

# 1102 Coaxial DFB Laser Diode

**LD-1550-T0**



## 1550 nm TO LD Laser Diode

The CWDM (Aspherical Lens) TO LD laser diodes are uncooled multi-quantum-well DFB (Distributed Feedback) laser diodes for 2.5 Gbps and 10 Gbps transmission at 1310 nm/1490 nm/1550 nm.

The laser diodes are packaged in a standard TO56 coaxial package with a photodiode for optical power monitor. Among these laser diodes, four products at 1270 nm, 1290 nm, 1310 nm and 1330 nm are suitable for 10 Gbps transmission. The products are Telcordia GR-468 qualified, and in compliance with RoHS directives.

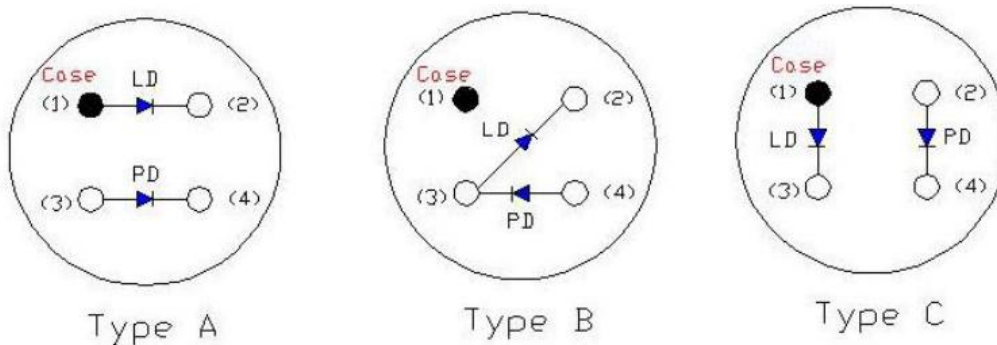
### FEATURES

- CWDM Band Wavelengths
- Low Threshold and Low Operating Current
- High Efficiency and High Output Power
- Wide Operation Temperature Range
- High Reliability
- TO56 Standard Package
- Reliability: Telcordia GR-468. RoHS

### USE IN

- 2.5/10 Gbps Fiberoptic Transmission
- Optical Communication Transceivers
- Storage Area Networks
- Fiber Sensors
- Fiberoptic Test and Measurement

### FUNCTIONAL DRAWING



#### Pin Assignment:

Pin No.	Type A	Type B	Type C
1	LD Anode(Case)	Case	LD Anode(Case)
2	LD Cathode (+)	LD Cathode (+)	PD Anode(-)
3	PD Anode (-)	LD Anode/ PD Cathode (+)	LD Cathode(+)
4	PD Cathode (+)	PD Anode (-)	PD Cathode(+)

**Order notes to our customers:** The default parameters are as follows. For special needs, please contact sales.

1) Connector FC/APC, 900 um, 1 m by default for all devices except for high power devices.

2) Slow axis working, fast axis blocked, connector key is aligned to slow axis by default for PM devices.

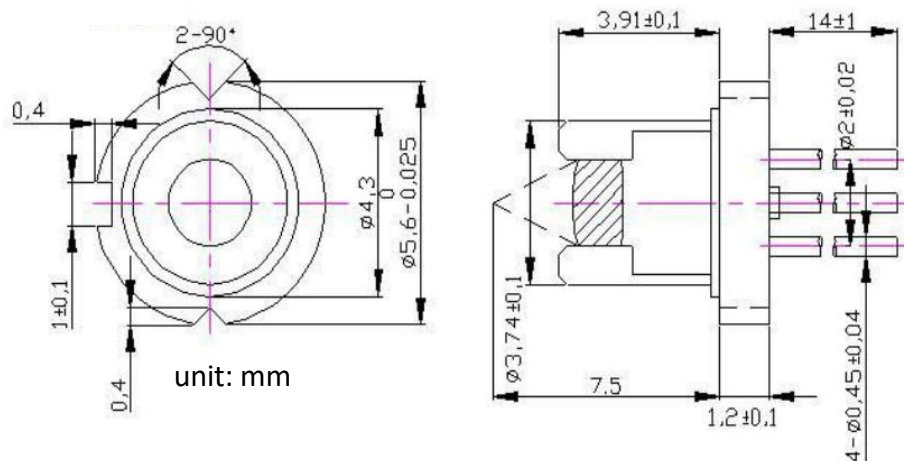
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Forward Current (Laser Diode)		150 mA max.
Reverse Voltage (Laser Diode)		2 V max.
Forward Current (Photo Diode)		2 mA max.
Reverse Voltage (Photo Diode)		20 V max.
Case Temperature		-40 °C to +85 °C
Storage Temperature		-40 °C to +85 °C
Soldering Temperature (10 s max.)		260 °C max.
Threshold Current	CW	7 mA typ.; 15 mA max.
	CW, TC=85 °C	30 mA typ.; 40 mA max.
Output Power	CW, I <sub>f</sub> =I <sub>th</sub> +20 mA	6 mW typ.
Slope Efficiency	CW, I <sub>f</sub> =I <sub>th</sub> +20 mA	0.36 mW/mA typ.; 0.3 mW/mA min.
Operating Voltage	CW, I <sub>f</sub> =I <sub>th</sub> +20 mA	0.9 V typ.; 1.5 V max.
Peak Wavelength	CW, I <sub>f</sub> =I <sub>th</sub> +20 mA, T=-40 °C to +85 °C	λ <sub>c</sub> -3 min.; λ <sub>c</sub> max.
Wavelength/Temperature Coefficient	T=-40 °C to +85 °C	0.09 nm/ °C typ.
Dynamic Spectral Width	2.5 GHz at -20 dB	0.32 nm typ.
Side Mode Suppression Ratio	CW, I <sub>f</sub> =I <sub>th</sub> +20 mA	40 dB typ.; 35 dB min.
Rise Time/Fall Time	CW, I <sub>f</sub> =I <sub>th</sub> +20mA, 20%-80%	80 ps typ.; 200 ps max.
Monitor Current (PD)	CW, I <sub>f</sub> =I <sub>th</sub> +20 mA, VRD=1 V, RL=10	0.3 mA typ.; 0.1 mA min.; 1.0 mA max.
Dark Current (PD)	VRD=10 V	1.0 μA max.
Capacitance (PD)	VRD=5 V, f=1 MHz	10 pF typ.; 20 pF max.
Focus Length	Aspherical	7.5 mm typ.; 7.0 mm min.; 8.0 mm max.

## MECHANICAL DRAWING



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