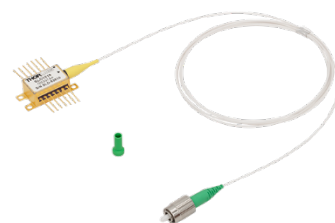


Superluminescent Diode, 1315 nm, Butterfly Package, SM Fiber

SLD1310



Description

The SLD1310 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 SMF-28e 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; $T_{CHIP} = 15 - 30\text{ °C}$, $T_{CASE} = 0 - 70\text{ °C}$

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
Isolation	ISO	-	50 dB	-
TEC Operation (Typical / Max @ $T_{CASE} = 25\text{ °C} / 70\text{ °C}$)				
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 k Ω	-

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

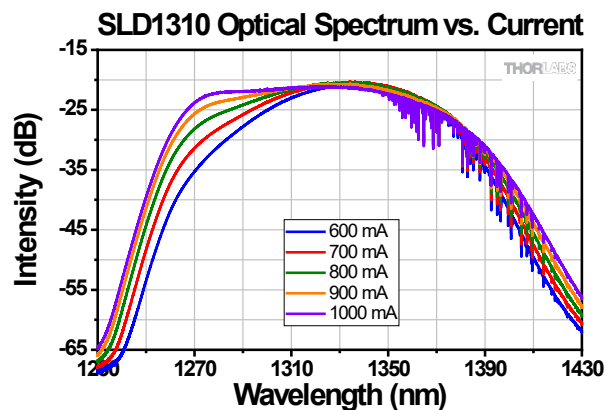
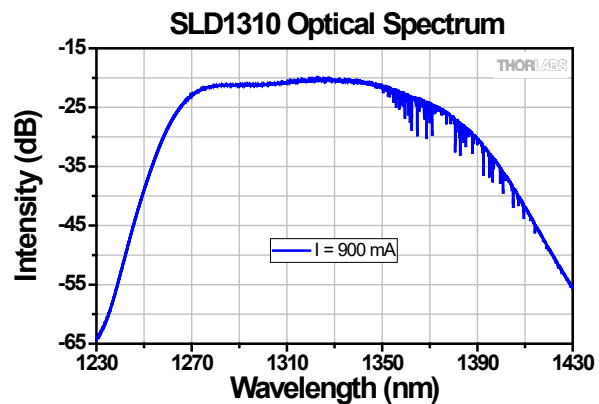
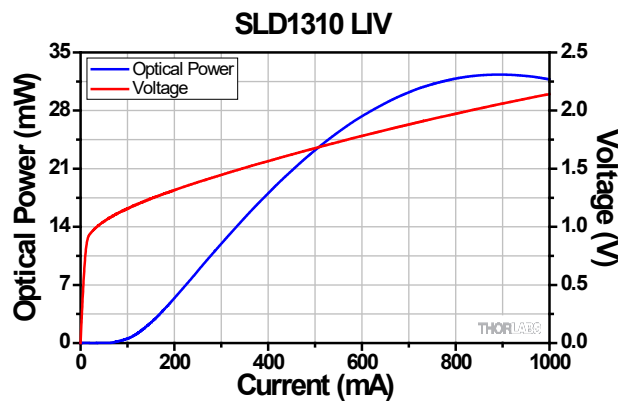


April 25, 2023

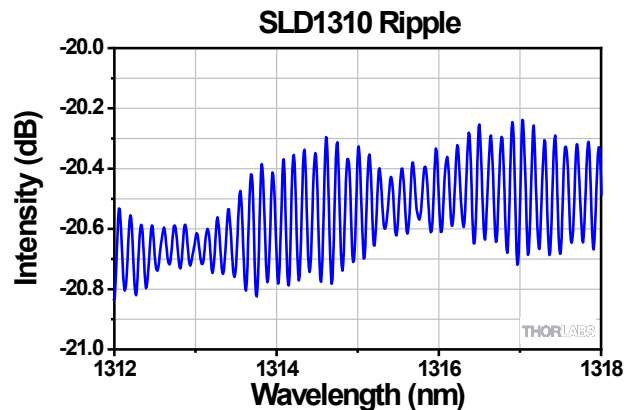
QTN048429-S01, Rev A

Fiber Specifications	
Fiber Type	SMF-28e
Mode Field Diameter	$9.2 \pm 0.4 \mu\text{m}$ at 1310 nm $10.4 \pm 0.5 \mu\text{m}$ at 1550 nm
Numerical Aperture	0.14
Core Diameter	$8.2 \mu\text{m}$
Fiber Length	$1.5 \text{ m} \pm 0.05 \text{ m}$
Connector	FC/APC, 2.0 mm Narrow Key

Typical Performance Plots

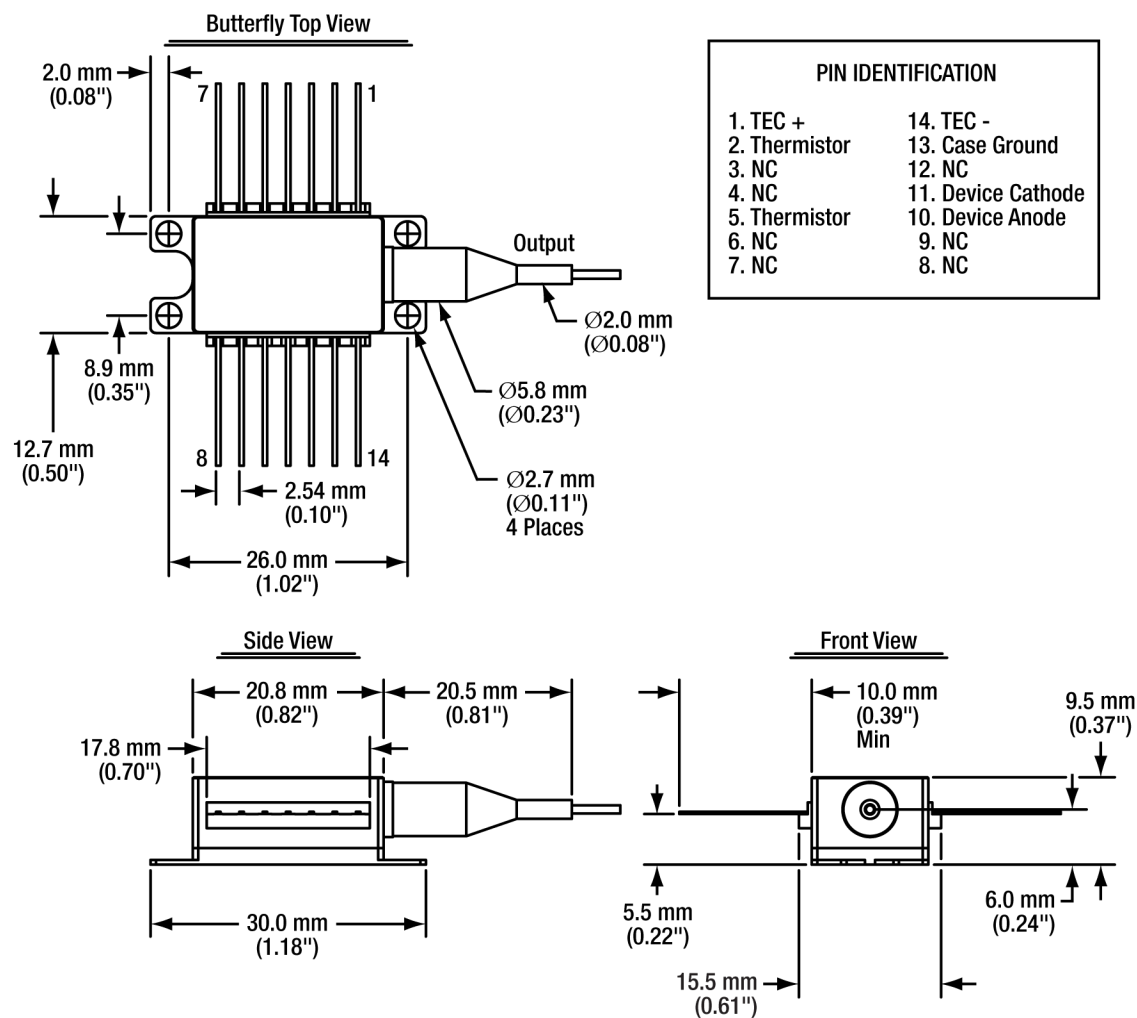


Note: As the current decreases, the bandwidth will decrease as well.



Note: The resolution of the measurement was 0.02 nm.

Drawing



April 25, 2023

QTN048429-S01, Rev A