



SPL785-50-5-PD

- IR Pigtailed Laser Diode
- 785 nm, 50 mW
- 5 μm SM Fiber
- FC/PC connector
- Built-in PD
- Heat Sink



Description

SPL785-50-5-PD is an infrared pigtailed laser diode with **built-in monitor photodiode**, typically emitting at 785 nm with an output power of 50 mW. It comes in a coaxial package with integrated heat sink, and **5 μm single mode fiber** with FC/PC connector. Variants without heat sink and different types of connectors are optionally available.

Maximum Ratings*

| Parameter | Symbol | Values | | Unit |
|---|-----------|--------|-------|--------------------|
| | | Min. | Max. | |
| Reverse Voltage | V_R | | 2.0 | V |
| PD Reverse Voltage | V_{RPD} | | 30 | V |
| Operating Temperature | T_{OPR} | - 10 | + 60 | $^{\circ}\text{C}$ |
| Storage Temperature | T_{STG} | - 40 | + 85 | $^{\circ}\text{C}$ |
| Soldering Temperature (t_{max} , 3s) | T_{SOL} | | + 260 | $^{\circ}\text{C}$ |

* Operating close to or exceeding these parameters may damage the device

Electro-Optical Characteristics ($T_{CASE} = 25^{\circ}\text{C}$)

| Parameter | Symbol | Values | | | Unit |
|--------------------|--------------------|-------------|--------|------|---------------|
| | | Min. | Typ. | Max. | |
| Peak Wavelength | λ_P | 770 | 785 | 795 | nm |
| Spectral Width | λ_{Δ} | | 2 | | nm |
| Output Power | P_O | | 50 | | mW |
| Operating Voltage | V_F | | 2.0 | 2.5 | V |
| Threshold Current | I_{th} | | 30 | 50 | mA |
| Operating Current | I_O | | 120 | 140 | mA |
| PD Monitor Current | I_{PD} | | 0.3 | | mA |
| Fiber Spec. | Type | Single Mode | | | |
| | Core diameter | | 5 | | μm |
| | N.A. | | 0.12 | | |
| | Connector | | FC/PC* | | |
| | Length | | 80 | | cm |

* FC/APC, SC, SMA905 available on request



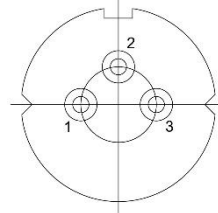
Electrical Connection

Pin Configuration*

| Pin # | Function |
|--------------|----------------------|
| Pin 1 | LD cathode |
| Pin 2 [case] | LD anode, PD cathode |
| Pin 3 | PD anode |

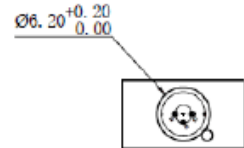
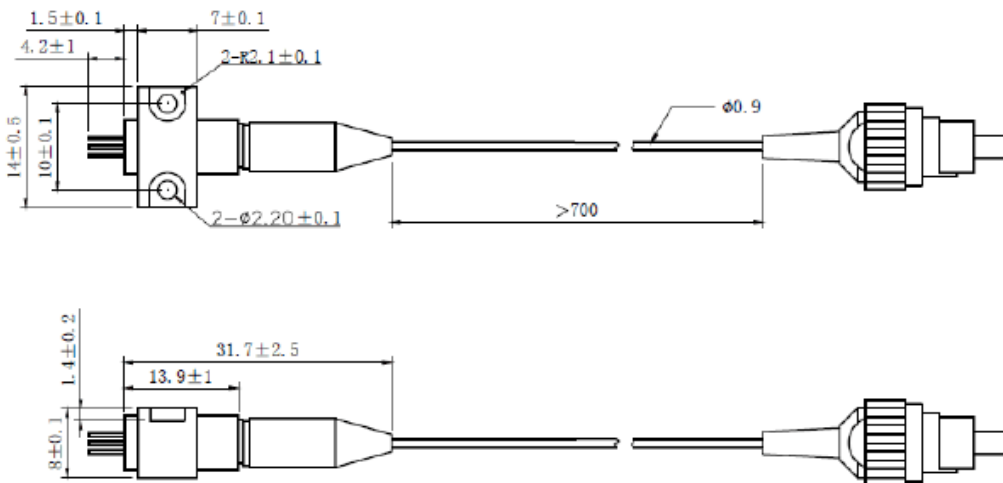


Bottom View



* subject to change

Outline Dimension



All dimensions in mm

Precautions

Safety

Laser light emitted from any laser diode may be harmful to the human eye. **Avoid looking directly into the laser diode's aperture.** The use of optical lenses will increase eye hazard



ESD Caution

Always do handle laser diodes with care to **prevent electrostatic discharge.** We advise to **wearing wrist straps, and grounding all applicable work surfaces,** when handling laser diodes

Operating Considerations

Usage of current regulated drive circuits is mandatory We advise to operate this laser diode with a current source and heat sink, and to never exceed the maximum specifications as outlined in this datasheet.

