1530nm FP Laser Diode

C-153-001-E-XX

Features

- Uncooled laser diode with MQW structure
- 5mW CW operation at –40 to +85°C
- High temperature operation without active cooling
- Hermetically sealed active component
- Built-in InGaAs monitor photodiode
- Complies with Telcordia(Bellcore) GR-468-CORE
- TO-18 with a flat window cap, 2.1mm low profile flat window cap and ball lens cap
- RoHS compliance available

Absolute Maximum Rating (Tc=25°C)

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	mA
Operating Temperature	T_{opr}	-40 to +85	°C
Storage Temperature	T_{stg}	-40 to +85	°C

Optical and Electrical Characteristics(Tc=25°C)

Parameter	Symbol	Min	Typical	Max	Unit	Test Condition
Slope Efficiency Flat window Ball lens cap	SE	 0.2 0.15	 0.3 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	1520	-	1548	nm	CW,P_o=5mW
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 Flat window cap	$\theta_{//}$ $\theta_{\perp}$	- -	25 40	-	deg.	CW,P_o=5mW,FWHM
Rise/Fall Time	t_r/t_f	-	-	0.5	ns	10-90 %
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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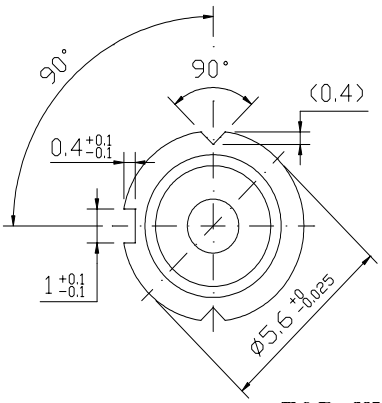
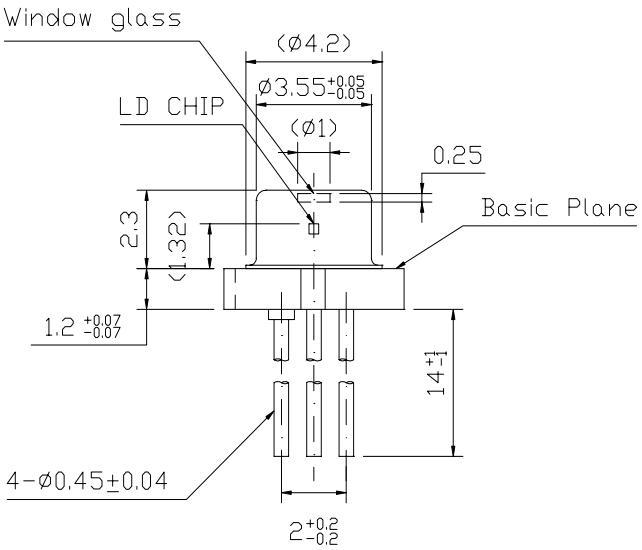
9F, No 81, Shui Lee Rd. • Hsinchu, Taiwan, R.O.C. • tel: 886.3.5169222 • fax: 886.3.5169213

Mechanical Drawing

All dimensions in mm



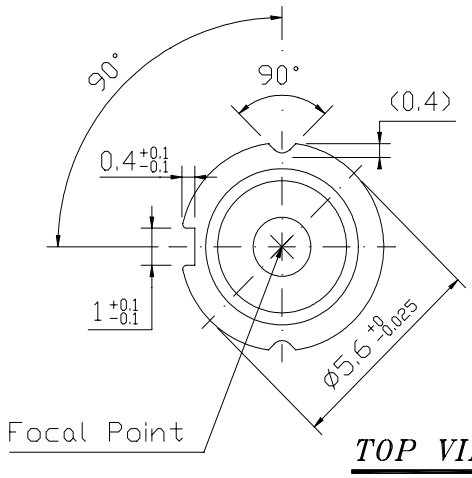
TOP VIEW



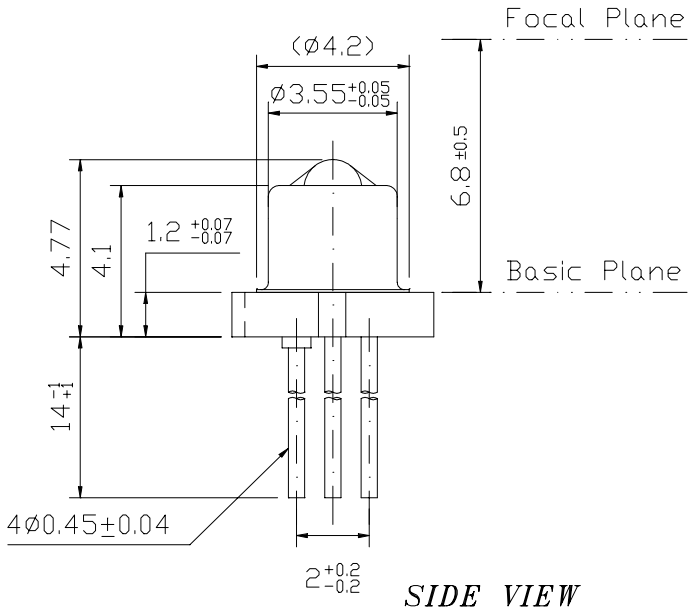
SIDE VIEW

Flat window cap

All dimensions in mm



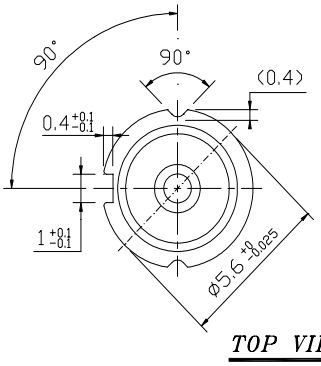
TOP VIEW



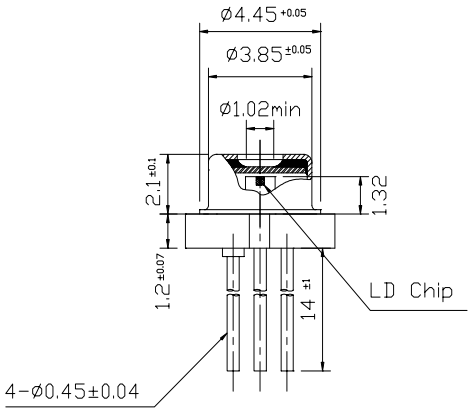
SIDE VIEW

Ball lens cap

All dimensions in mm



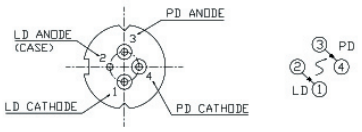
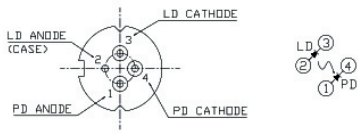
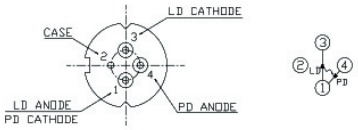
TOP VIEW



SIDE VIEW

Low profile flat window cap

LD Pin Assignment

Model	PIN Assignment (Bottom View)
A Type	
B Type	
D Type	

Ordering Information

Available Options:

C-153-001-E-XX
C-153-001-E-XX-G5
C-153-001-E-XX-GR

Note : XX=A,AB,AD,B,BB,BD,LA,LAB,LAD

C - 153 - 001 - E - X X - XX

Application	Wavelength	Data rate	Header	Cap	Pin out	RoHS compliance
C= Communicaton	153= 1530nm	001 = ≦ 1.25G	E= TO-18	A= Flat window B= Ball Lens LA= Low profile flat window	No symbol= A B= B D= D	**Blank = RoHS non-compliant product** G5 = RoHS 5/6-compliant product (lead exemption) GR = Full RoHS compliant product (no exemption)

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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