1610nm Super luminescent Diode(SLD) Laser Diode



Description

The PL-SLD-1610-A-A81-PA 1610nm Superluminescent Diodes bridge the gap between Laser Diodes and Light Emitting Diodes.Like an LD, the SLD provides a high optical output power. PD-LD's SLD feature broadband spectrum characteristics, typically found only in LEDs, and a low coherence. Our SLD features a low coherence length having a high intensity at a narrow radiation angle. This makes the SLD much easier to couple to a fiber for a broad range of applications. SLDs are ideal for Optical Coherence Tomography, fiber sensors such as temperature and strain gauges as well as applications in test and measurement instrumentation.The diode is packaged in 14-pin standard butterfly package with monitor photodiode and thermo-electric cooler (TEC). Module is pigtailed with 0.7-1.0 m of single mode polarization maintaining fiber and connectorized by FC/APC connector.

Features

- Optical output: 5mW
- FC-APC connector
- Efficient coupling into single mode fiber
- 14-pin butterfly package
- High optical output power
- Wide spectral half width
- Built-in monitor photo diode

Application

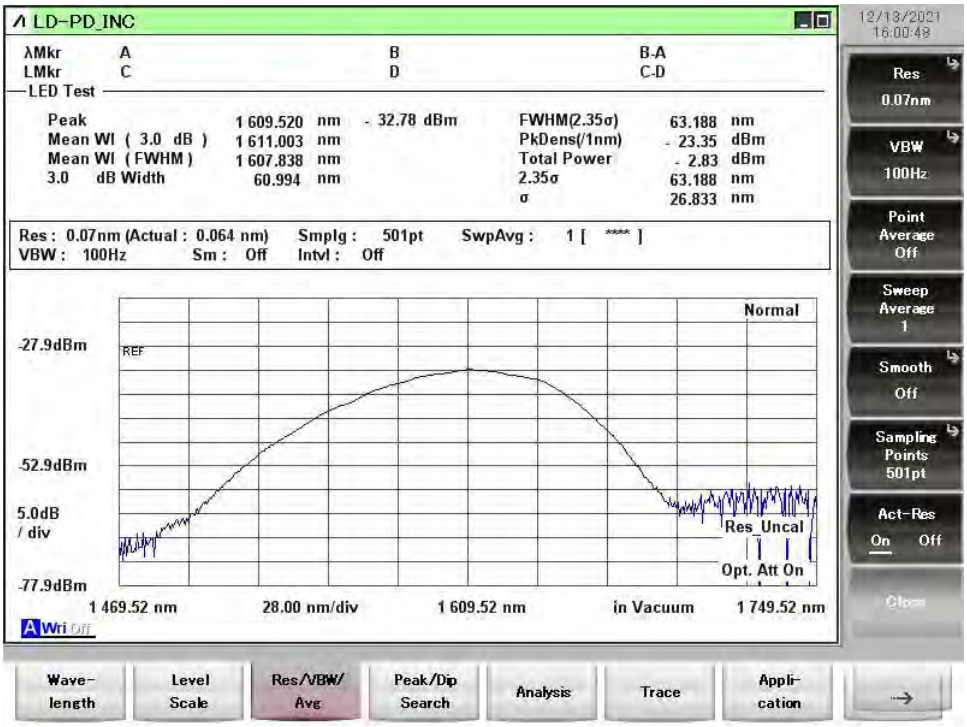
- Fiber transmission systems,
- Fiber optic gyros
- Fiber optic sensors

Laser Specifications

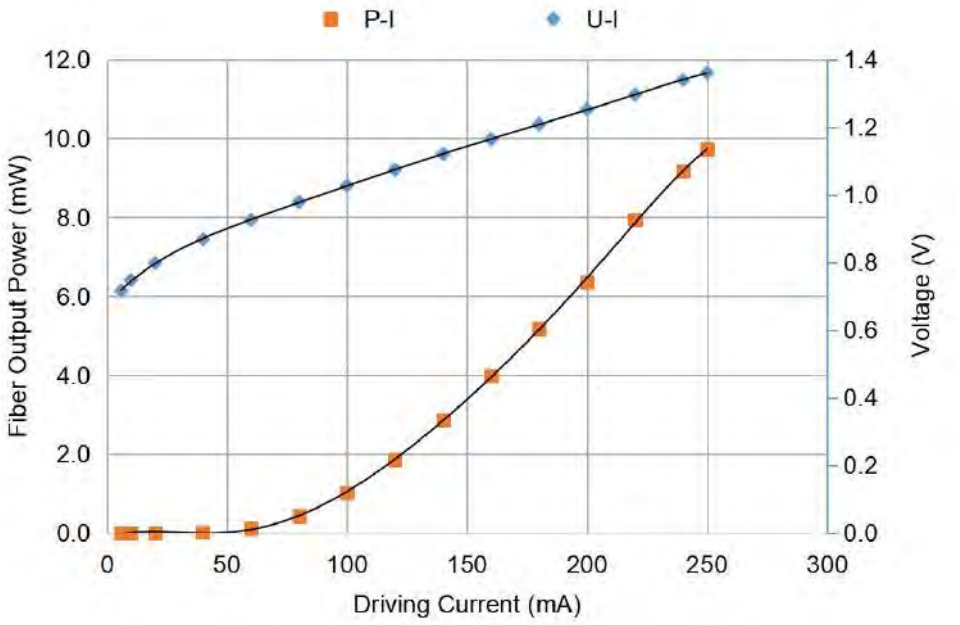
Electrical/Optical Characteristics (Tsub=25°C, CW bias unless stated otherwise)

Parameter	Symbol	Min	Typ	Max	Unit
Centre Wavelength	λ	1600	1610	1620	nm
Spectral Width	Δλ	60	70		nm
Threshold Current	Ith		30	40	mA
Operating Current	Iop		200	350	mA
Fiber output Power	Pf		10		mW
PD Dark Current (VRD=5V)	Id			0.1	uA
Extinction Ratio	PER	17	20		dB
Coupled Fiber Type	SMF-28E/PM1550				
Forward Voltage	Vf		1.8	2.5	V
Thermistor Resistance	RT	9.5	10	10.5	KΩ
Thermistor Temp. Coefficient			-4.4		%/°C
Connector	FC/APC				

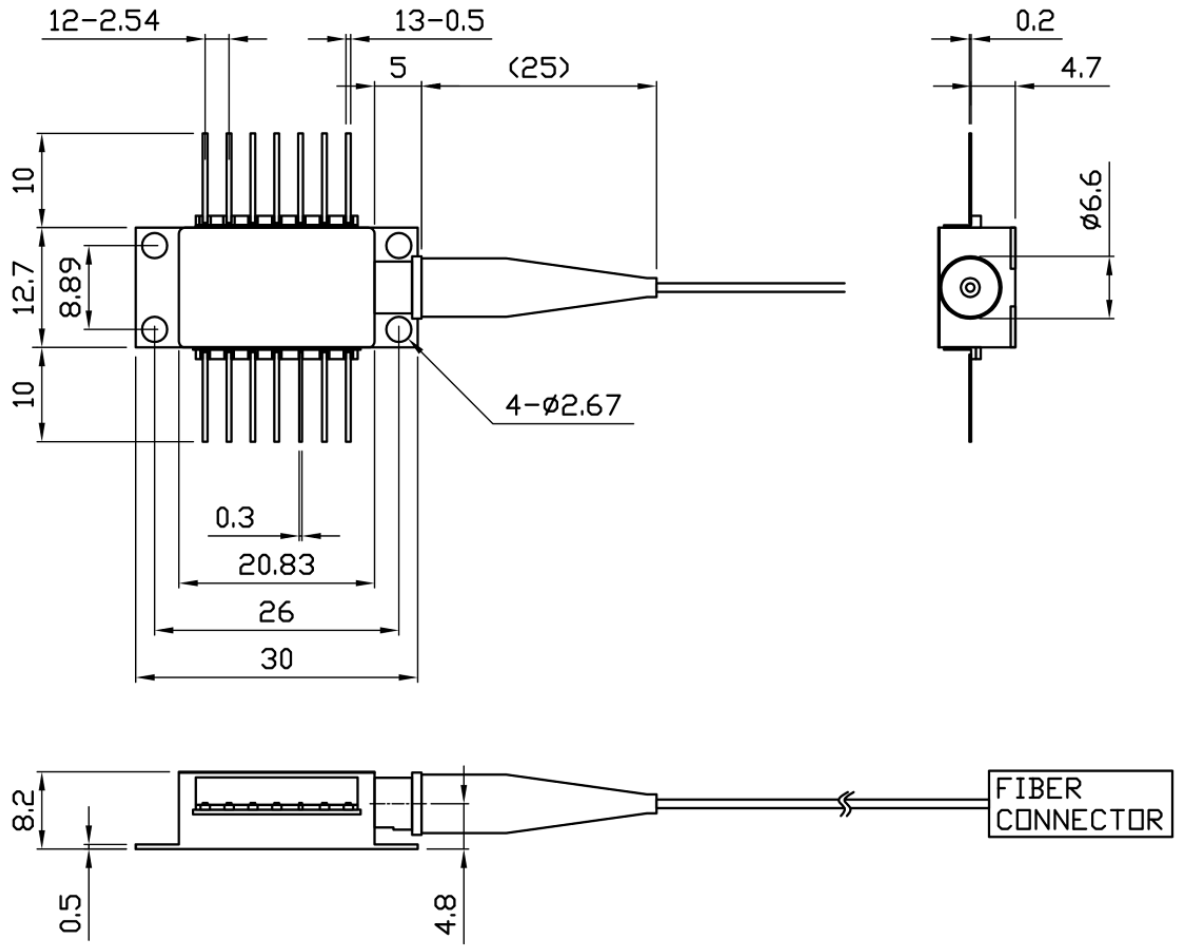
Spectrum

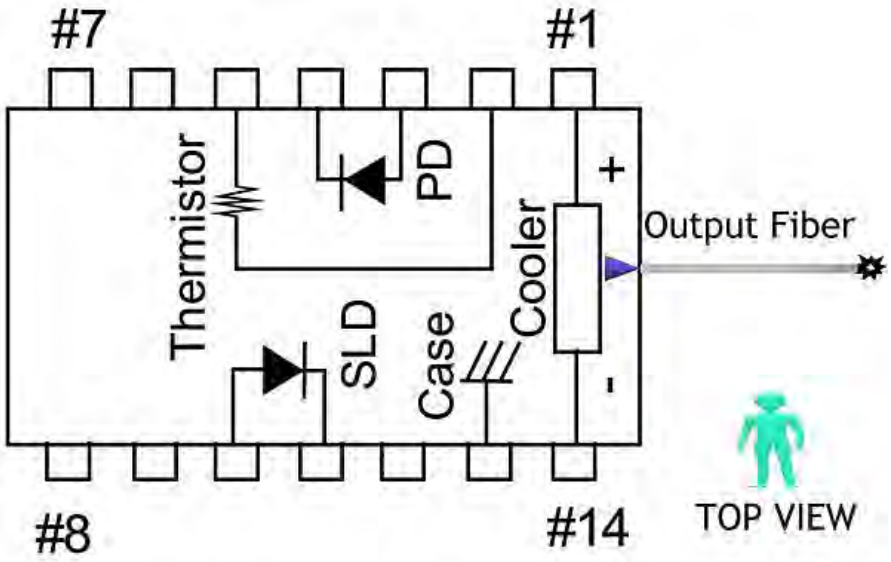


L-I Curve



Package Size and Pin definition





1	Thermoelectric Cooler (+)	8	N/C
2	Thermistor	9	N/C
3	PD Monitor Anode (-)	10	SLD Anode (+)
4	PD Monitor Cathode (+)	11	SLD Cathode (–)
5	Thermistor	12	N/C
6	N/C	13	Case Ground
7	N/C	14	Thermoelectric Cooler (–)

Absolute Maximum Ratings

Item	Unit	Min	Typ	Max
Case Temperature	°C	-20	25	70
Chip Temperature	°C	+10	25	40
Operating Current	mA	0	350	420
Forward Voltage	V	0.8	1.2	1.8
TEC Current	A	-	1.2	2.0
Reverse Voltage (SLD)	V	-	-	2.0
Reverse Voltage(PD)	V	-	-	10
PD Forward Current	mA	-	-	10

Ordering Info

PL-SLD-□□□□-☆-A8▽-XX

□□□□: Wavelength

680: 680nm

850: 850nm

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1550: 1550nm

1610: 1610nm

☆: Output Power

A: 5mW

B: 10mW

▽: Bandwidth

1: 60-70nm

2: 30-40nm

XX: Fiber and Connector Type

SA=SMF-28E+ FC/APC

SP=SMF-28E+ FC/PC

PP=PM Fiber+ FC/PC

PA=PM Fiber+ FC/APC