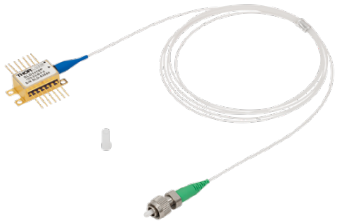
Superluminescent Diode, 1315 nm, Butterfly Package, PM Fiber



SLD1310P

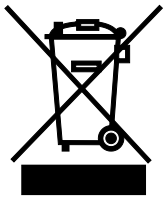
Description

The SLD1310P is a 1315 nm broadband superluminescent diode (SLD) with an integrated dual-stage optical isolator. This SLD is housed in a butterfly package with a TEC and integrated thermistor that allow for temperature control, thus stabilizing the power and spectrum. The output is coupled to 1.5 m of single mode Corning PM13-U40A (PM) fiber terminated with an FC/APC connector.

Specifications

Absolute Maximum Ratings[a]	
Absolute Max Current	1000 mA
Operating Case Temperature	0 to 70 °C
Storage Temperature	-10 to 70 °C
Pin Code	14 Pin, Type 1

a. Please note that exceeding the absolute maximum ratings above may cause device failure.



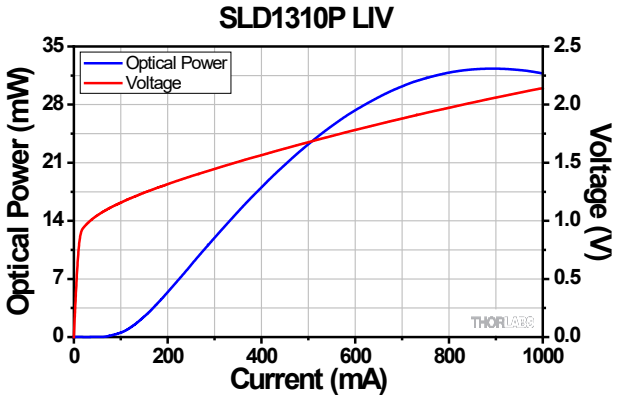
CW; T_{CHIP} = 15 - 30 °C, T_{CASE} = 0 - 70 °C

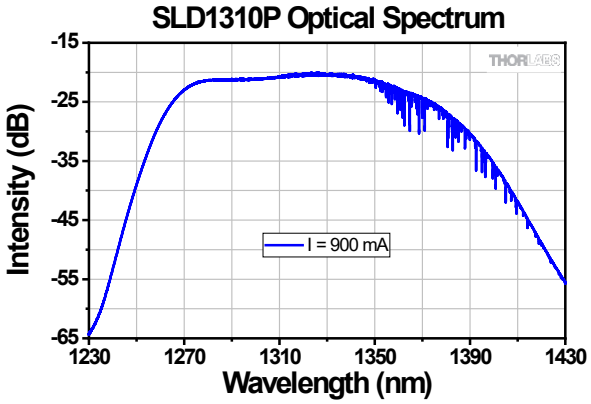
Operating Specifications[a]				
	Symbol	**Min**	**Typical**	**Max**
Center Wavelength[b]	λ_C	1300 nm	1315 nm	1330 nm
Operating Current	I_{OP}	-	900 mA	1000 mA
ASE Power[c]	P_{ASE}	22 mW	30 mW	-
Optical 3 dB Bandwidth[c,d]	BW	75 nm	90 nm	-
Gain Ripple (RMS)[c]	δG	-	0.12 dB	0.3 dB
Forward Voltage[c]	V_F	-	2.0 V	2.3 V
Polarization Extinction Ratio (PER)	r_{ex}	-	23 dB	-
Isolation	ISO	-	50 dB	-
TEC Operation (Typical / Max @ T_{CASE} = 25 °C / 70 °C)				
TEC Current	I_{TEC}	-	0.7 A	1.5 A
TEC Voltage	V_{TEC}	-	1.0 V	4.0 V
Thermistor Resistance	R_{TH}	-	10 kΩ	-

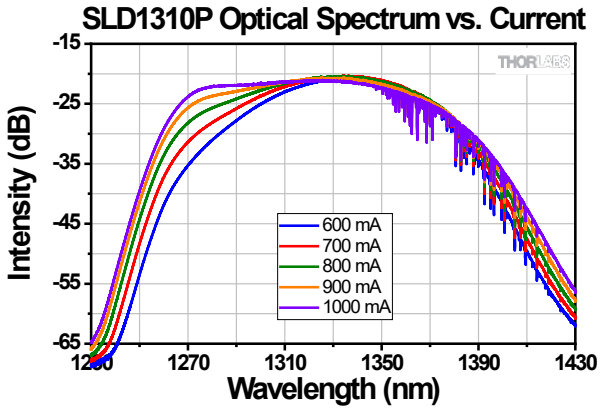
a. These operating specifications are a consistent set of values which will yield the specified performance.
b. The center wavelength for an SLD with a flat-top spectral shape is defined as the midpoint of the 3 dB bandwidth.
c. At Operating Current
d. At the minimum ASE power, we guarantee the minimum 3 dB bandwidth.

Fiber Specifications	
Fiber Type	Corning PM13-U40A (PM)
Mode Field Diameter	9.3 ± 0.5 µm @ 1300 nm
Numerical Aperture	0.12
Fiber Length	1.5 m ± 0.05 m
Connector	FC/APC, 2.0 mm Narrow Key

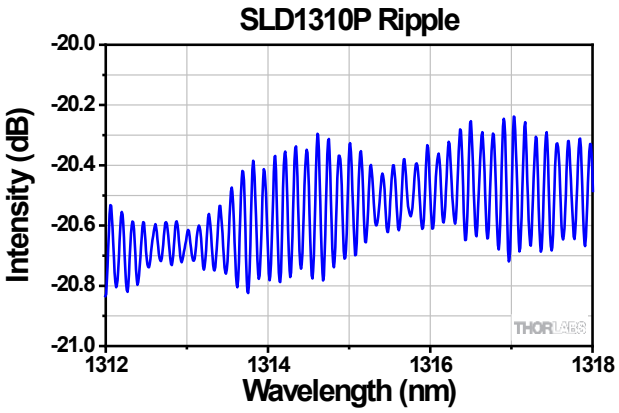
Typical Performance Plots





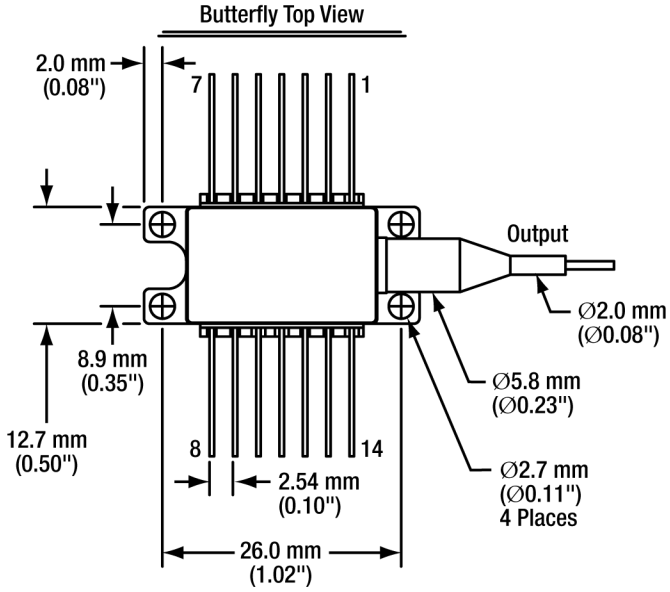


Note: As the current decreases, the bandwidth will decrease as well.



Note: The resolution of the measurement was 0.02 nm.

Drawing



PIN IDENTIFICATION	
1. TEC +	14. TEC -
2. Thermistor	13. Case Ground
3. NC	12. NC
4. NC	11. Device Cathode
5. Thermistor	10. Device Anode
6. NC	9. NC
7. NC	8. NC