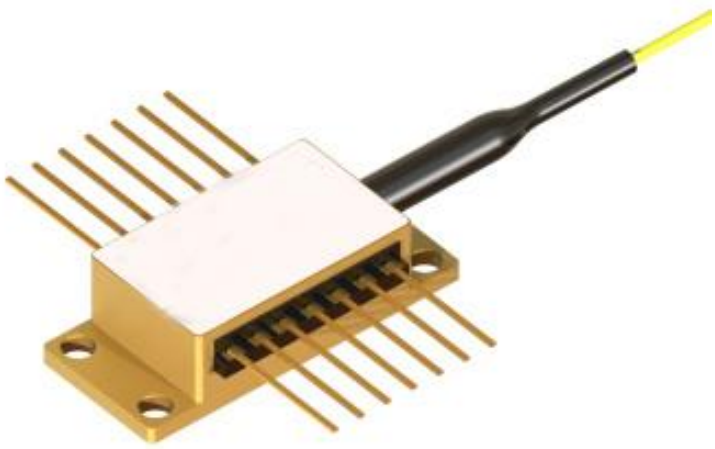
1000nm 25mW SLD Laser Diode



Product Description

Superluminescent diodes (SLDs) are semiconductor optoelectronic devices intermediate between lasers (LDs) and light-emitting diodes (LEDs). Similar to laser diodes, SLDs are based on electrically driven PN junctions, which exhibit optical activity under forward bias and produce amplified spontaneous emission over a wide wavelength range. The peak wavelength and intensity of an SLD depend on the composition of the active material and the level of injected current. SLDs are designed to provide high single-pass gain for spontaneous emission generated along the waveguide, but unlike laser diodes, the feedback is insufficient to achieve lasing action.

Product features

Broad spectrum; Low coherence; High output power; Fiber-coupled design; High output stability

Part Number

MP-SLD-1000-25-14BF-PA

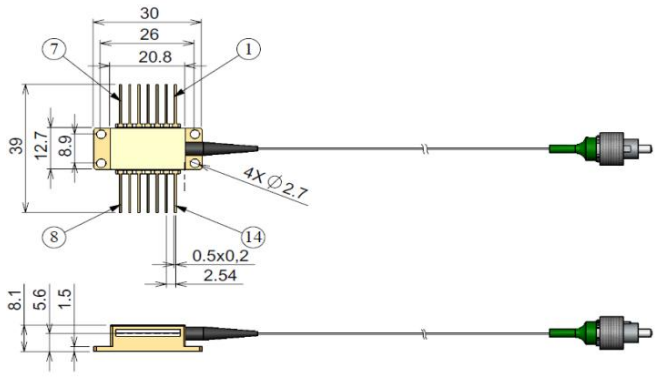
Application area

Optical Coherence Tomography (OCT) | Distributed Fiber-optic Sensing (DAS/DTS) | Fiber-optic Gyroscopes (FOG) | Quantum Optics | WDM System Verification

Core parameters

Average Wavelength	Spectral Width (FWHM)	Output Power
1000 nm	3MHz	25 mW

Dimension Drawing



Pin identification:

1	TEC "+"
2	Thermistor
3	-
4	-
5	Thermistor
6	-
7	-
8	-
9	-
10	SLD anode "+"
11	SLD cathode "-"
12	-
13	Case
14	TEC "-"

General Parameters

Detailed parameters

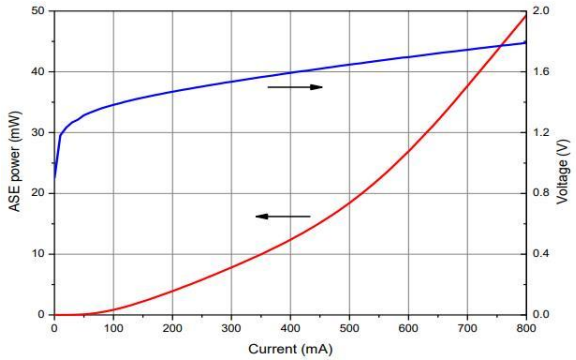
Specifications: Test conditions: continuous operation, chip temperature 25°C, case installed on room temperature heat sink					
Parameters	Symbols	Minimum	Typical values	Maximum	unit
Operating output power	Pout	15	25		mW
Average wavelength	λm	985	1000	1015	nm
Bandwidth @ -3dB	Δλ	80	100		nm
Spectral inclination amplitude			1	3	dB
The maximum position of the ground state	λg	1015	1030	1045	nm
The maximum position of the excited state	λe	940	955	970	nm
ASE Spectral Ripple*			0.02	0.3	dB
Polarization extinction ratio	PER	15	20		dB
Operating current	Iop		600	700	mA
Forward voltage	Vf		1.7	1.9	V

Rising time	**Trise**		**0.15**		**ns**
Drop time	**Tfall**		**0.5**		**ns**

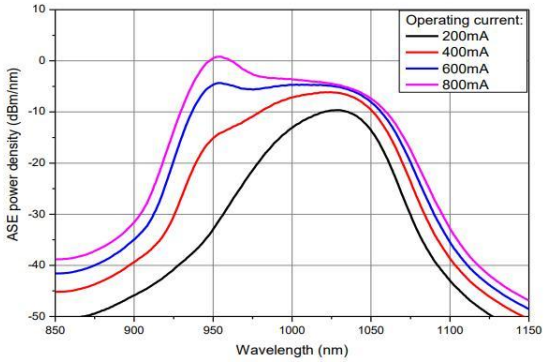
*** RMS in the 1nm range at ASE max, 10pm resolution**

Typical performance is for reference only

Light-Current-Voltage Characteristics



Spectral Characteristics



Wavelength power density curve