

### Features

- Un-cooled 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
- TOSA package
- FC/ST/SC receptacle package with 2-hole flange
- Fiber pigtailed package with optional FC/ST/SC/MU/LC connector
- Design for 2.5G high speed optic networks application

### Absolute Maximum Rating (Tc=25°C)

Parameter	Symbol	Value	Unit
Fiber Output Power L/M/H/2	$P_f$	1(L)/1.5(M)/2.5(H)/3(2)	mW
LD Reverse Voltage	$V_{RLD}$	2	V
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 +85	°C

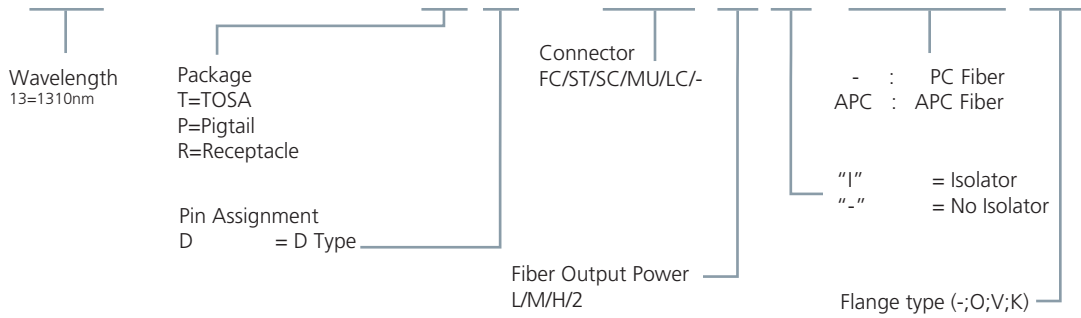
(All optical data refer to a coupled 9/125µm SM fiber)

### Optical and Electrical Characteristics (T=25°C)

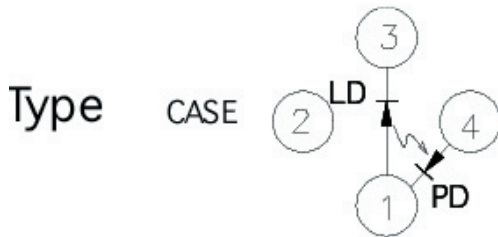
Parameter	Symbol	Min	Typical	Max	Unit	Test Condition
Threshold Current	$I_{th}$	-	10	15	mA	CW
Fiber Output Power L M H 2	$P_f$	0.2 0.5 1 2	- - 1.6 2.5	0.5 1 - -	mW	CW, $I_{th}+20mA$ , kink free
Peak Wavelength	$\lambda$	1295	1310	1325	nm	Note 3
Side mode Suppression Ratio	$S_r$	30	35	-	dB	CW, $P_f=P_f(\text{Min})$ , 0 to 70°C
Forward Voltage	$V_f$	-	1.2	1.5	V	CW, $P_f=P_f(\text{Min})$
Rise/Fall Time	$t_r/t_f$	-	-	150	ps	$I_{bias}=I_{th}$ , 10% to 90%
Tracking Error	$\Delta P_f / P_f$	-	-	±1.5	dB	APC, 0 to +70°C
PD Monitor Current	$I_m$	100	-	-	µA	CW, $P_f=P_f(\text{Min})$ , $V_{RPD}=2V$
PD Dark Current	$I_{DARK}$	-	-	0.1	µA	$V_{RPD}=5V$
PD Capacitance	$C_t$	-	6	15	pF	$V_{RPD}=5V$ , $f=1MHz$

## Ordering Information

# C-13-DFB2.5-XD-SXXXX/XXX-X



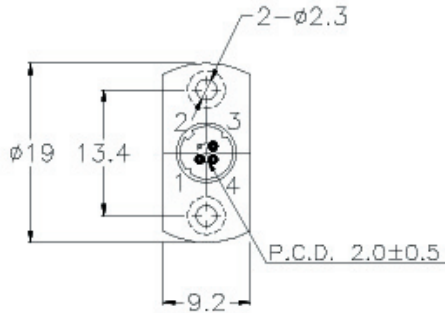
## Pin Assignment



- P in1 : Laser Anode and Monitor Diode Cathode
- P in2 : Case Gnd
- P in3 : Laser Cathode
- P in4 : Monitor Diode Anode

Packaging Dimension (Receptacle)

DFB LD Module- receptacle

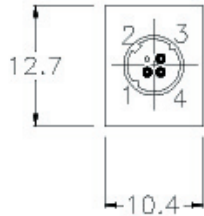
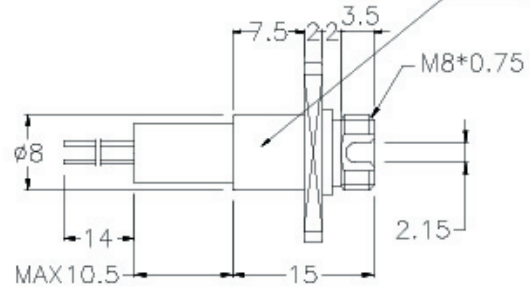


Part Number: C-13-DFB2.5-RD-SXXXX

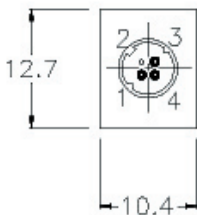
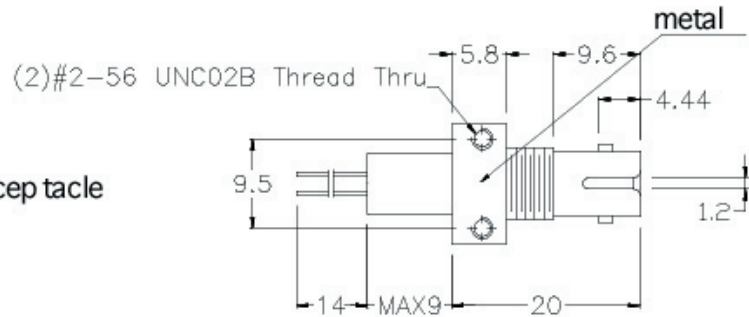
Units in mm

metal

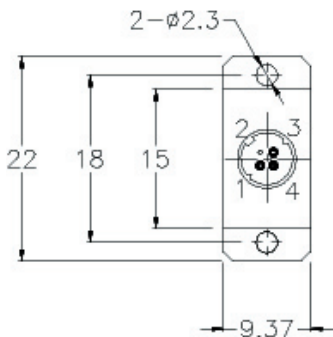
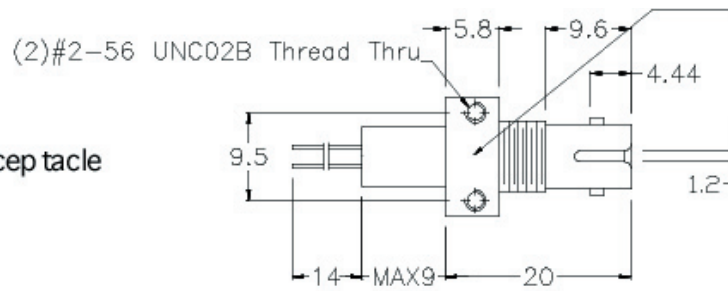
FC Receptacle



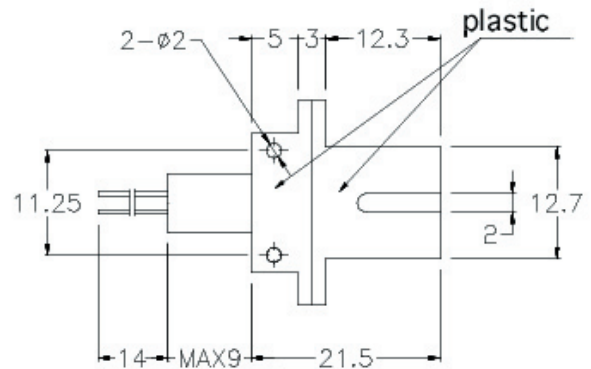
ST Receptacle



ST Receptacle



SC Receptacle



## C-13-DFB2.5-T/R/PX-SXXXX/XXX-X

### Packaging Dimension (TOSA)

2.5G DFB LD Module- TOSA

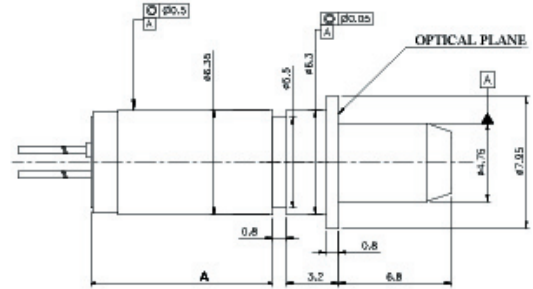
Part Number: C-13-DFB2.5-TX-SSCXX

Units in mm

P.C.D. 2.0±0.5



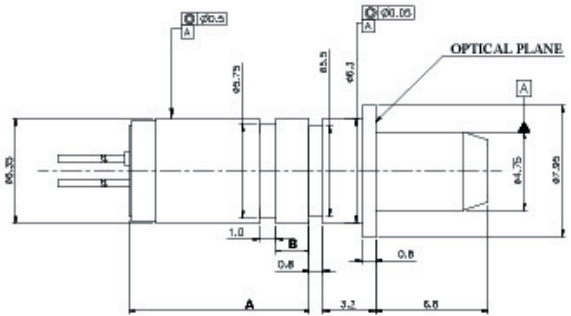
SC TOSA (L&M Power)  
C-13-DFB2.5-TX-SSCX



DIMENSION A: 7.77~8.37mm



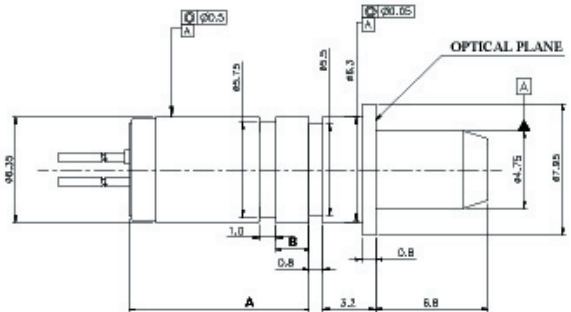
SC TOSA (L&M Power with Isolator)  
C-13-DFB2.5-TX-SSCXI



DIMENSION A: 8.07~9.07mm  
B: 1.0~2.0mm



SC TOSA (H&2 Power)  
C-13-DFB2.5-TX-SSCXX



DIMENSION A: 9.7~11mm  
B: 2.0~3.3mm

## C-13-DFB2.5-T/R/PX-SXXXX/XXX-X

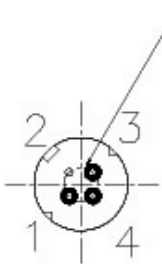
**Packaging Dimension (TOSA)**

**2.5G DFB LD Module- TOSA**

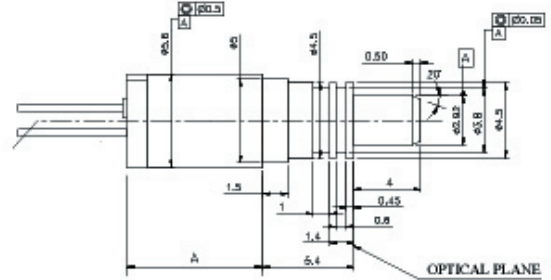
**Part Number: C-13-DFB2.5-TX-SLCXX**

**Units in mm**

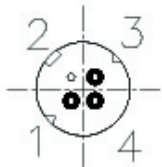
P.C.D. 2.0±0.5



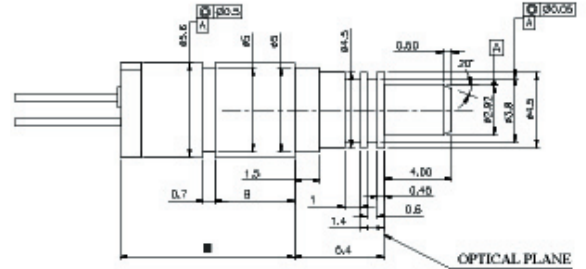
**LC TOSA (L&M Power)  
C-13-DFB2.5-TX-SLCX**



**DIMENSION A: 7.77~8.37mm**



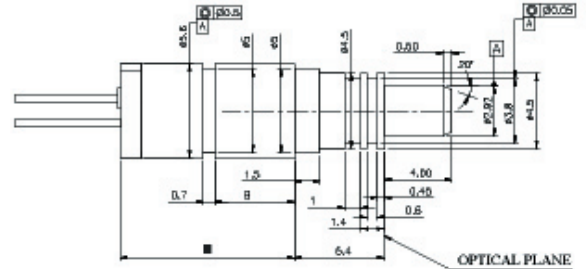
**LC TOSA (L&M Power with Isolator)  
C-13-DFB2.5-TX-SLCXI**



**DIMENSION A: 8.07~9.07mm  
B: 2.8~3.8mm**



**LC TOSA (H&2 Power)  
C-13-DFB2.5-TX-SLCXX**



**DIMENSION A: 9.7~11mm  
B: 2.9~4.2mm**

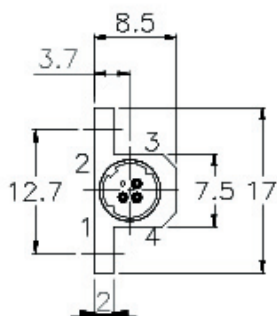
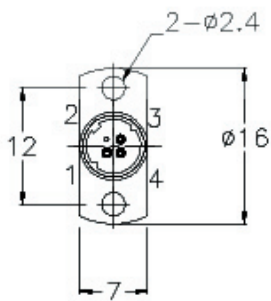
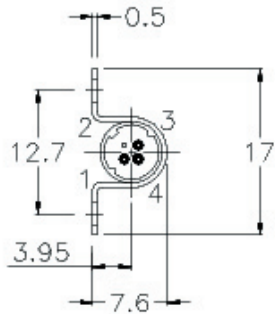
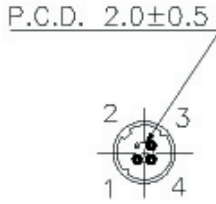
C-13-DFB2.5-T/R/PX-SXXXX/XXX-X

Packaging Dimension (TOSA)

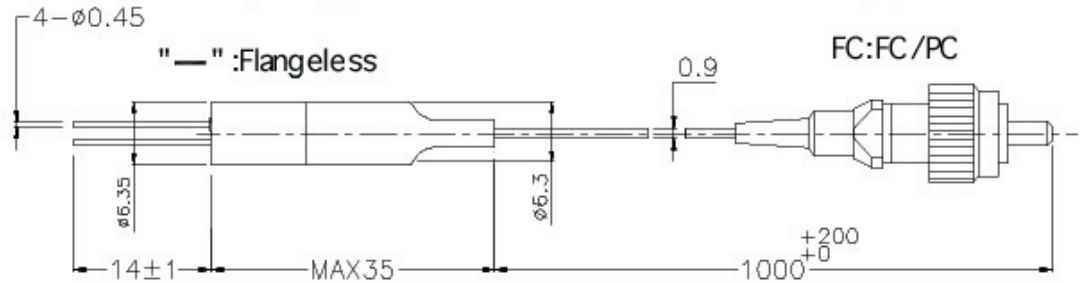
2.5G DFB LD Module- Pigtailed

Part Number: C-13-DFB2.5-PX-SXXXX/XXX-X

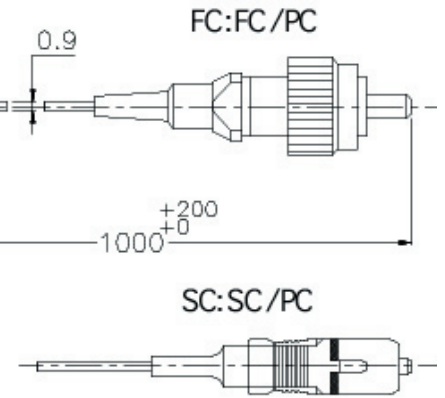
Units in mm



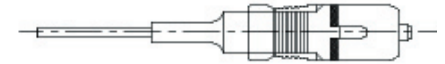
## Flange Type



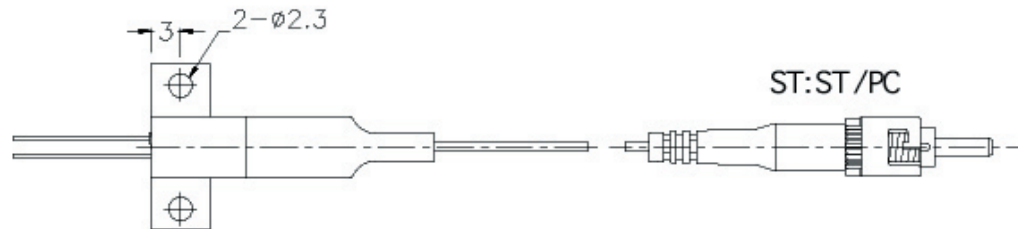
## Connector Type



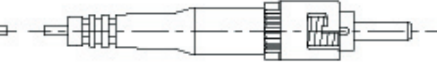
SC:SC/PC



## "O": Horizontal (Omega Housing)



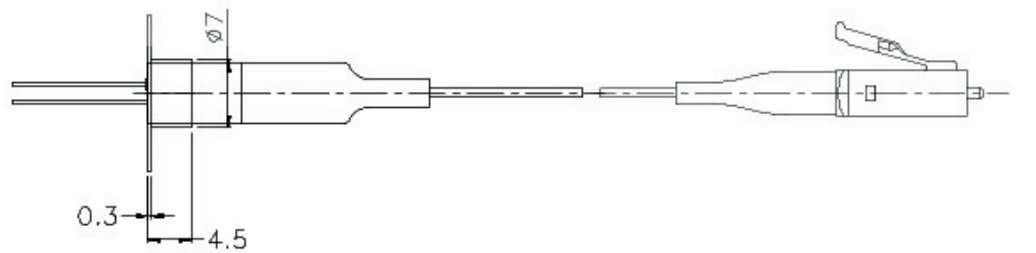
ST:ST/PC



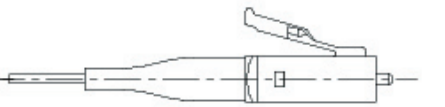
MU: MUJ/PC



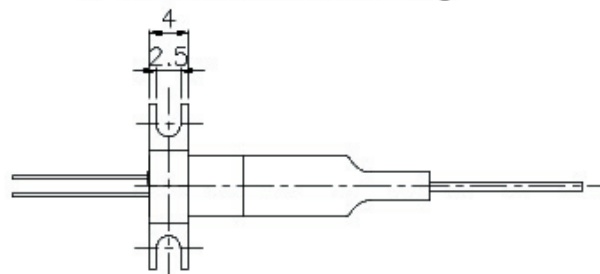
## "V" : Vertical



LC:LC/PC



## "K" : Horizontal (KX Housing)



### 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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