Luminent
Bringing Communications to Light™

1550 nm, 2.5 Gbps MQW-DFB Laser Diode Modules
Preliminary

C-15-DFB2.5-XD-SXXXX-X

Features
- Uncooled laser diode with MQW structure
- 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

Application
- Designed for 2.5 Gbps high speed optical networks

Absolute Maximum Ratings (T_c=25°C)

Parameter	Symbol	Value	Unit
Fiber Output Power			
L	P_f	0.6	mW
M		1.0	
H		2.0	
LD Reverse Voltage	V_{rld}	2	V
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 +85	°C

Optical and Electrical Characteristics (T_c = 25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Threshold Current	I_{th}	-	10	15	mA	CW
Fiber Output Power						
L		0.2	-	0.5		
M	P_f	0.5	-	1	mW	CW, I_{th}+30 mA,
H		1	-	2		kink free
Peak Wavelength*	□	1535	1550	1565	nm	
Side mode Suppression	S_r	30	35	-	dB	CW, P_f = P_f (Min), 0 to +70 °C
Forward Voltage	V_F	-	1.2	1.5	V	CW, P_f = P_f (Min)
Rise, Fall Time	t_r, t_f	-	-	150	ps	I_{bias}=I_{th}, 10 to 90%
Tracking Error	□P_f/ P_f	-	-	±1.5	dB	APC, 0 to +70 ˚C
PD Monitor Current	I_m	100	-	-	□A	CW,P_f=P_f(Min), V_{rpd} = 2V
PD Dark Current	I_{DARK}	-	-	0.1	□A	V_{rpd} = 5V
PD Capacitance	C_t	-	6	15	pF	V_{rpd} = 5V, f= 1MHz

(All optical data refer to a coupled 9/125 □m SM fiber)
*Selected wavelength is available for WDM application.

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ORDERING INFORMATION

C-15-DFB2.5-XD-SXXXX-X

Wavelength
15 1550

Package
P ..... Pigtail
R ..... Receptacle

Pin Assignment
D ..... D Type

Connector
FC/ST/SC/MU/-

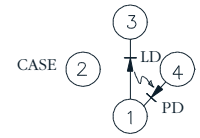
Fiber Output Power
I ..... Isolator
- ..... No Isolator

Flange Type
-/O/V/K

2.5 Gbps DFB LD Modules-receptacle

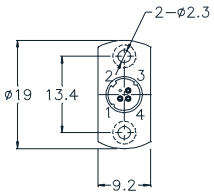
LD Pin Assignment — **Units in mm**

D Type

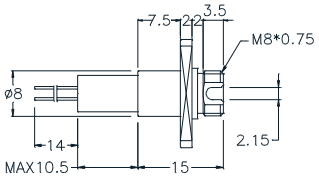


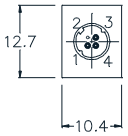
Pin 1 : Laser Anode and Monitor Diode Cathode
Pin 2 : Case Gnd
Pin 3 : Laser Cathode
Pin 4 : Monitor Diode Anode

Connector Type

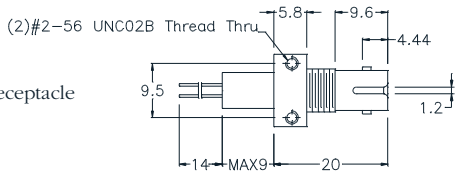


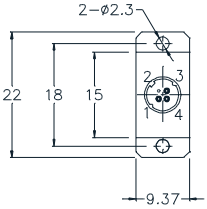
FC Receptacle



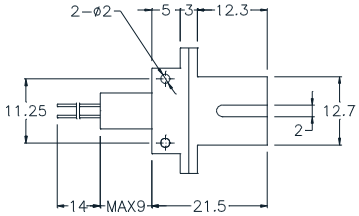


ST Receptacle

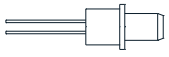




SC Receptacle



TOSA(FC,ST,SC,LC)
Customer Specified



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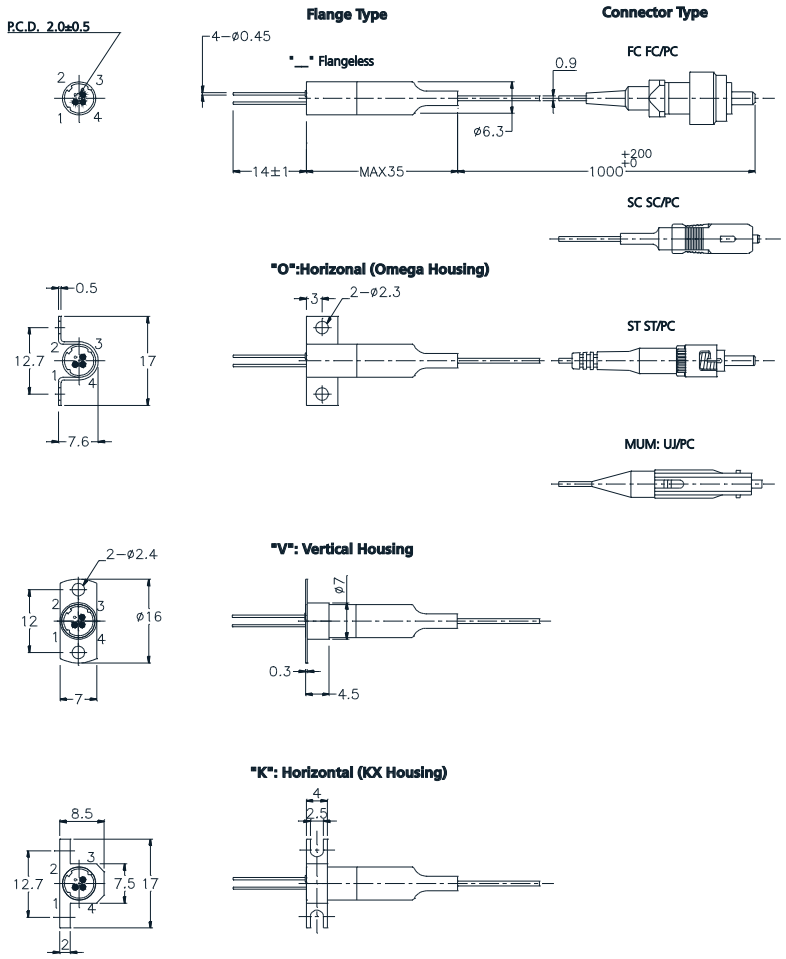
C-15-DFB2.5-XD-SXXXX-X

2.5 Gbps DFB LD Modules-pigtailed

Package Dimensions — **Units in mm**



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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