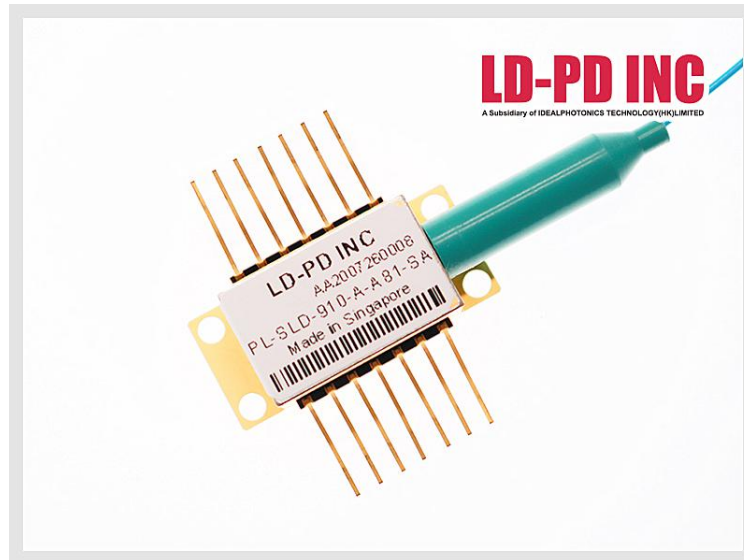


910nm Super luminescent Diode(SLD) Laser Diode



Description

The PL-SLD-910-A-A81-PA 910nm 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

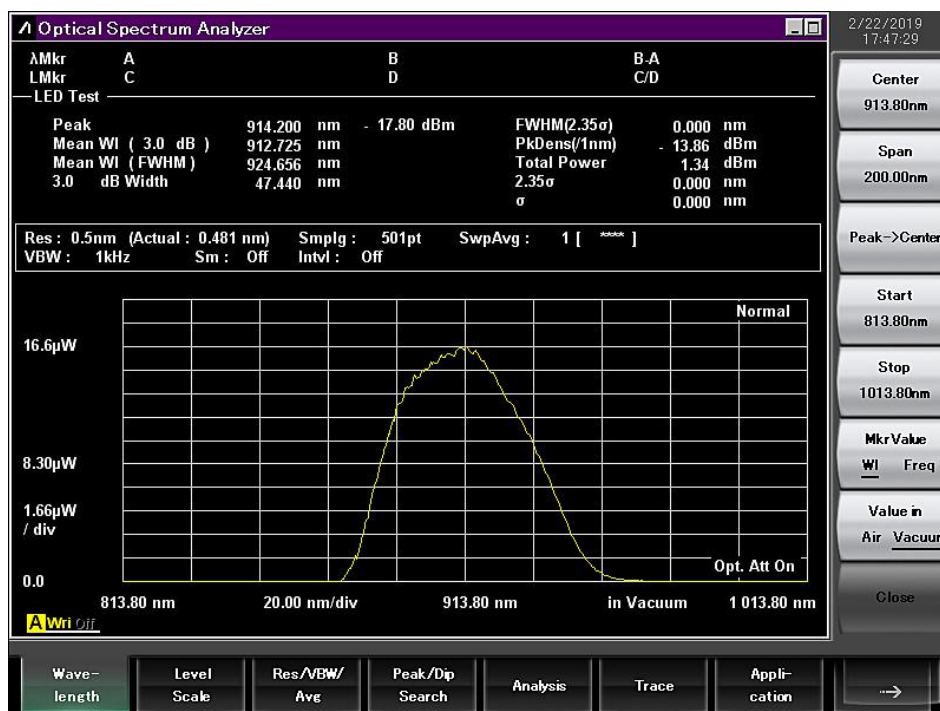
- Fiber transmission systems
- Fiber optic gyros
- Fiber optic sensors
- Optical coherence tomography
- Testing Light source

Laser Specifications

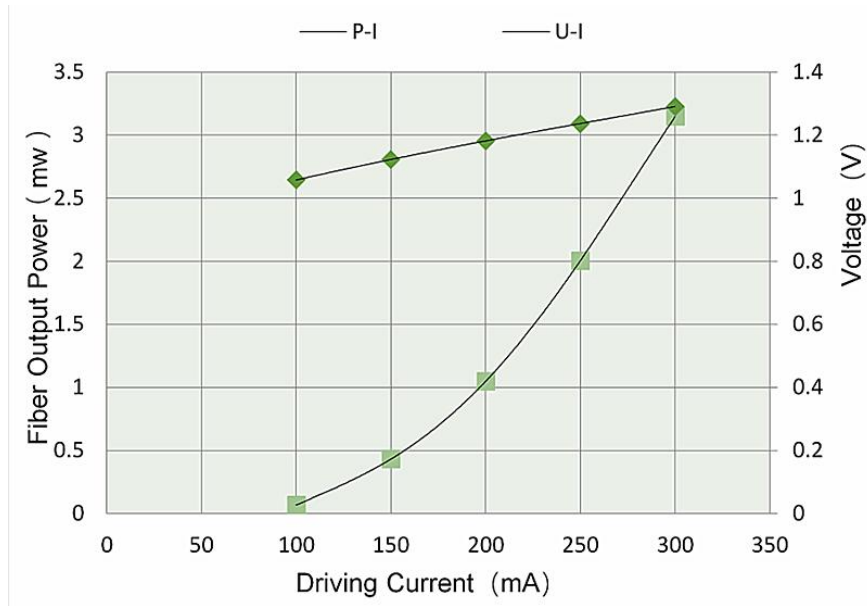
Electrical/Optical Characteristics(Tsub=25°C, CW bias unless stated otherwise)

| Parameter | Symbol | Min | Typ | Max | Unit |
|--|-------------------|------|------|------|-------|
| Centre Wavelength | λ | 900 | 905 | 910 | nm |
| Spectral Width | $\Delta\lambda$ | 0.6 | 0.8 | 2.0 | nm |
| Threshold Current | I _{th} | | 30 | 40 | mA |
| Operating Current | I _{op} | | 120 | 200 | mA |
| Fiber output Power | P _f | 70 | 100 | 150 | mW |
| Wavelength Tuning VS Temp | $\Delta\lambda/T$ | | | 0.01 | nm/°C |
| Tracking Ratio(0.1Pop < P _f < Pop) ¹ | TR | 0.52 | | 1.48 | |
| Tracking error ² | TE | -48 | - | +48 | |
| Monitor diode responsivity | I _{BF} | 0.5 | | 5 | uA/mW |
| Thermistor resistance(Tset = 25°C) ³ | R _{th} | 9.5 | - | 10.5 | KΩ |
| PD Dark Current (VRD=5V) | I _d | | | 0.1 | uA |
| Extinction Ratio (PM VERSION) | PER | 17 | 20 | | dB |
| Coupled Fiber Type | HI1060 | | | | |
| Forward Voltage | V _f | | 1.8 | 2.6 | |
| Thermistor Resistance | RT | 9.5 | 10 | 10.5 | |
| Thermistor Temp. Coefficient | | | -4.4 | | |
| Connector | None or FC/APC | | | | |

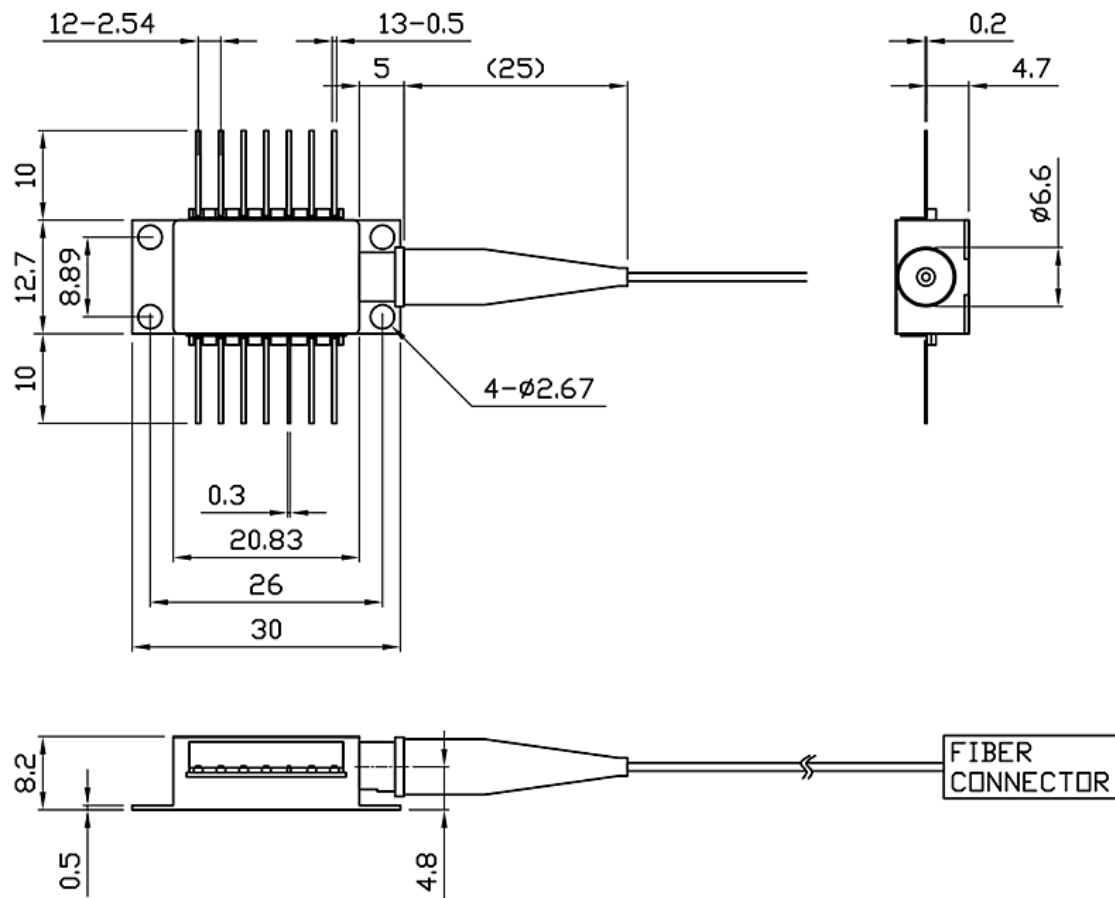
Spectrum

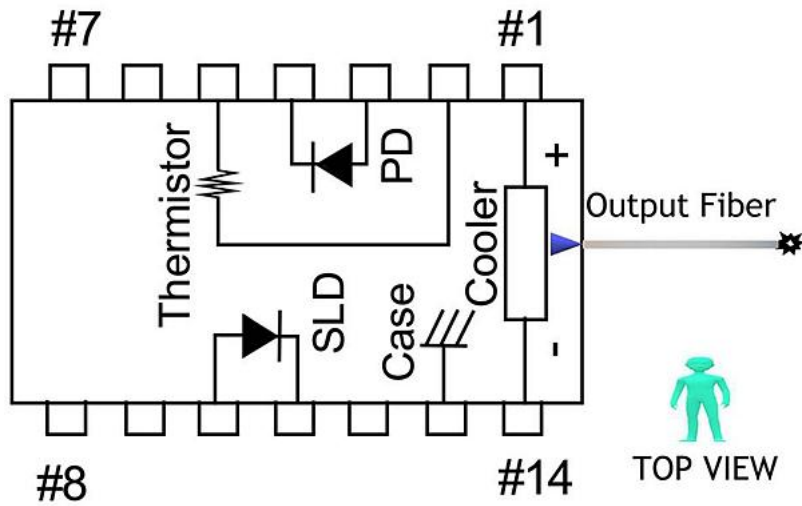


L-I Curve



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 | -5 | 25 | 70 |
| Chip Temperature | °C | +10 | 25 | 40 |
| Operating Current | mA | 0 | 200 | 300 |
| Forward Voltage | V | 0.8 | 1.2 | 1.8 |
| TEC Current | A | - | 1.2 | 1.4 |
| Reverse Voltage (SLD) | V | - | - | 1.8 |
| Reverse Voltage (PD) | V | - | - | 10 |

Ordering Info**PL-SLD-□□□□-☆-A8▽-XX**

□□□□:Wavelength

680:680nm

850:850nm

910:910nm

1550:1550nm

☆ :Output Power

A:5mW

B:10mW

▽:Bandwidth

1:30-40nm

2:20-30nm

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