1550nm 2.5 Gbps Fabry-Perot Laser Diode

C-15-002-E-XX

Features
- Uncooled laser diode with MQW structure
- 5mW CW operation at -40 to +85ºC
- High temperature operation without active cooling
- Hermetically sealed active component
- Built-in InGaAs monitor photodiode
- Complies with Bellcore TA-NWT-000983
- Designed for 2.5G high speed, optical network
- TO-18 packaging with flat window cap or a ball lens cap

Absolute Maximum Rating (Tc=25ºCt)

Parameter	Symbol	Value	Unit
Optical Output Power	Po	6 (CW)	mW
LD Reverse Voltage	V_{RLD}	2	V
LD Forward Current	I_{FLD}	150	mA
PD Reverse Voltage	V_{RPD}	10	V
PD Forward Current	I_{FPD}	2.0	mA
Operating Temperature	T_{opr}	-40 to +85	ºC
Storage Temperature	T_{stg}	-40 to +100	ºC

Optical and Electrical Characteristics(Tc=25ºC)

Parameter	Symbol	Min	Typical	Max	Unit	Test Condition
Slope Efficiency Flat window cap Ball lens cap	SE	 0.2 0.15	 0.25 0.18	-	mW/mA	CW,P_o=5mW
Threshold Current	I_{th}	-	10	15	mA	CW,P_o=5mW
Optical Output Power	P_o	5	-	-	mW	CW, kink free
Peak Wavelength	λ	1530	1550	1570	nm	Note
Spectral Width	Δλ	-	2	5	nm	CW,P_o=5mW
Forward Voltage	V_f	-	1.2	1.5	V	CW,P_o=5mW
Beam Divergence	$\theta_{//}$ $\theta_{\perp}$	- -	20 40	-	deg.	CW,P_o=5mW,FWHM
Rise/Fall Time	t_r/t_f	-	-	150	ps	I_{bias}=I_{th},20-80 % Lead length =1mm
PD Monitor Current	I_m	100	-	-	μA	CW,P_o=5mW, V_{RPD}=2V
PD Dark Current	I_{DARK}	-	-	0.1	μA	V_{RPD}=5V
PD Capacitance	C_t	-	6	15	pF	V_{RPD}=5V, f=1MHz

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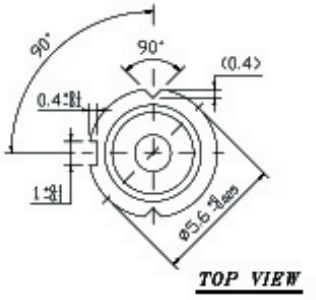
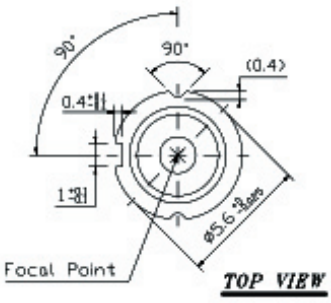
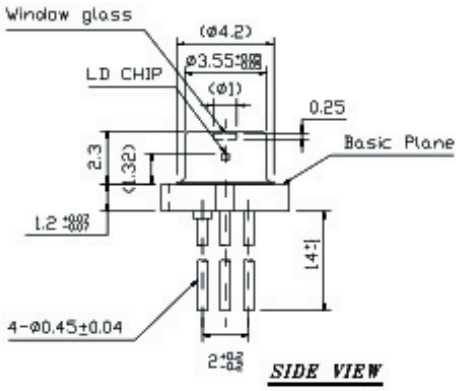
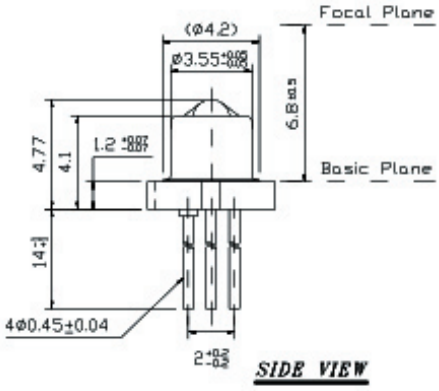
Mechanical Drawing





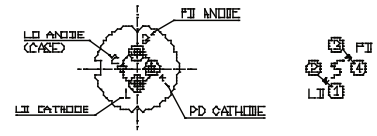
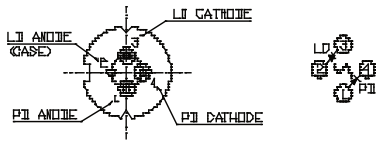
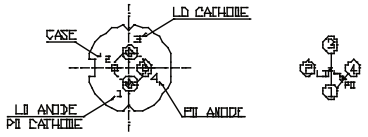




Flat window cap
A- type B- type D- type

Ball Lens cap
A- type B- type D- type

LD Pin Assignment

Model	PIN Assignment (Bottom View)
A-type	
B-type	
D-type	

Warnings

Handling Precautions: This device is susceptible to damage as a result of electrostatic discharge (ESD). A static free environment is highly recommended. Follow guidelines according to proper ESD procedures.
Laser Safety: Radiation emitted by laser devices can be dangerous to human eyes. Avoid eye exposure to direct or indirect radiation.

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