



Features

- Un-cooled laser diode with multi-quantum-well 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
- TOSA
- FC/ST/SC receptacle package with 2-hole flange
- Fiber pigtailed with FC/ST/SC/MU/LC connector
- Design for CWDM fiber optic networks
- RoHS Compliant available

Absolute Maximum Ratings (Tc=25°C)

Parameter	Symbol	Rating	Unit	
Fiber Output Power	L/M/H/2	P _f	0.6(L)/1(M)/2(H)/2.6(2)	mW
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 ~ 70	°C	
Storage Temperature	T _{stg}	-40 ~ 85	°C	

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

Optical and Electrical Characteristics (Tc=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Threshold Current	I _{th}	-	-	20	mA	CW
Optical Output Power	L	0.2	-	0.5	mW	CW, I _{th} +25mA, kink free
	M	0.5	-	1.5		
	H	1	1.6	-		
	2	2	2.5	-		CW, I _{th} +30mA, kink free
Peak Wavelength	λ	n-2	n	n+2	nm	Note 3
		n-3	n	n+3		
Side mode Suppression	S _r	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	-	-	0.3	ns	I _{bias} =I _{th} , 10~90%
Tracking Error	ΔP _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

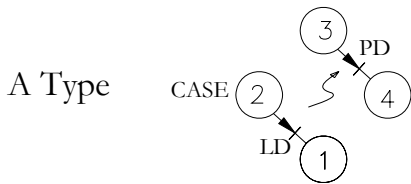
Optical Isolation	OI	30 20	- -	- -	dB	$T_c=25^{\circ}\text{C}$ $0^{\circ}\text{C} < T_c < 70^{\circ}\text{C}$
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Note:

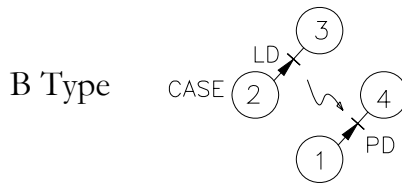
1. Pin assignment can be customized.
2. Specifications subject to change without notice.
3. Selected wavelength is available for WDM application.

* Peak wavelength n=1270;1290;1310;1330;1350;1370;1390;1410;1430;1450;1470;1490
;1510;1530;1550;1570;1590;1610

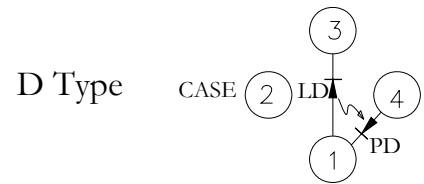
Pin Assignment



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



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



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

Ordering Information

C-XXXXXX-DFB-XX-SXXXI/XXX-X-XX

Wavelength
1270=1270 nm 1450=1450 nm
1290=1290 nm 1470=1470 nm
1310=1310 nm 1490=1490 nm
1330=1330 nm 1510=1510 nm
1350=1350 nm 1530=1530 nm
1370=1370 nm 1550=1550 nm
1390=1390 nm 1570=1570 nm
1410=1410 nm 1590=1590 nm
1430=1430 nm 1610=1610 nm

Blank=Wavelength $\pm 2\text{nm}$
" A " =Wavelength $\pm 3\text{nm}$

Package
T=TOSA
R=Receptacle
P=Pigtail

Pin Assignment
Blank=A Type
B=B Type
D=D Type

Connector
FC/ST/SC/MU/LC/Blank

Fiber Output Power
L/M/H/2

I= Isolator

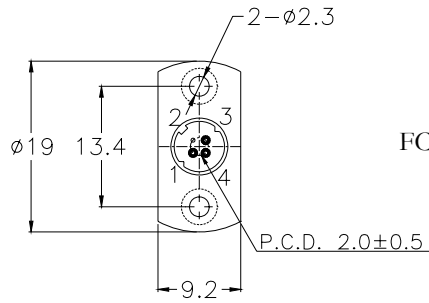
Blank=PC Fiber
APC=APC Fiber

Flange type (Blank;O;V;K)

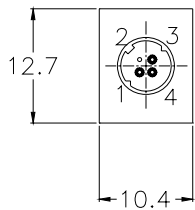
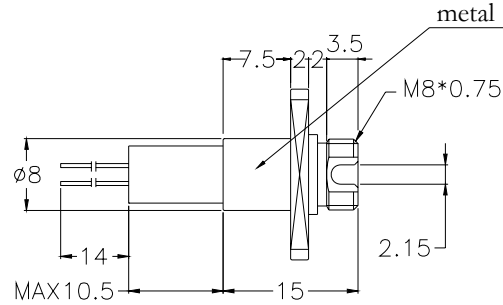
RoHS Compliant
Blank/G5/GR
Blank = RoHS non-compliant product
G5 = RoHS 5/6-compliant product (lead exemption)
GR = Full RoHS compliant product (no exemption)

Packaging Dimensions (Units in mm)

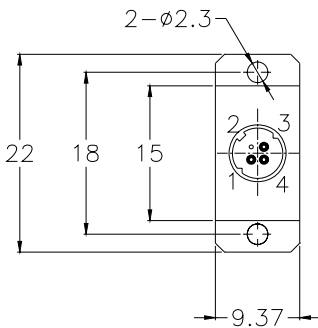
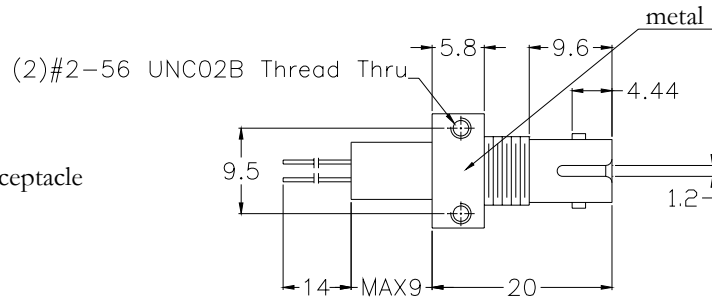
Part Number: C-XXXXX-DFB-RX-SXXXI-XX



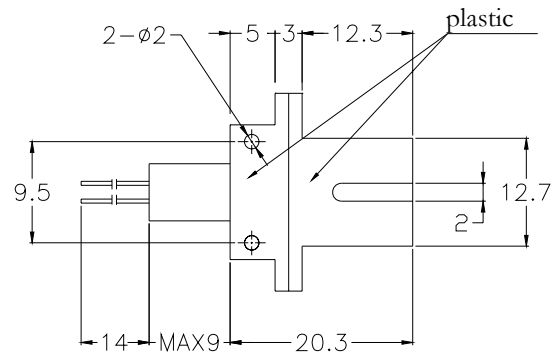
FC Receptacle



ST Receptacle

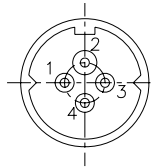


SC Receptacle

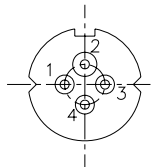
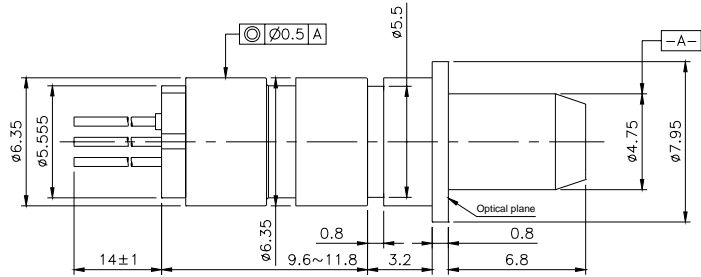


Packaging Dimensions (Units in mm)

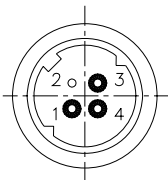
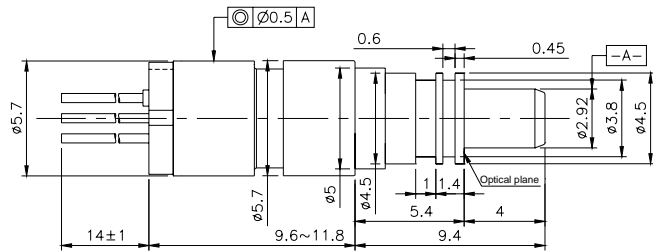
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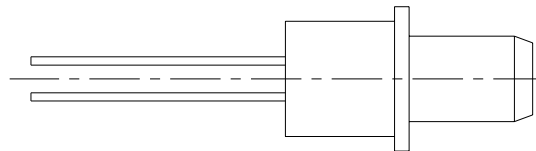
SC TOSA



LC TOSA



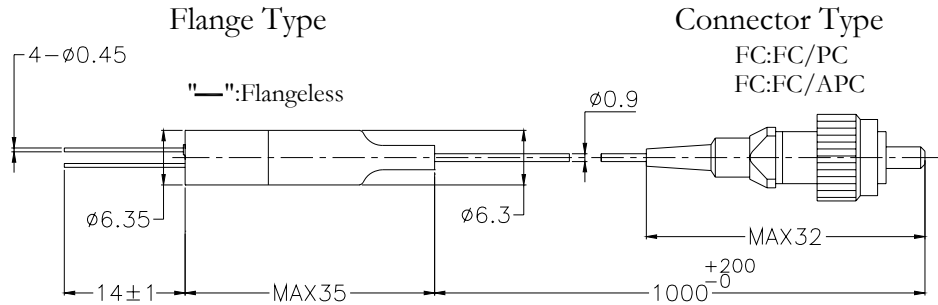
Customer Specified TOSA



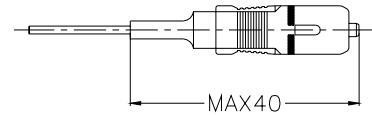
Packaging Dimensions (Units in mm)

Part Number: C-XXXXX-DFB-PX-SXXXI/XXX-X-XX

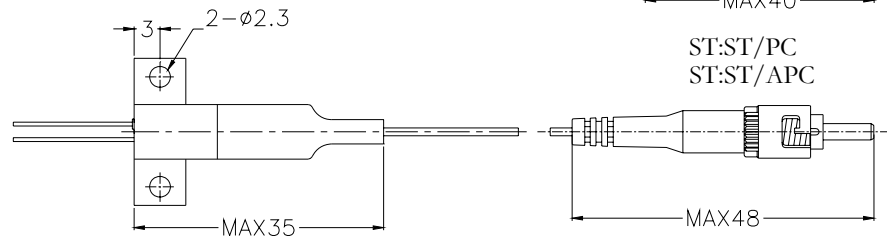
P.C.D. 2.0 ± 0.5



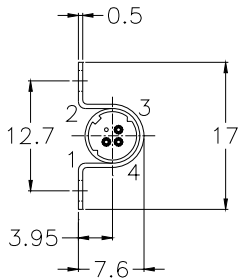
SC:SC/PC
SC:SC/APC



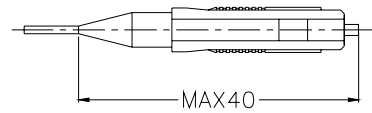
"O":Horizontal (Omega Housing)



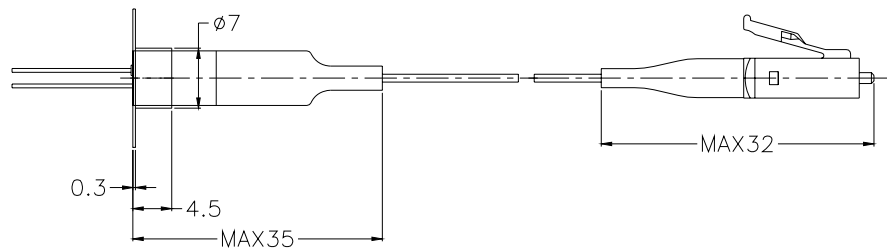
ST:ST/PC
ST:ST/APC



MU:MU Connector

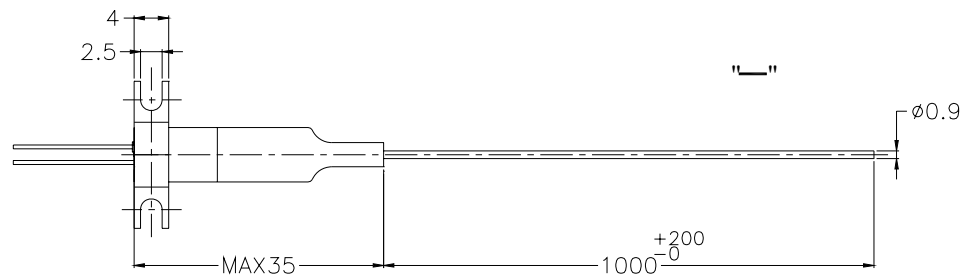
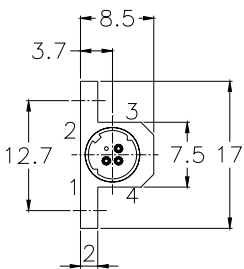


"V":Vertical



LC:LC/PC
LC:LC/APC

"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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