

## 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	$I_{FPD}$	2.0	mA
Operating Temperature	$T_{opr}$	0 to +70	°C
Storage Temperature	$T_{stg}$	-40 to +100	°C

## Optical and Electrical Characteristics( Tc=70°C )

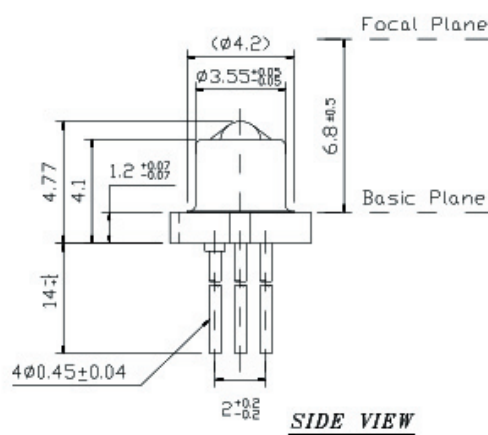
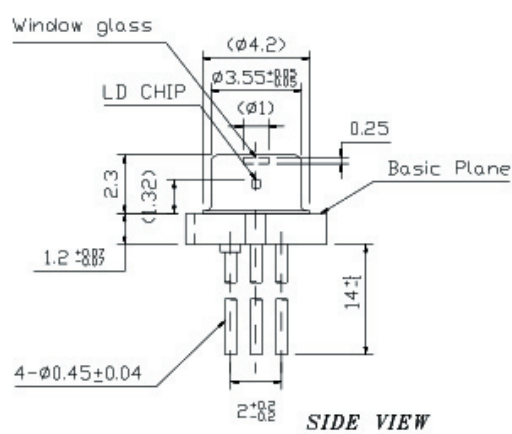
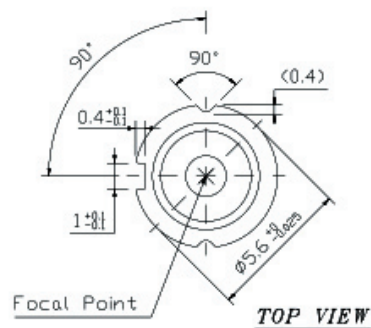
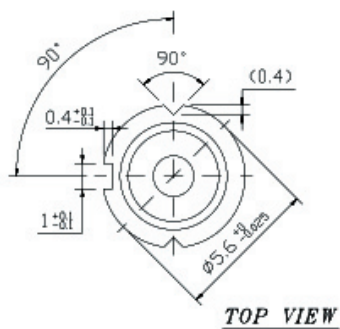
Parameter	Symbol	Min	Typical	Max	Unit	Test Condition
Threshold Current	$I_{th}$	-	-	50	mA	CW
Optical Output Power	$P_o$	6	-	-	mW	CW, $I=I_{th}+60mA$ flat window cap

## 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	$\lambda$	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	$\theta_{//}$	-	25	-	deg.	CW, $P_o=5mW$ , FWHM
	$\theta_{\perp}$	-	35	-		
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	800	$\mu A$	CW, $P_o=5mW$ , $V_{RPD}=2V$
PD Dark Current	$I_{DARK}$	-	-	0.1	$\mu A$	$V_{RPD}=5V$
PD Capacitance	$C_t$	-	6	15	pF	$V_{RPD}=5V$ , $f=1MHz$

C-15-DFB2.5-E-XX-NT

Mechanical Drawing



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

Bell 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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