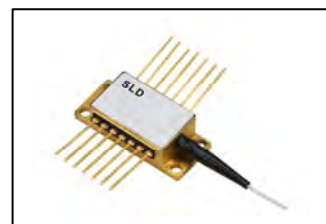


Superluminescent diodes are semiconductor emitters that combine the high brightness of laser diodes with a broad spectrum of LEDs. They are light sources of choice for numerous applications based on low coherence measurements like Optical Coherence Tomography, spectroscopy, low speckle illumination, 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.



Specifications – Optical Parameters

Parameter	MIN	TYP	MAX
Output power P_{op} , ex SM fiber, mW	12.0	15.0	–
Forward current at P_{op} , mA	–	350	450
Central wavelength at P_{op} , nm	1035	1050	1065
Spectrum width at P_{op} , FWHM, nm	70	75	–
Spectral flatness at P_{op} , dB	–	2.2	2.5
Residual spectral modulation depth at P_{op} , %	–	–	5.0
Secondary coherence subpeaks [†] at P_{op} , dB (10 log)	–	-25	-20
Slow / fast polarization ratio (PM modules) at P_{op} , dB	–	10	–
PD monitor current ^{††} at P_{op} , mA	0.1	–	–

[†] - direct measurement by Michelson interferometer

^{††} - at 5 V reverse bias

Spectral parameters refer to 15 mW typical output.

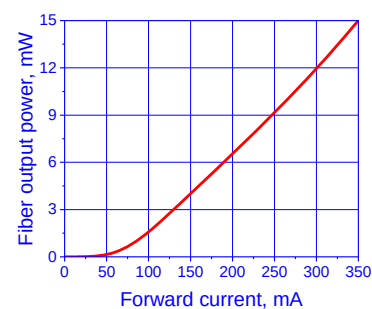
Other Parameters

SLD forward voltage at P_{op} , V	–	1.7	2.6
PD monitor bias voltage, V	–	–	5.0
Operating temperature at P_{op} , °C	-20	–	+65
Storage temperature at P_{op} , °C	-40	–	+85
Cooler current, A	–	–	2.5
Cooler voltage, V	–	–	3.2
Thermistor BETA, K	–	3892	–
Thermistor Resistance at 25 °C, kΩ	–	10	–

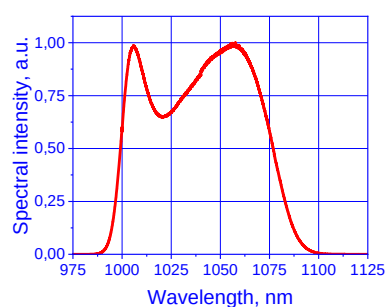
Applications

These devices open a new series of Superlum SLDs emitting in 1000 – 1100 nm spectral range. Due to their very wide spectrum, they may be of a special interest for high-resolution Optical Coherence Tomography and other similar low coherence interferometry systems, as well as spectroscopy, optical sensing and testing.

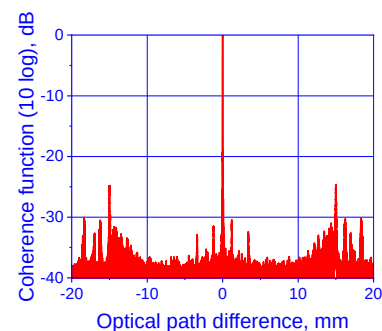
Typical Performance Examples



Light-current characteristic



Optical spectrum at P_{op}



Coherence function at P_{op}

The following marking should be used for ordering:

P/N (fiber type)

Examples : **S1050.75.15S** – as rated above, SMF pigtail, FC/APC; **S1050.75.15P**– as rated above, PMF pigtail, FC/APC.

MMF pigtailed SLDs are available upon request. Modules will be shipped FC/APC finished if not specified otherwise in the PO. SLDs with LC/APC finished fiber pigtails 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.