

C-15-DFB2.5-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
- Designed for 2.5G high speed long reach optical network
- 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_{FPD}	2	mA
Operating Temperature	T_{opr}	0 to +70	°C
Storage Temperature	T_{stg}	-40 to +100	°C

Optical and Electrical Characteristics (Tc=70°C)

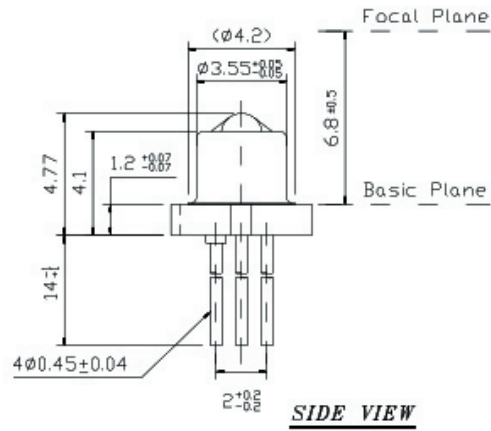
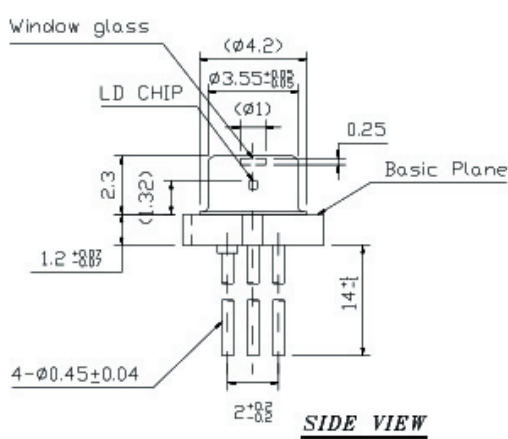
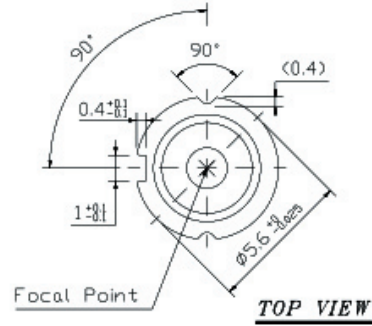
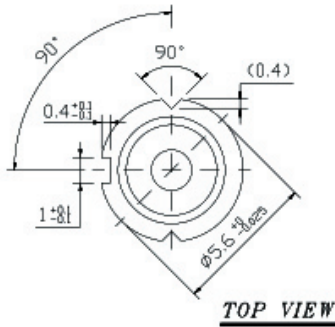
Parameter	Symbol	Min	Typical	Max	Unit	Test Condition
Threshold Current	I_{th}	-	-	50	mA	CW
Optical Output Power	P_o	6	-	-	mW	CW, $I=I_{th}+60mA$ flat window cap

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	1535	1550	1565	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	$\Delta\lambda/\Delta T$	0.08	0.1	0.12	nm/°C	CW, $P_o=5mW$ (0 to 70°C)
Beam Divergence	$\theta_{//}$ θ_{\perp}	-	25 35	-	deg.	CW, $P_o=5mW$, FWHM
Rise/Fall Time	t_r / t_f	-	-	150	ps	$I_{bias}=I_{th}$, 20-80% Lead Length=1mm
Spectral Width (-20dB)	$\Delta\lambda$	-	-	1	nm	Modulate at 2.5Gbps ER=8.2dB
PD Monitor Current	I_m	100	200	1200	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



C-15-DFB2.5-E-A-NT
 C-15-DFB2.5-E-AB-NT
 C-15-DFB2.5-E-AD-NT

C-15-DFB2.5-E-B-NT
 C-15-DFB2.5-E-BB-NT
 C-15-DFB2.5-E-BD-NT

LD Pin Assignment	
Model	PIN Assignment (Bottom View)
C-15-DFB2.5-E-A-NT C-15-DFB2.5-E-B-NT	
C-15-DFB2.5-E-AB-NT C-15-DFB2.5-E-BB-NT	
C-15-DFB2.5-E-AD-NT C-15-DFB2.5-E-BD-NT	

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Ordering Information

Available Options:

C-15-DFB2.5-E-A-NT
C-15-DFB2.5-E-AB-NT
C-15-DFB2.5-E-AD-NT
C-15-DFB2.5-E-B-NT
C-15-DFB2.5-E-BB-NT
C-15-DFB2.5-E-BD-NT

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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