forward voltage*, V	-	-	2.5
PD monitor current at P_{op} power, µA	100	-	-
Central wavelength*, nm	830	840	850
3 dB spectral width*, nm	30	35	-
Residual spectral modulation depth*, %	-	2.0	5.0
Wavelength shift, dλ/dT, nm/°C, to λ at +25 °C	-	0.28	-

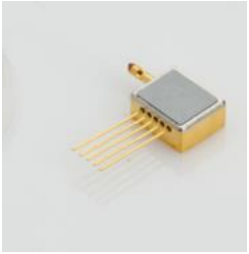
* at +25 °C case temperature and 5.0 mW output power ex SMF fiber.

All parameters are measured at optical feedback not exceeding 1E-3

Absolute Maximum Ratings

Parameter	MIN	TYP	MAX
SLD output power ex SM fiber, mW	-	-	10.0
SLD forward current, mA	-	-	200
SLD forward voltage, V	-	-	2.6
PD monitor bias voltage, V	-	-	5.0
Operating temperature range, °C	−20	-	+55
Storage temperature range, °C	−40	-	+80

Attention – stresses beyond listed in "Absolute Maximum Ratings" may result in immediate SLD failure. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.



Features

- 5 mW output power at +25 °C, 2.5 mW at +55 °C
- Operating temperature range: −20 °C …+55 °C
- Miniature package
- SMF pigtail; PMF upon request
- FC/APC connectors, LC/APC upon request
- Low cost

Applications

- optical coherence tomography
- optical sensors
- optical metrology
- atomic force microscopy
- others

The following marking should be used for ordering:

S840.35.5S-MINIBUT – SMF pigtail, FC/APC;

Modules will be shipped FC/APC finished if not specified otherwise in the PO. PMF and MMF pigtailed SLDs are available upon request.

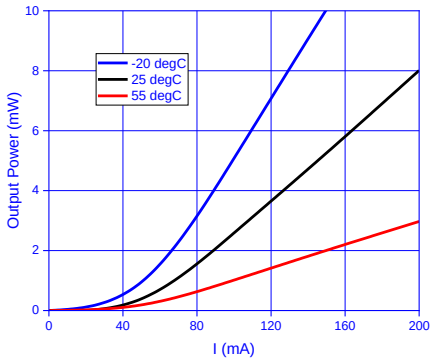
Superlum offers customization of its products to fit the requirements of every customer. Please get in touch with us for more details before ordering if you need customer-specific SLD parameters.

SUPERLUM

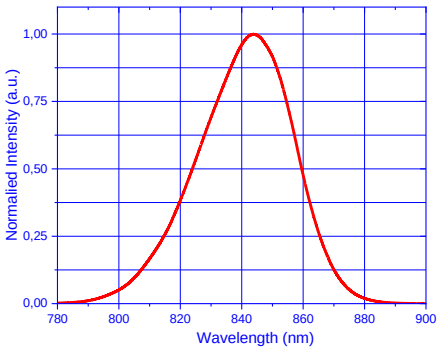
S840.35.5S-MINIBUT. Uncooled SM fiber SLD modules at 840 nm with bell-shaped spectrum

TYPICAL PERFORMANCE EXAMPLES

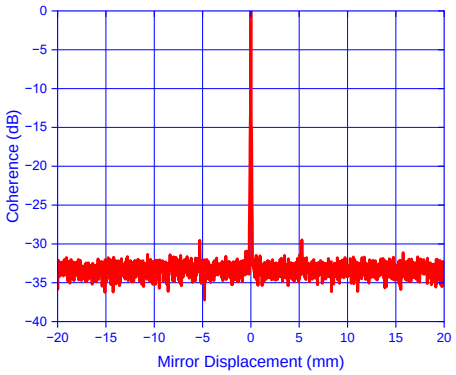
Light-current curves



Spectrum at 5 mW output



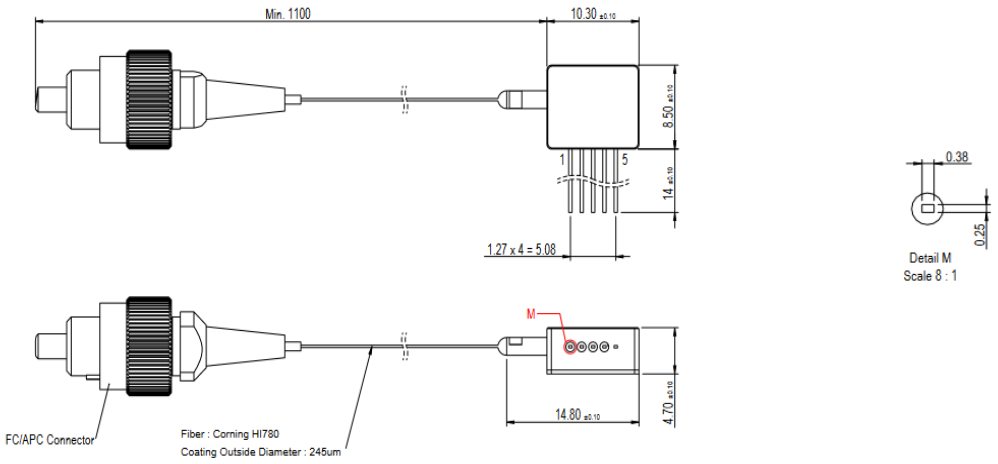
Coherence at 5 mW output



Notes: examples demonstrate typical performance only. Actual performance may vary from sample to sample and from lot to lot. All specifications are subject to change without notice. **Coherence function is measured by Michelson interferometer.** Mirror displacement = Optical path difference / 2

Attention: SLDs are sensitive to optical feedback. The higher the power, the stronger is the sensitivity. During SLD characterization, all parameters are measured at optical feedback not exceeding 1E-3.

Package Dimensions and Pinout Diagram



Pin	Description
1	PD monitor cathode (+)
2	PD monitor anode (-)
3	SLD anode (+)
4	SLD cathode (-)
5	Case GND