780nm Ultra High Power Superluminescence LEDs (GaAs-based SLED) Diode



Description

The PL-SLD-C-A81-W780-PA 780nm Superluminescent Diodes bridge the gap between Laser Diodes and Light Emitting Diodes.Like an LD, the SLD provides a high optical output power. LD-PD'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: 10mW
- Narrow linewidth (Δv < 1MHz)
- Wavelength: 633nm @ 25°C
- SM or PM Fiber (ø0.9mm)
- FC-APC connector
- 14-pin butterfly package
- Internal monitor PD and TEC
- Low power consumption

Application

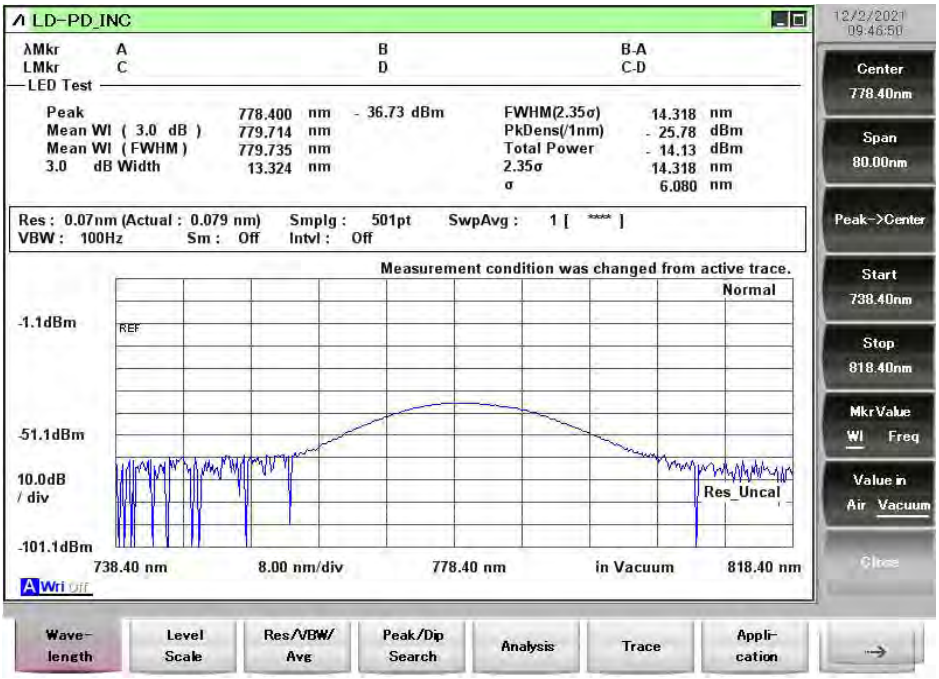
- Fiber transmission systems
- Fiber optic gyros
- Fiber optic sensors

Laser Specifications

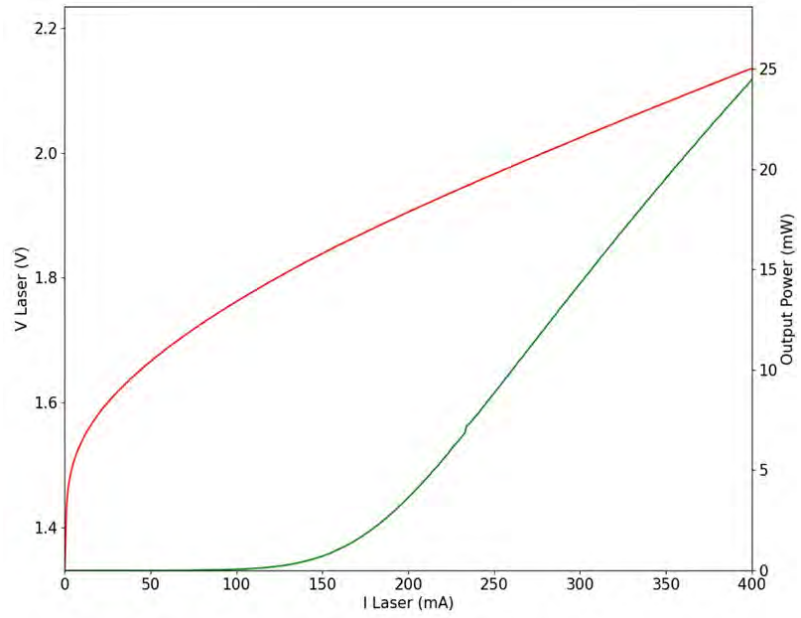
Electrical/Optical Characteristics(Tsub=25°C, CW bias unless stated otherwise)

Parameter	Symbol	Min	Typ	Max	Unit
Centre Wavelength	λ	770	780	790	nm
Spectral Width	Δλ	10	13	15	nm
Threshold Current	Ith		100	150	mA
Operating Current	Iop		300	400	mA
Fiber output Power	Pf	15	20	30	mW
PD Dark Current (VRD=5V)	Id			0.1	uA
Extinction Ratio	PER	17	20		dB
Coupled Fiber Type	HI780/PM850				
Forward Voltage	Vf		1.8	2.5	V
Thermistor Resistance	RT	9.5	10		KΩ
Thermistor Temp. Coefficient			-4.4		%/°C
Connector	FC/APC				

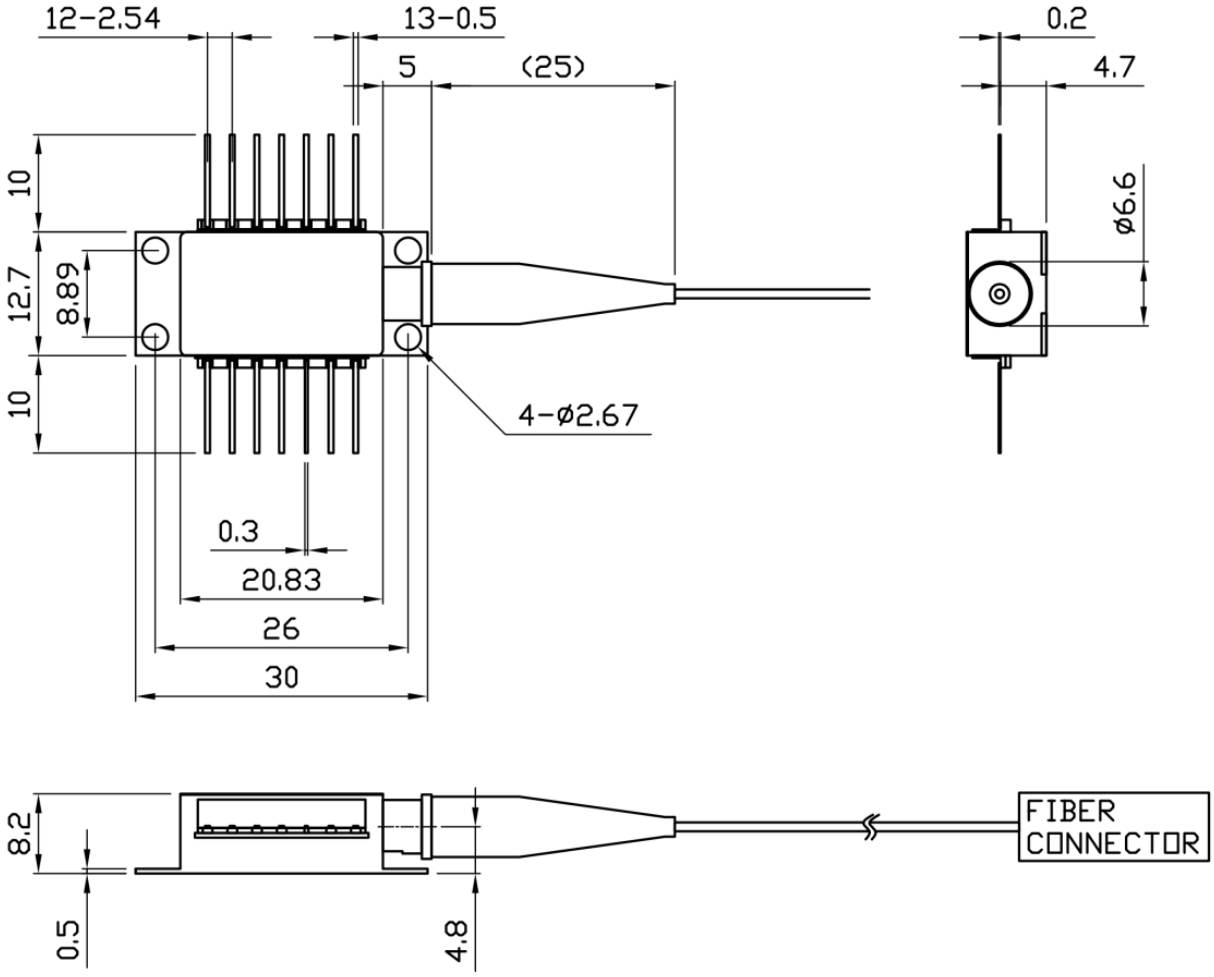
Spectrum

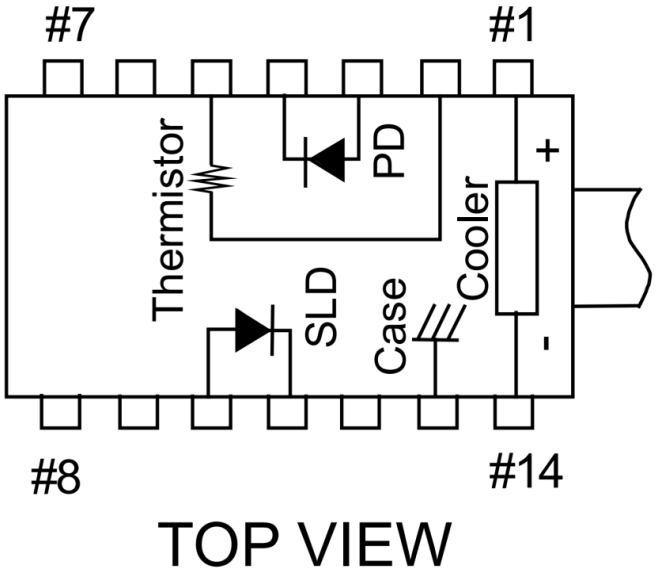


L-I Curve



Package Size and Pin definition





TOP VIEW

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	-5	25	70
Chip Temperature	°C	+10	25	40
Operating Current	mA	0	300	400
Forward Voltage	V	0.8	1.2	2.3
TEC Current	A	-	2.0	4V
Reverse Voltage (LD)	V	-	-	1.8
Reverse Voltage(PD)	V	-	-	10

Ordering Info

PL-SLD-☆-A8▽-W□□□□-XX

☆ :Output Power

A:10mW

B:30mW

▽:Bandwidth

1:30-40nm

2:20-30nm

□ □□□:Wavelength

680:680nm

780:780nm

850:850nm

*****

1550:1550nm

XX: Fiber and Connector Type

SA=HI780+ FC/APC

SP=HI780+ FC/PC

PP=PM 780 Fiber+ FC/PC

PA=PM 780 Fiber+ FC/APC