

C-XXXXX-DFB-XX-SXXXI/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 Bellcore TA-NWT-000983
- Single frequency operation with high SMSR

Packaging

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

Application

- Design for CWDM fiber optic networks
- RoHS Compliant available

Absolute Maximum Ratings

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}	2.0	mA
Operating Temperature	T_{opr}	0 ~ 70	°C
Storage Temperature	T_{stg}	-40 ~ 85	°C

(All optical data refer to a coupled 9/125 μ m S/M fiber)

Optical and Electrical Characteristics (Tc=25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Test Conditions
Threshold Current	I_{th}	-	-	20	mA	CW
Fiber Output Power L M H 2	P_f	0.2	-	0.5	mW	CW, $I_{th}+25$ mA, kink free
		0.5	-	1.5		
		1	1.6	-		
		2	2.5	-		CW, $I_{th}+30$ mA, 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	$\Delta P_f / P_f$	-1.5	-	1.5	dB	APC, 0~70°C
PD Monitor Current	I_m	100	-	-	μ A	CW, $P_f = P_f$ (Min), $V_{RPD}=2$ V
PD Dark Current	I_{dark}	-	-	0.1	μ A	$V_{RPD}=5$ V
PD Capacitance	C_t	-	6	15	pF	$V_{RPD}=5$ V, f=1MHz
Optical Isolation	OI	30	-	-	dB	Tc=25°C
		20	-	-		0°C<Tc<70°C

Note: 1.Pin assignment can be customized.

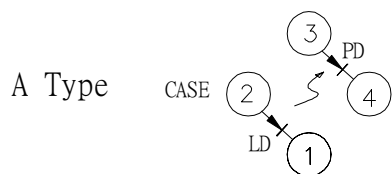
2.Specifications subject to change without notice.

3.Selected wavelength is available for WDM application

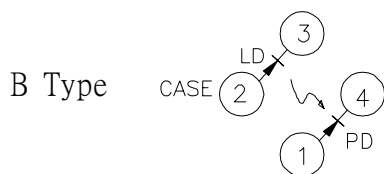
*Peak wavelength n=1270;1290;1310;1330;1350;1370;1390;1410;1430;1450;1470;1490
;1510;1530;1550;1570;1590;1610

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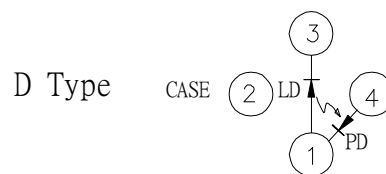
LD Pin Assignment



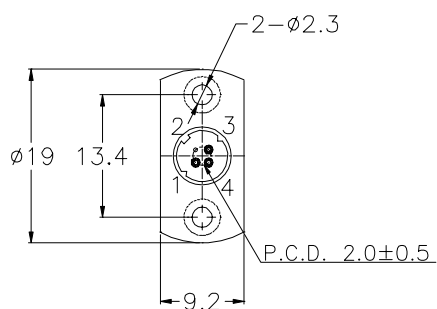
Pin 1 : Laser Cathode
Pin 2 : Laser Anode and Case Gnd
Pin 3 : Monitor Diode Anode
Pin 4 : Monitor Diode Cathode



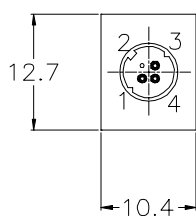
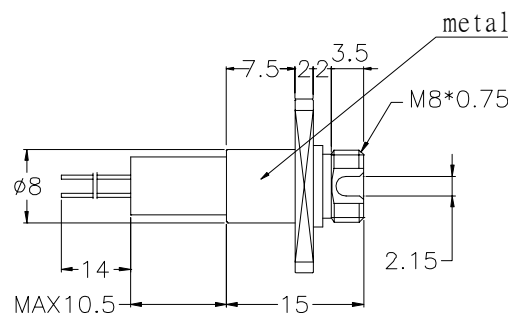
Pin 1 : Monitor Diode Anode
Pin 2 : Laser Anode and Case Gnd
Pin 3 : Laser Cathode
Pin 4 : Monitor Diode Cathode



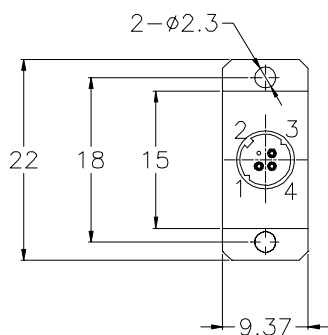
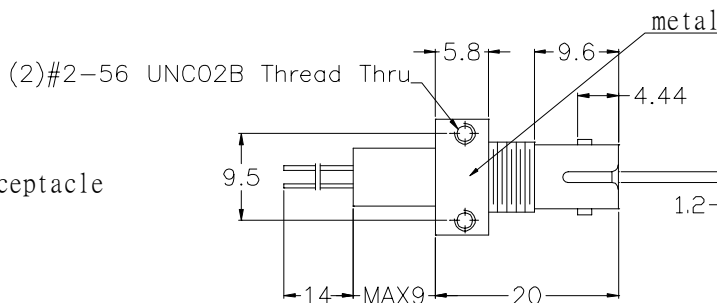
Pin 1 : Laser Anode and Monitor Diode Cathode
Pin 2 : Case Gnd
Pin 3 : Laser Cathode
Pin 4 : Monitor Diode Anode



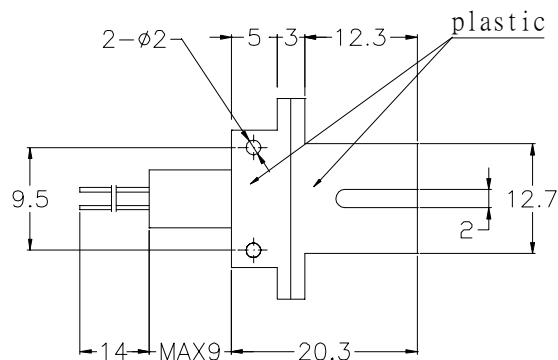
FC Receptacle



ST Receptacle



SC Receptacle



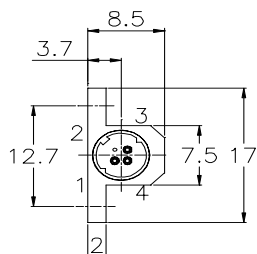
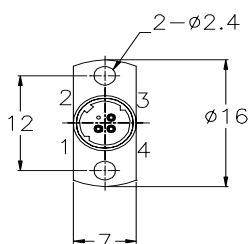
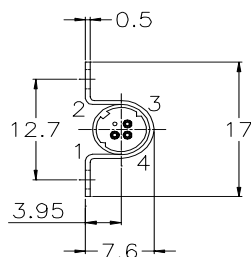
C-XXXXX-DFB-XX-SXXXI/XXX-X-XX

Packaging Dimension

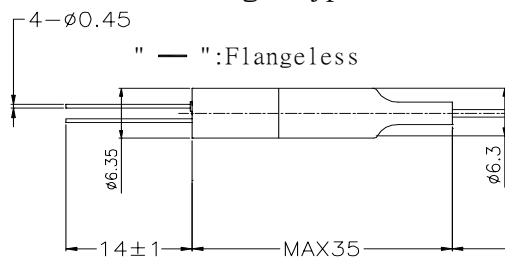
Units in mm.

Part Number: C-XXXXX-DFB2.5-PX-SXXXI/XXX-X-XX

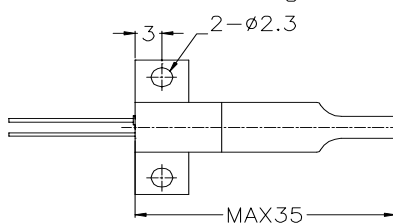
P.C.D. 2.0 ± 0.5



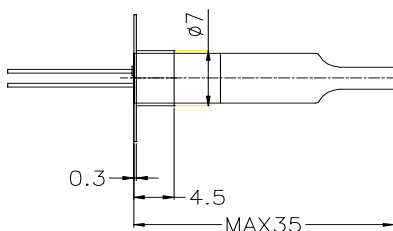
Flange Type



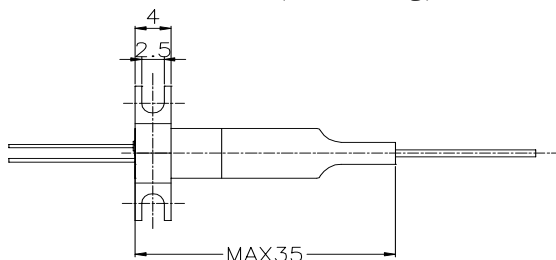
"□": Horizontal (Omega Housing)



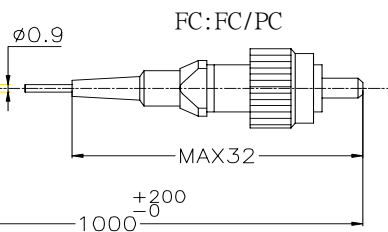
"V": Vertical



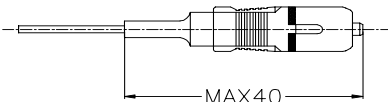
"K": Horizontal (KX Housing)



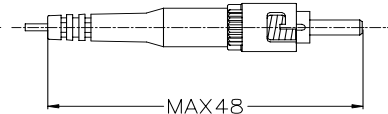
Connector Type



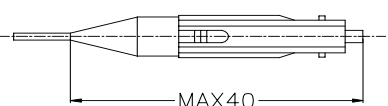
FC: FC/PC



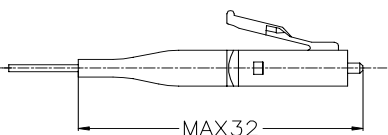
ST: ST/PC



MU: MUJ/PC



LC: LC/PC



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Ordering Information

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

Wavelength								
1270=1270 nm	1450=1450 nm	"-" = Wavelength ± 2 nm	Package	Connector	- = PC Fiber			
1290=1290 nm	1470=1470 nm	"A" = Wavelength ± 3 nm	T=TOSA	FC/ST/SC/MU/LC/-	APC = APC Fiber			
1310=1310 nm	1490=1490 nm		R=Receptacle	Fiber Output Power	Flange type (-;O;V;K)			
1330=1330 nm	1510=1510 nm		P=Pin	L/M/H/2				
1350=1350 nm	1530=1530 nm		Pin Assignment	"I" = Isolator	RoHS Compliant			
1370=1370 nm	1550=1550 nm		"-"=A Type		-/G5/R5			
1390=1390 nm	1570=1570 nm		B=B Type		Blank = RoHS non-compliant product			
1410=1410 nm	1590=1590 nm		D=D Type		G5 = RoHS 5/6-compliant product (lead exemption)			
1430=1430 nm	1610=1610 nm				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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