

1650nm 10mW PM SLD Laser Diode



- **Product Description**

1650 nm superluminescent diode (SLD) module, serving as an incoherent light source for various optical measurement scenarios. It emits incoherent light with a broad spectrum and high output power via polarization-maintaining fiber (PMF).

- **Product features**

High-power SLD output; polarization-maintaining fiber coupling; broad spectral characteristics; high stability; compact industrial design



● Part Number

MP-SLD-1650-10-A81-14BF-PP

● Application area

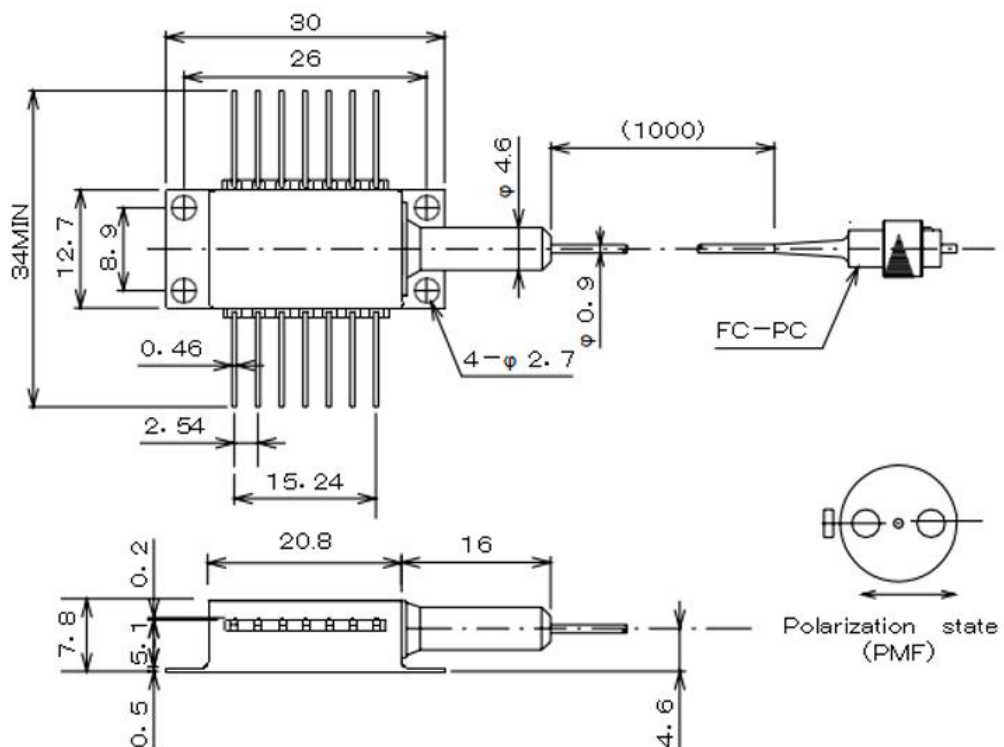
Optical Coherence Tomography | Fiber Sensing | Device Testing | Biological

Detection | Fiber Optic Gyroscope

● Core parameters

| Center Wavelength | Output Power |
|-------------------|--------------|
| 1650 nm | 10 mW |

● Dimension Drawing





● General Parameters

Technical Specifications

Optical and Electrical Characteristics (TSLD=25° C, TC=25° C)

| Parameter | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|-----------------------|-----------------|------------------------------|------|------|------|------------|
| Forward Voltage | VF | Pf=10mW | — | — | 2.5 | V |
| Forward Current (BOL) | IF | Pf=10mW | — | — | 350 | mA |
| Center Wavelength | λ_C | Pf=10mW,-3dB | 1630 | 1650 | 1670 | nm |
| Spectral Width | $\Delta\lambda$ | Pf=10mW,-3dB | — | 65 | 70 | nm |
| Spectral Ripple | M | Pf=10mW,res=0.1nm | — | — | 0.6 | dB |
| Monitor PD Current | Im | Pf=10mW,VRD=5V | 100 | — | 2000 | μ A |
| PD Dark Current | Id | VRD=5V | — | — | 0.1 | μ A |
| Tracking Error | Δ Pf | Im=const,TC=-20~ 75 ° C | — | — | 0.5 | dB |
| TEC Voltage | VC | IF=EOL,TC=75° C | — | — | 3.5 | V |
| TEC Current | IC | IF=EOL,TC=75° C | — | — | 1.2 | A |
| Thermistor Resistance | Rth | TSLD=25° C,B=3900± 100K | 9.5 | 10 | 10.5 | k Ω |
| Optical Isolation | Ro | λ =1650nm,TSLD=25° C | 30 | — | — | dB |



Notes:

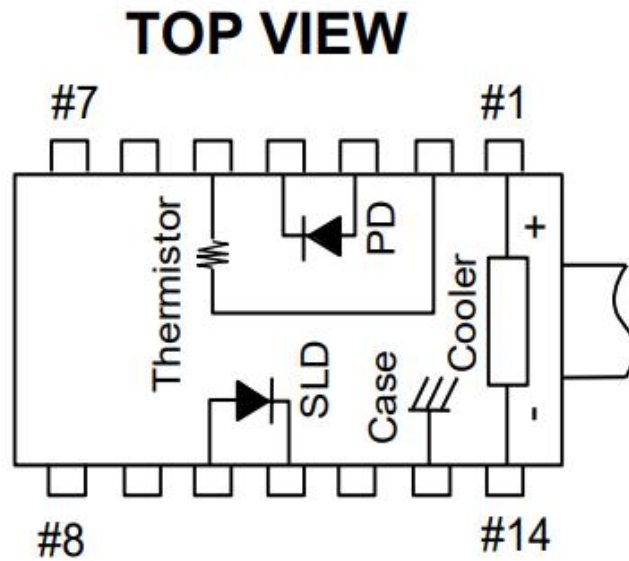
$$EOL = BOL \times 1.2$$

The polarization state of SLD is parallel to the slow axis.

Absolute Maximum Ratings (T sub =25° C)

| Item | Symbol | Rating | Unit |
|-------------------------------|--------|----------|------|
| SLD Forward Current | IF | 420 | mA |
| SLD Reverse Voltage | VR | 2 | V |
| PD Forward Current | IFD | 10 | mA |
| PD Reverse Voltage | VRD | 10 | V |
| Operating Ambient Temperature | TC | -20~ +75 | °C |
| Storage Temperature | Tstg | -40~ +85 | °C |
| Cooler Current | IC | 2 | A |

Pin Definition



| No. | FUNCTION | No. | FUNCTION |
|-----|--------------|-----|----------------|
| 1 | Cooler anode | 8 | NC |
| 2 | Thermistor | 9 | NC |
| 3 | PD anode | 10 | SLD anode |
| 4 | PD cathode | 11 | SLD cathode |
| 5 | Thermistor | 12 | NC |
| 6 | NC | 13 | Case |
| 7 | NC | 14 | Cooler cathode |