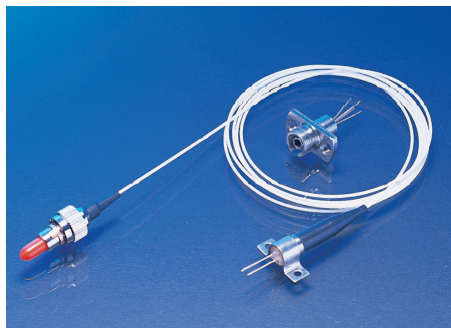


C-1XXX(A)-DFB-T/R/PX-SXXXI/XXX-X



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 CWDM high speed optic networks application

Absolute Maximum Rating (Tc=25°C)

Parameter	Symbol	Value	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	$I_{FPD}$	2.0	mA
Operating Temperature	$T_{opr}$	0 to +70	°C
Storage Temperature	$T_{ste}$	-40 to +85	°C

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

Optical and Electrical Characteristics (Tc=25°C)

Parameter	Symbol	Min	Typical	Max	Unit	Test Condition
Threshold Current	$I_{th}$	-	-	20	mA	CW
Fiber Output Power	$P_f$	0.2 0.5 1 2	- - 1.6 2.5	0.5 1.5 - -	mW	CW, $I_{th}+25mA$ , kink free
L						
M						
H						
2						
Peak Wavelength	$\lambda$	n-2 n-3	n n	n+2 n+3	nm	note 1 note 1
Side mode Suppression Ratio	$Sr$	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	$t_r / t_f$	-	-	0.3	ns	$I_{bias}=I_{th}$ , 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	$V_{RPD}=5V$ , $f=1MHz$

With Isolator

Parameter	Symbol	Min	Typical	Max	Unit	Test Condition
Optical Isolation	OI	30	-	-	dB	Tc=25°C
		20	-	-		0° < Tc < 70°

Note1: 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

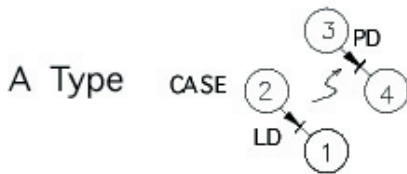
Ordering Information

Ordering Information

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

<p><b>Wavelength</b></p> <p>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</p> <p>"-" = Wavelength <math>\pm 2</math>nm          "A" = Wavelength <math>\pm 3</math>nm</p>	<p><b>Package</b></p> <p>T=TOSA          R=Receptacle          P= Pigtail</p> <p><b>Pin Assignment</b></p> <p>"-" = A Type          B = B Type          D = DType</p>	<p><b>Connector</b></p> <p>FC/ST/SC/MU/LC/-</p> <p><b>Fiber Output Power</b></p> <p>L/M/H/2</p> <p>"I" = Isolator</p>	<p>- = PC Fiber          APC = APC Fiber</p> <p>Flange type (-;O;V;K)</p>
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Pin Assignment



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



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

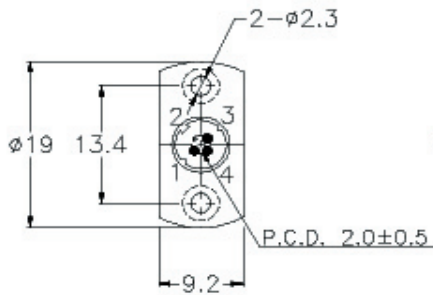


- P in1 : Laser Anode and Monitor Diode Cathode
- P in2 : Case Gnd
- P in3 : Laser Cathode
- P in4 : MonitorDiode Anode

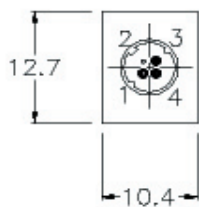
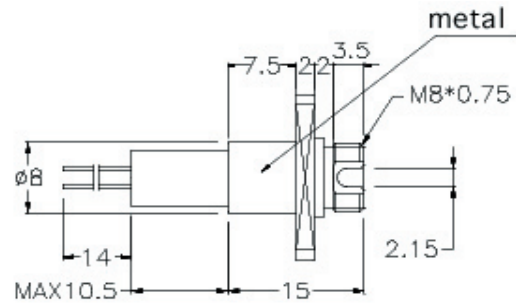
Packaging Dimension

Part Number: C-XXXXXX-DFB-RX-SXXXI

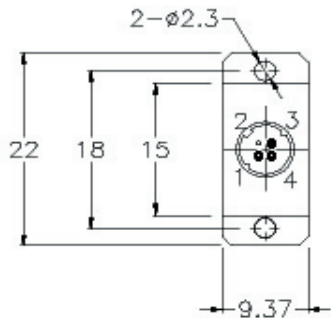
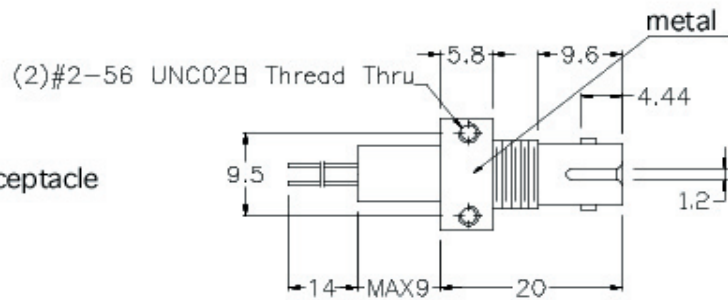
Units in mm



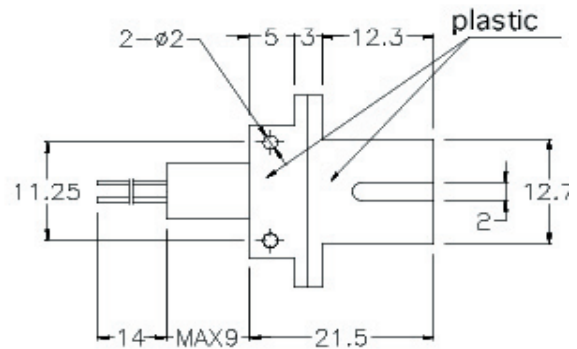
FC Receptacle



ST Receptacle



SC Receptacle

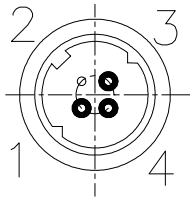


C-1XXX(A)-DFB-T/R/PX-SXXXI/XXX-X

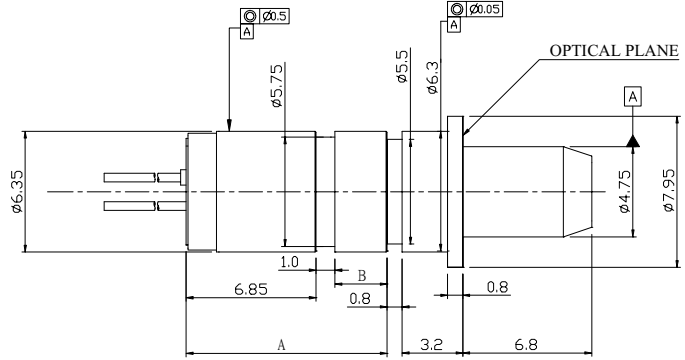
Packaging Dimension (TOSA)

Part Number: C-XXXXX-DFB-TX-SXXXI

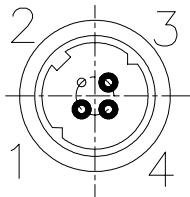
Units in mm



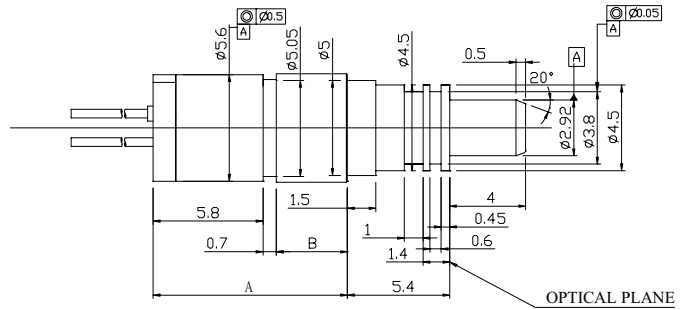
SC TOSA  
C-XXXXX-DFB-TX-SSCXI



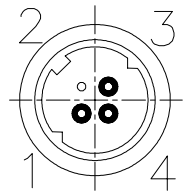
DIMENSION A:Max 11.8mm  
B:Max 3.95mm



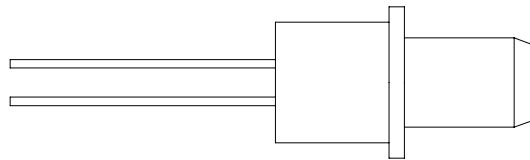
LC TOSA  
C-XXXXX-DFB-TX-SLCXI



DIMENSION A:Max 11.8mm  
B:Max 5.3mm



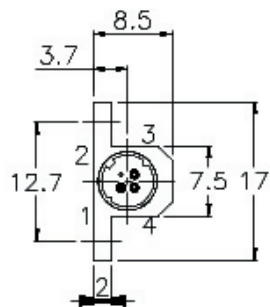
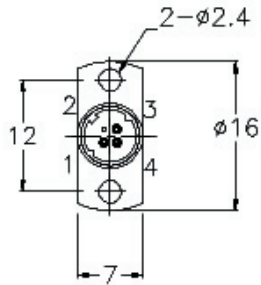
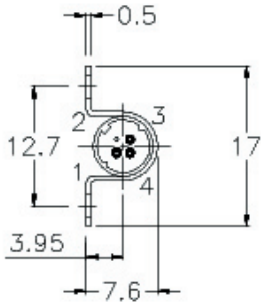
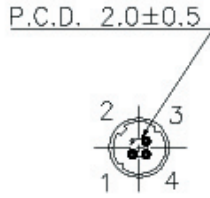
Customer Specified  
TOSA



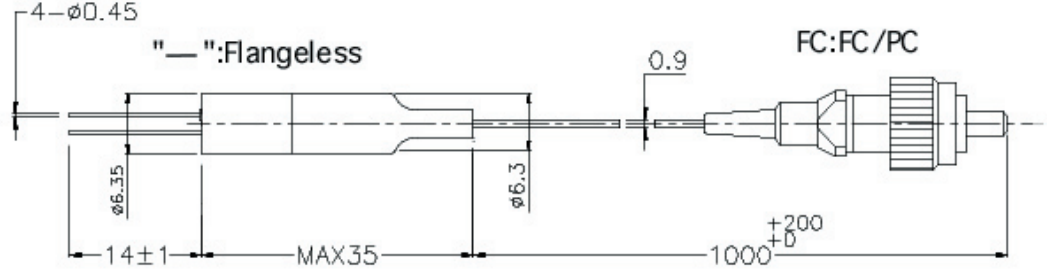
Packaging Dimension (Pigtailed)

Part Number: C-XXXXX-DFB-PX-SXXXX

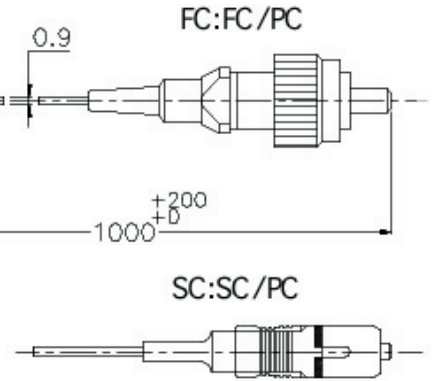
Units in mm



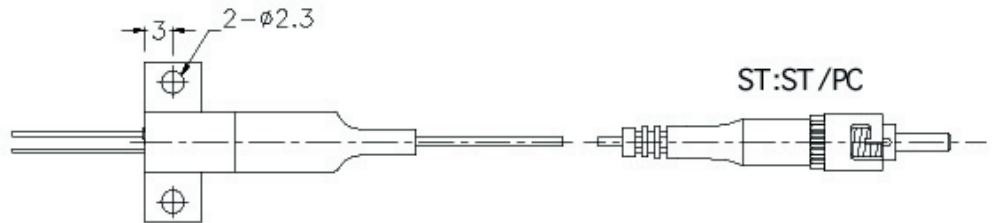
Flange Type



Connector Type

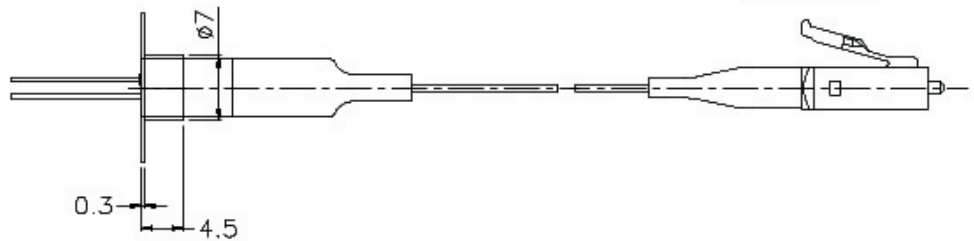


"O": Horizontal (Omega Housing)



ST:ST/PC

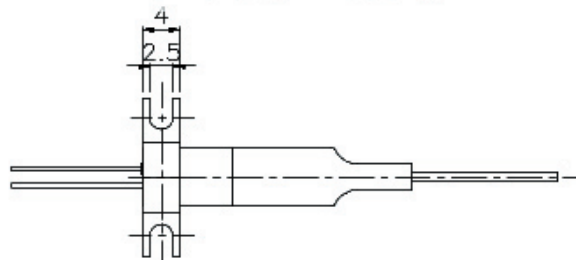
"V": Vertical



MU: MUJ/PC

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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