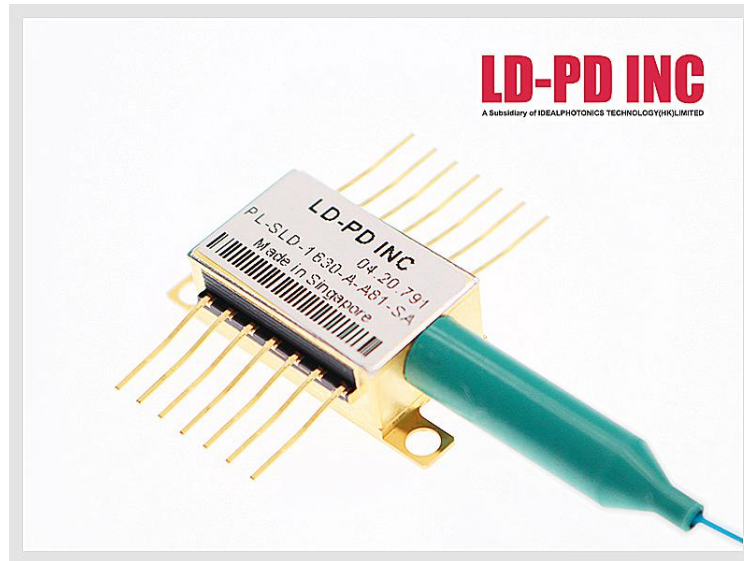


## 1630nm Super luminescent Diode(SLD) Laser Diode



### Description

The PL-SLD-1630-A-A81-PA 1630nm 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,
- Optical coherence tomography,
- Testing Light source

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

Parameter	Symbol	Min	Typ	Max	Unit
Centre Wavelength	$\lambda$	1620	1630	1640	nm
Spectral Width	$\Delta\lambda$	60	70		nm
Threshold Current	I <sub>th</sub>		30	40	mA
Operating Current	I <sub>op</sub>		450	700	mA
Fiber output Power	P <sub>f</sub>		10		mW
PD Dark Current (VRD=5V)	I <sub>d</sub>			0.1	uA
Extinction Ratio	PER	17	20		dB
Coupled Fiber Type	SMF-28E/PM1550				
Forward Voltage	V <sub>f</sub>		1.8	2.5	V
Thermistor Resistance	R <sub>T</sub>	9.5	10	10.5	KΩ
Thermistor Temp. Coefficient			-4.4		%/°C
Connector	FC/APC				

LP\_OSA\_LD-PD\_Inc\_SNO21906

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fMkr	A	B	B-A
LMkr	C	D	C-D
LED Test			
Peak	1 628.700 nm	- 5.55 dBm	FWHM(2.35σ) 55.287 nm
Mean Wl ( 3.0 dB )	1 621.322 nm		PkDens(1nm) - 3.52 dBm
Mean Wl ( FWHM )	1 619.215 nm		Total Power 12.55 dBm
3.0 dB Width	53.775 nm		6.07σ 142.506 nm
			σ 23.478 nm

Res: 1.0nm (Actual: 0.902 nm) SmpIq: 501pt SwpAvg: 423 [ ☐ ]

VBW: 1kHz Sm: Off Intvl: Off

7.5dBm

57.5dBm

10.0dB / div

-107.5dBm

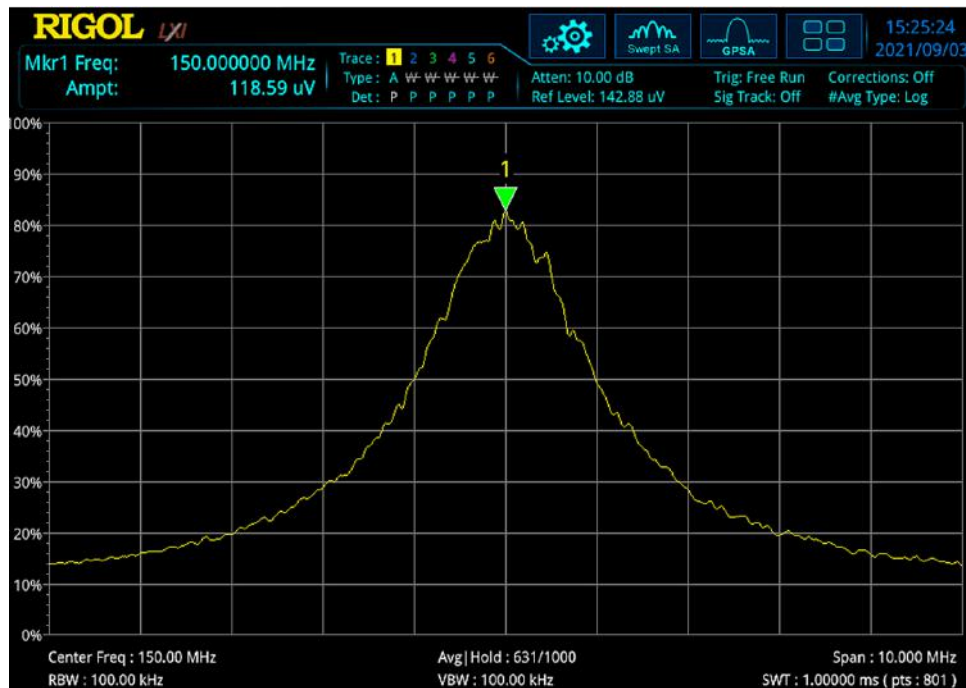
1 494.70 nm 25.00 nm/div 1 619.70 nm in Vacuum 1 744.70 nm

Normal

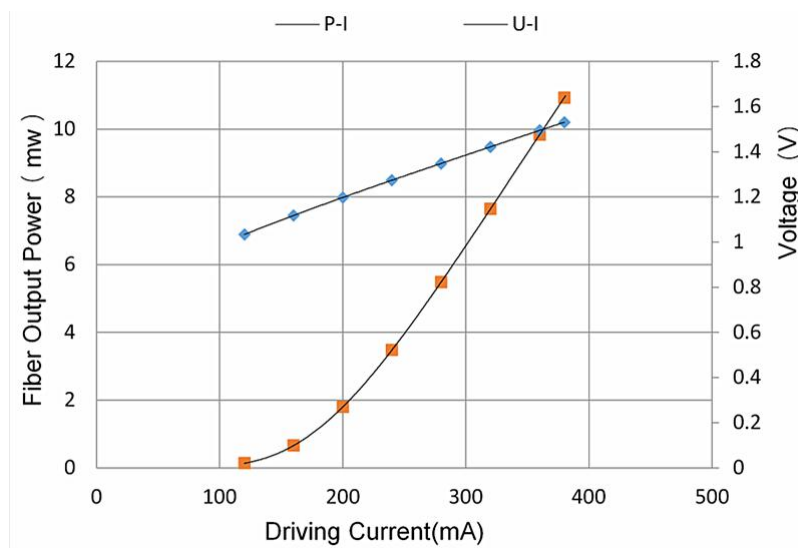
Opt. Att On

Wave-length Level Res/VBW/ Avg Peak/Dip Search Analysis Trace Appli-cation

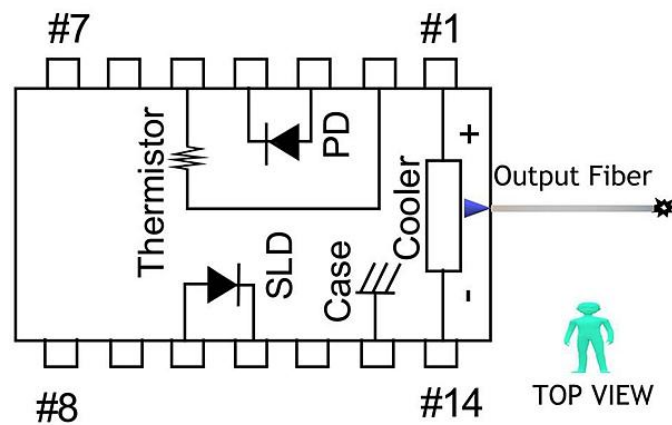
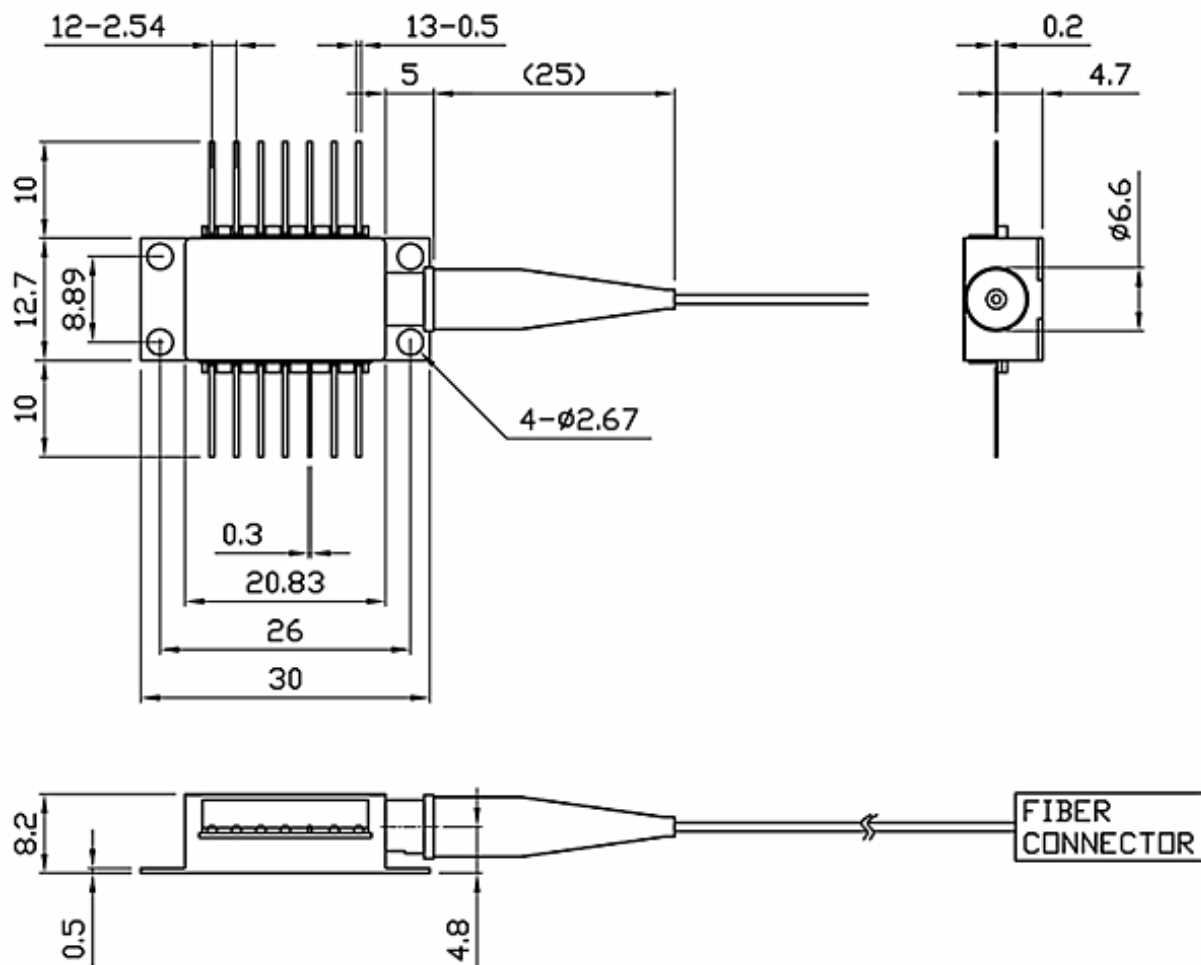
## DFB Linewidth Testing Result



## 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	700
Forward Voltage	V	0.8	1.2	1.8
TEC Current	A	-	1.2	2.0
Reverse Voltage (LD)	V	-	-	2.0
Reverse Voltage (PD)	V	-	-	10
PD Forward Current	mA	-	-	10

### Ordering Info

**PL-SLD-□□□□-☆-A8▽-XX**

□□□□:Wavelength

680: 680nm

850: 850nm

\*\*\*\*\*

1310: 1310nm

1480: 1480nm

1550: 1550nm

1630: 1630nm

☆ : Output Power

A: 5mW

B: 10mW

▽: Spectral Width

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