

C-151-DFB-E-XX-NT



Features

- Uncooled laser diode with MQW structure
- 5mW CW operation at 0 to +70°C
- High temperature operation without active cooling
- Hermetically sealed active component
- Built-in InGaAs monitor photodiode
- Complies with Bellcore TA-NWT-000983
- Single frequency operation with high SMSR
- TO-18 package with a flat window cap or a ball lens cap

Absolute Maximum Rating (Tc=25°C)

Parameter	Symbol	Value	Unit
Optical Output Power	P _o	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 _{FDP}	2.0	mA
Operating Temperature	T _{opr}	0 to +70	°C
Storage Temperature	T _{stg}	-40 to +100	°C

Optical and Electrical Characteristics (Tc=70°C)

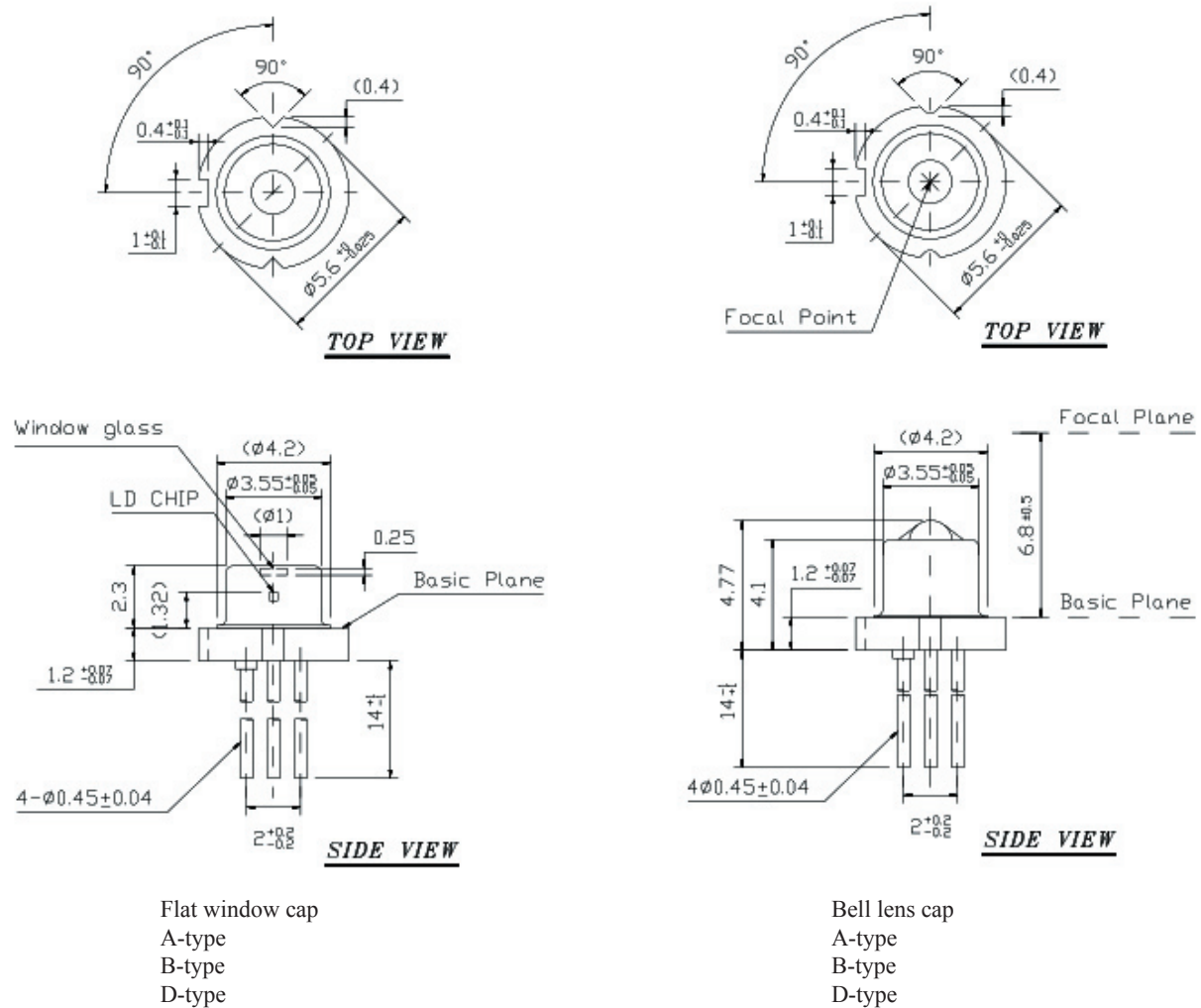
Parameter	Symbol	Min	Typical	Max	Unit	Test Condition
Threshold Current	I _{th}	-	-	50	mA	CW
Optical Output Power	P _o	6	-	-	mW	CW, I=I _{th} +60mA flat window cap

Optical and Electrical Characteristics (Tc=25°C)

Parameter	Symbol	Min	Typical	Max	Unit	Test Condition
Slope Efficiency	SE	0.15	0.25	-	mW/mA	CW, P _o =5mW
Flat window cap		0.12	0.18	-		
Ball lens cap						
Threshold Current	I _{th}	-	10	15	mA	CW
Optical Output Power	P _o	5	-	-	mW	CW, kink free
Peak Wavelength	λ	1495	1510	1525	nm	CW, P _o =5mW
Side Mode Suppression Ratio	Sr	30	35	-	dB	CW, P _o =5mW (0 to 70°C)
Forward Voltage	V _F	-	1.2	1.5	V	CW, P _o =5mW
Temperature Dependence of Peak Wavelength	Δλ _p /ΔT	0.08	0.1	0.12	nm/°C	CW, P _o =5mW (0 to 70°C)
Beam Divergence	θ θ _⊥	- -	25 35	- -	deg.	CW, P _o =5mW, FWHM
Rise/Fall Time	t _r / t _f	-	-	0.5	ns	I _{bias} =I _{th} , 10-90%
Spectral Width (-20dB)	Δλ	-	-	1	nm	CW, P _o =5mW
PD Monitor Current	I _m	100	200	800	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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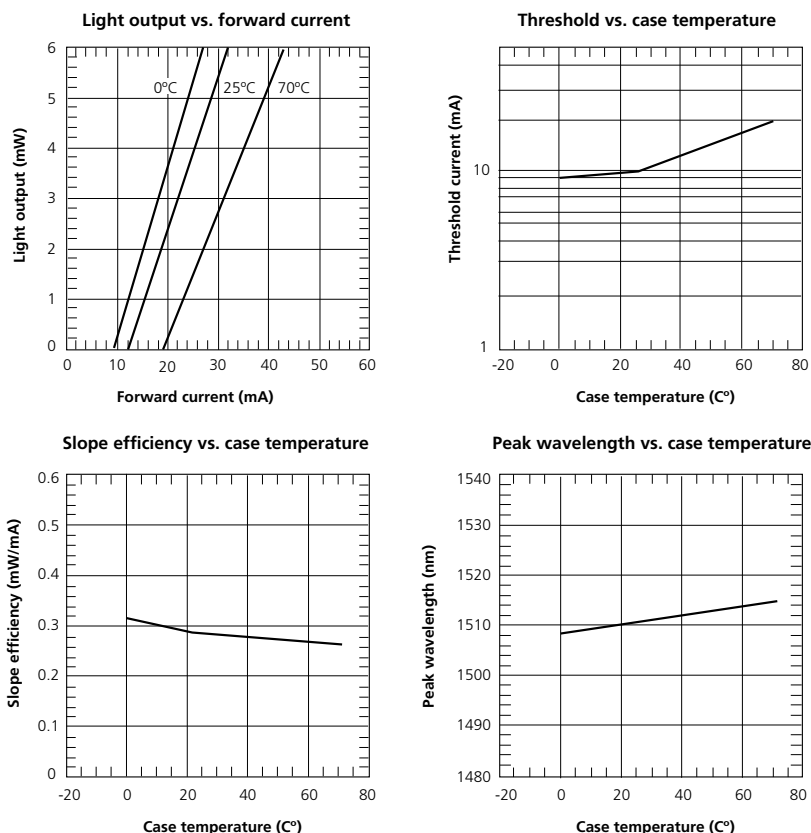
Mechanical Drawing



LD Pin Assignment

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

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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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