

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.

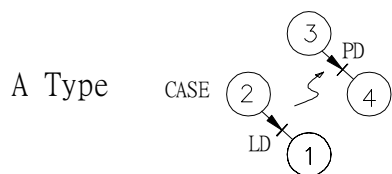
2.Specifications subject to change without notice.

3.Selected wavelength is available for WDM application

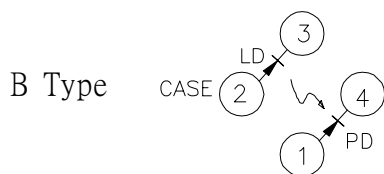
***Peak wavelength n=1270;1290;1310;1330;1350;1370;1390;1410;1430;1450;1470;1490
;1510;1530;1550;1570;1590;1610**

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

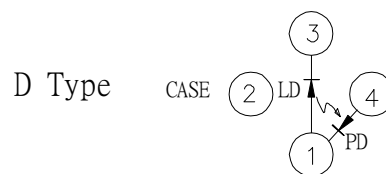
LD Pin Assignment



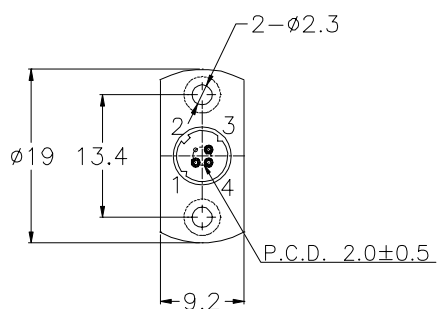
Pin 1 : Laser Cathode
Pin 2 : Laser Anode and Case Gnd
Pin 3 : Monitor Diode Anode
Pin 4 : Monitor Diode Cathode



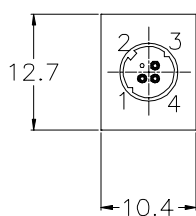
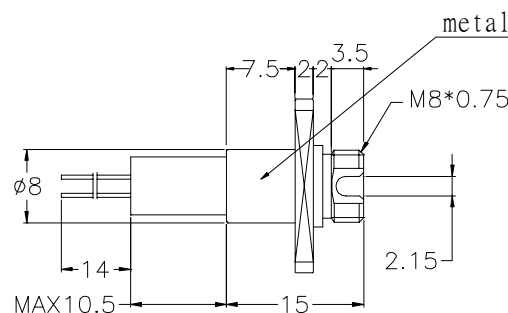
Pin 1 : Monitor Diode Anode
Pin 2 : Laser Anode and Case Gnd
Pin 3 : Laser Cathode
Pin 4 : Monitor Diode Cathode



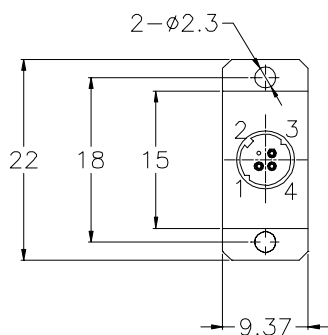
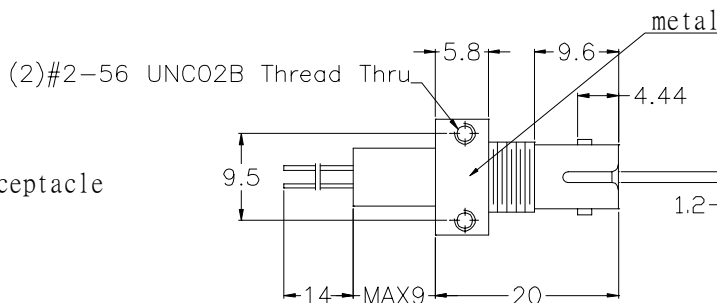
Pin 1 : Laser Anode and Monitor Diode Cathode
Pin 2 : Case Gnd
Pin 3 : Laser Cathode
Pin 4 : Monitor Diode Anode



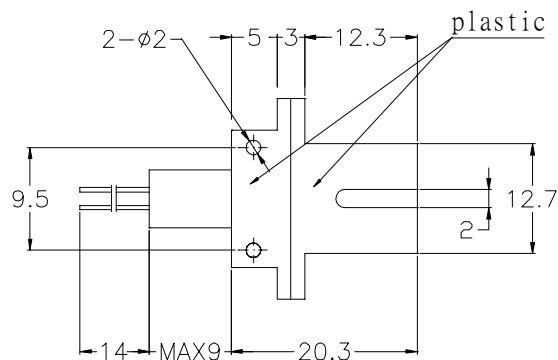
FC Receptacle



ST Receptacle



SC Receptacle



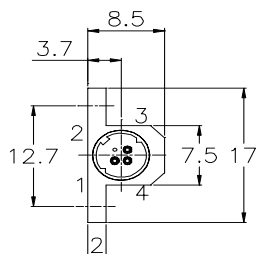
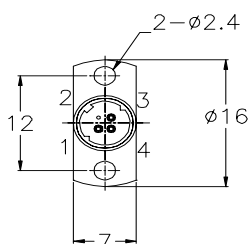
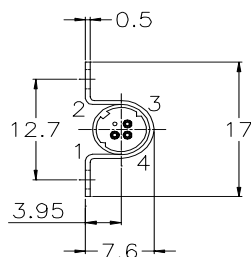
C-XXXXX-DFB-XX-SXXXI/XXX-X-XX

Packaging Dimension

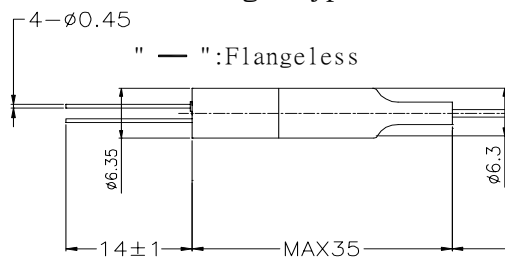
Units in mm.

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

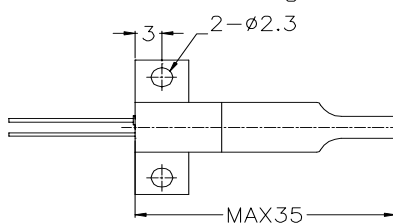
P.C.D. 2.0 ± 0.5



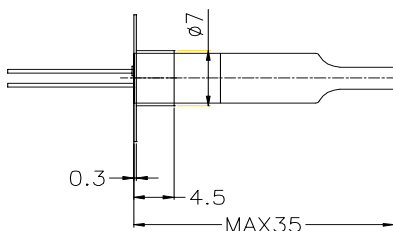
Flange Type



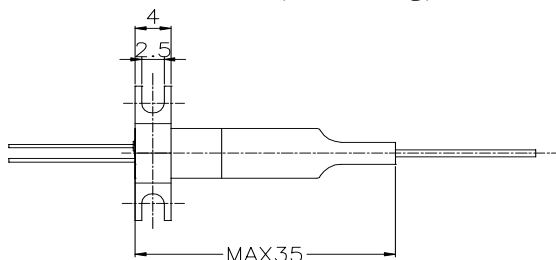
"□": Horizontal (Omega Housing)



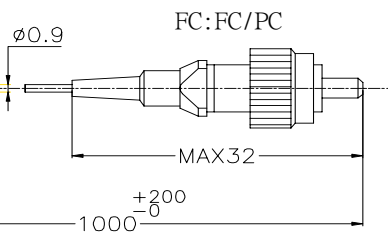
"V": Vertical



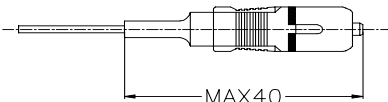
"K": Horizontal (KX Housing)



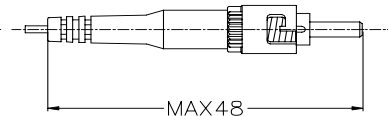
Connector Type



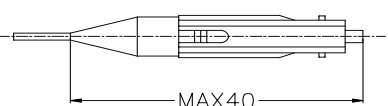
SC:SC/PC



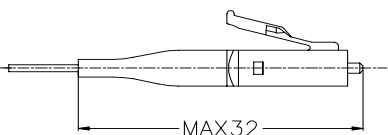
ST:ST/PC



MU:MUJ/PC



LC:LC/PC



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

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.

Legal Notice

IMPORTANT NOTICE!

All information contained in this document is subject to change without notice, at Luminent's sole and absolute discretion. Luminent warrants performance of its products to current specifications only in accordance with the company's standard one-year warranty; however, specifications designated as "preliminary" are given to describe components only, and Luminent expressly disclaims any and all warranties for said products, including express, implied, and statutory warranties, warranties of merchantability, fitness for a particular purpose, and non-infringement of proprietary rights. Please refer to the company's Terms and Conditions of Sale for further warranty information.

Luminent assumes no liability for applications assistance, customer product design, software performance, or infringement of patents, services, or intellectual property described herein. No license, either express or implied, is granted under any patent right, copyright, or intellectual property right, and Luminent makes no representation or warranties that the product(s) described herein are free from patent, copyright, or intellectual property rights. Products described in this document are NOT intended for use in implantation or other life support applications where malfunction may result in injury or death to persons. Luminent customers using or selling products for use in such applications do so at their own risk and agree to fully defend and indemnify Luminent for any damages resulting from such use or sale.

THE INFORMATION CONTAINED IN THIS DOCUMENT IS PROVIDED ON AN "AS IS" BASIS. Customer agrees that Luminent is not liable for any actual, consequential, exemplary, or other damages arising directly or indirectly from any use of the information contained in this document. Customer must contact Luminent to obtain the latest version of this publication to verify, before placing any order, that the information contained herein is current.

© Luminent, Inc. 2005
All rights reserved