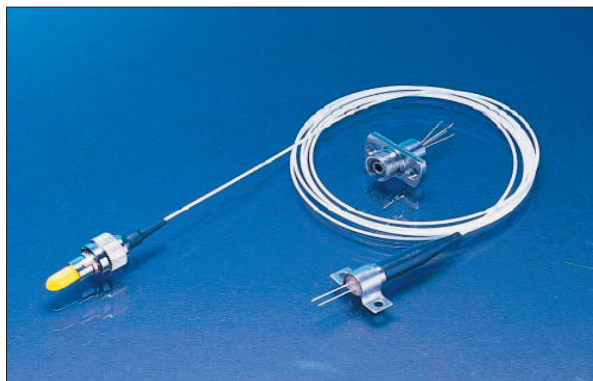


C-13-DFB2.5-XX-SXXXX/XXX-X-XX



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 Telcordia Technologies GR-468-CORE
- Single frequency operation with high SMSR

Packaging

- TOSA
- FC/ST/SC receptacle package with 2-hole flange
- Fiber pigtailed with optional FC/ST/SC/MU/LC connector

Application

- Design for 2.5Gbps high speed optics networks
- RoHS Compliant available

Absolute Maximum Ratings (Tc=25°C)

Parameter	Symbol	Rating	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 ~+70	°C
Storage Temperature	T_{stg}	-40 ~+85	°C

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

Optical and Electrical Characteristics (Tc=25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Test Conditions
Threshold Current	I_{th}	-	10	15	mA	CW
Fiber Output Power	L	0.2	-	0.5	mW	CW, I_{th} +20mA, kink free
	M	0.5	-	1		
	H	1	1.6	-		
	2	2	2.5	-		
Peak Wavelength	λ	1295	1310	1325	nm	Note 3
Side mode Suppression Ratio	Sr	30	35	-	dB	CW, $P_f = P_f$ (Min), 0~70°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	$I_{bias} = I_{th}$, 20~80% Lead length=1mm
Tracking Error	$\Delta P_f / P_f$	-1.5	-	1.5	dB	APC, 0~70°C
PD Monitor Current	I_m	100	-	-	μA	CW, $P_f = P_f$ (Min), $V_{RPD}=2V$
PD Dark Current	I_{DARK}	-	-	0.1	μA	$V_{RPD}=5V$
PD Capacitance	C_t	-	6	15	pF	$V_{RPD}=5V, f=1MHz$

Note: 1.Pin assignment can be customized.

2.Specifications subject to change without notice.

3.Selected wavelength is available for WDM application.

A Type

CASE

Diagram illustrating a Case structure (A Type) with nodes 1, 2, 3, and 4. Node 2 is connected to node 1 by a thick arrow labeled 'LD'. Node 2 is connected to node 3 by a wavy line. Node 3 is connected to node 4 by a thick arrow labeled 'PD'.

B Type

```
graph LR; 2((2)) <-->|LD| 3((3)); 3 -.-> 4((4)); 4 <-->|PD| 1((1)); CASE[CASE] --- 2; PD[PD] --- 4;
```

D Type

CASE

```
graph TD; 1((1)) -- LD --> 2((2)); 2 -- PD --> 3((3)); 3 -- PD --> 4((4));
```

Technical drawing of the front view of a 1000mm x 1000mm x 10mm plate. The drawing shows a central circular feature with a diameter of 19mm. Inside this circle, there are four smaller circles, each with a diameter of 2.3mm, arranged in a square pattern. The center-to-center distance between these four circles is 13.4mm. The overall width of the plate is 1000mm, and the overall height is 1000mm. The drawing is labeled with dimensions and a note: "P.C.D. 2.0±0.5".

Technical drawing of a mechanical assembly. The drawing shows a cross-section of a component with a central hole. The outer diameter is labeled $\phi 8$. The inner hole has a diameter of $\phi 2.2$. The total length of the component is labeled 15 . The distance from the left end to the start of the central hole is labeled 14 . The distance from the start of the central hole to the right end is labeled 7.5 . The distance from the right end to the center of the central hole is labeled 3.5 . The distance from the center of the central hole to the right end of the component is labeled 2.15 . The component is labeled "metal". The thread on the right end is labeled $M8 \times 0.75$. The maximum length of the component is labeled $MAX 10.5$.

Technical drawing of a metal receptacle. The drawing shows a side view of the component with various dimensions and labels. The labels include: (2)#2-56 UNC02B Thread Thru, metal, receptacle, MAX9, and 1.2. The dimensions are: 5.8, 9.6, 4.44, 9.5, 14, 20, and 1.2. The drawing shows a metal receptacle with a threaded hole and a central pin. The dimensions are: 5.8 (width of the top flange), 9.6 (width of the main body), 4.44 (width of the bottom flange), 9.5 (height of the main body), 14 (length of the pin), 20 (total length), and 1.2 (width of the pin). The label (2)#2-56 UNC02B Thread Thru points to the threaded hole. The label metal points to the main body. The label receptacle points to the entire component. The label MAX9 points to the pin. The label 1.2 points to the width of the pin.

Technical drawing of a mechanical part with the following dimensions and labels:

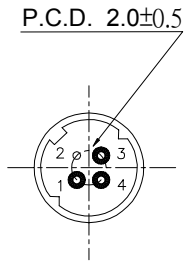
- Top horizontal dimensions: 5, 3, 12.3
- Left vertical dimension: 9.5
- Right vertical dimension: 12.7
- Bottom horizontal dimensions: 14, MAX9, 20.3
- Labels: "2- $\varnothing 2$ " (pointing to two holes), "plastic" (pointing to the main body), and "2" (pointing to a small vertical feature on the right).

C-13-DFB2.5-XX-SXXXX/XXX-X-XX

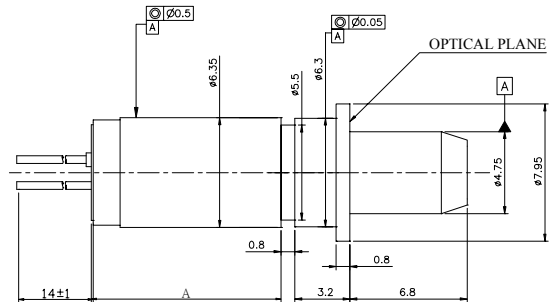
Packaging Dimension

Units in mm.

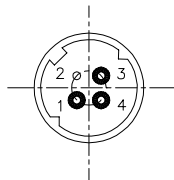
Part Number: C-13-DFB2.5-TX-SSCXX-XX



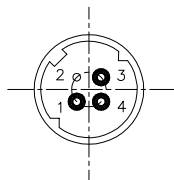
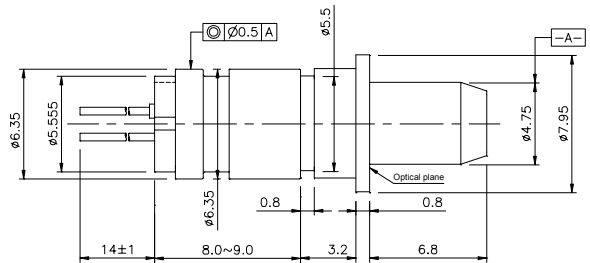
SC TOSA (L&M Power)
C-13-DFB2.5-TX-SSCX-XX



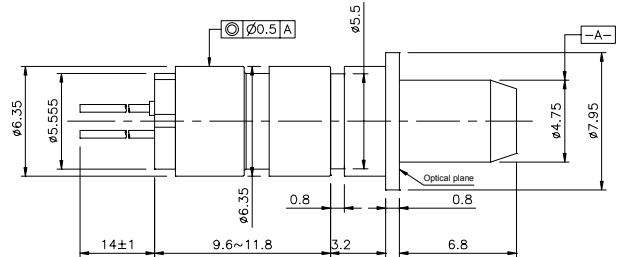
DIMENSION A: 7.77~8.37mm



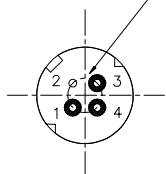
SC TOSA
(L&M Power with Isolator)
C-13-DFB2.5-TX-SSCXI-XX



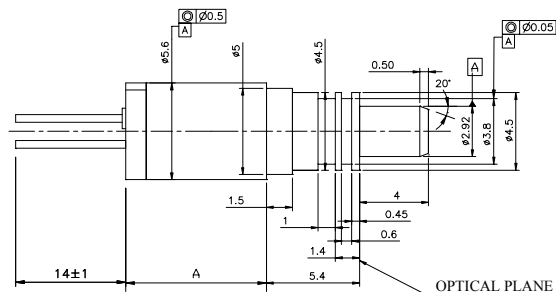
SC TOSA (H&2 Power)
C-13-DFB2.5-TX-SSCXX-XX



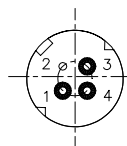
P.C.D. 2.0 ± 0.5



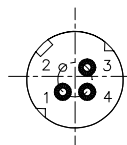
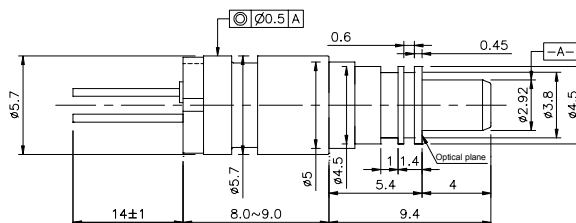
LC TOSA (L&M Power)
C-13-DFB2.5-TX-SLCX-XX



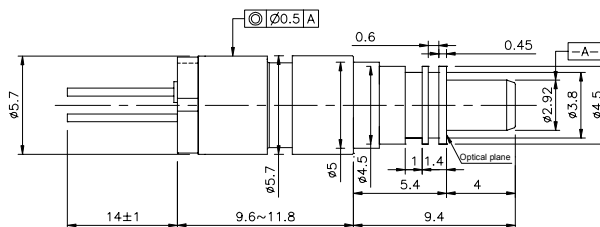
DIMENSION A:7.77~8.37mm



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



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

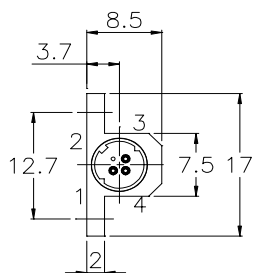
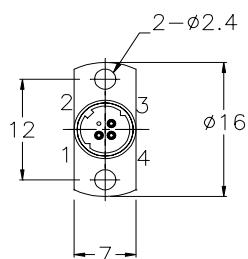
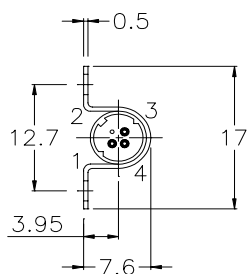
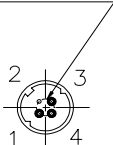


Packaging Dimension

Units in mm.

Part Number: C-15-DFB2.5-PX-SXXXX/XXX-X-XX

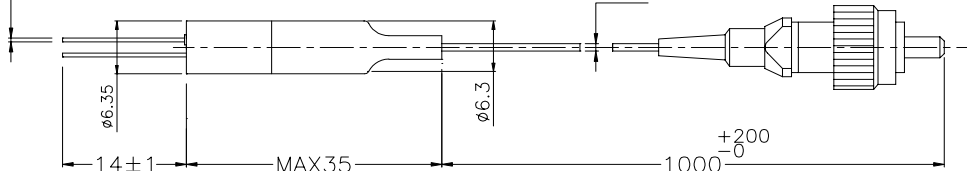
P.C.D. 2.0 ± 0.5



Flange Type

4- $\phi 0.45$

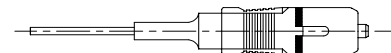
"": Flangeless



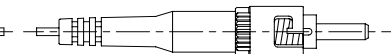
Connector Type

FC:FC/PC

SC:SC/PC



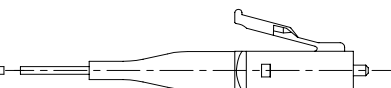
ST:ST/PC



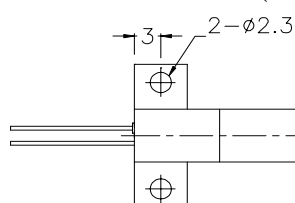
MU:MUJ /PC



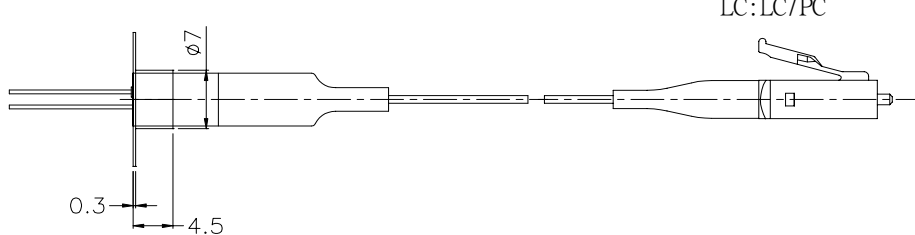
LC:LC/PC



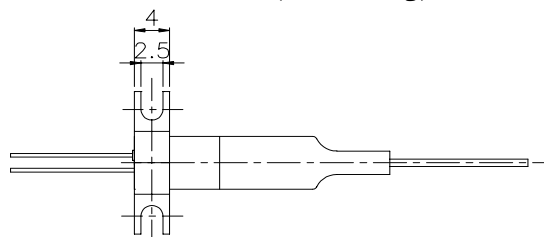
"O": Horizontal (Omega Housing)



"V": Vertical



"K": Horizontal (KX Housing)



C-13-DFB2.5-XX-SXXXXX/XXX-X-XX

Ordering Information

C-13-DFB2.5-XX-SXXXXX/XXX-X-XX

Wavelength
13=1310nm

Package
T=TOSA
R=Receptacle
P=Pin

Assignment
"A" = A Type
B = B Type
D = D Type

Connector
FC/ST/SC/MU/LC/-

Fiber Output Power
L/M/H/2

"I" = Isolator
"_" = No isolator

- = PC Fiber
APC = APC Fiber

Flange type (-;O;V;K)

RoHS Compliant

-/G5/GR

Blank = RoHS non-compliant product

G5 = RoHS 5/6-compliant product (lead exemption)

GR = Full RoHS compliant product (no exemption)

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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