Luminent
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Reference No: OM-D-SP-0001-V14

Date: 2003/8/21

Specifications

Product (Part) Name: 2.5G CWDM Series Laser Diode Module (18 channel)

Product (Part) No: C-1XXX-DFB2.5-T/R/PX-SXXXI/XXX-X ;
C-1XXXA-DFB2.5-T/R/PX-SXXXI/XXX-X

Revision record		
Version	Issue date	Description of change
V12	2003/3/26	1.Add product of A & B type 2.revise rise/fall time
V13	2003/8/1	1.All of the products use Isolator 2.P3 revise the drawing
V14	2003/8/21	Revise the TOSA drawing

Section issued: R&D division		
Approval	Check	Engineer
C.H Chiu	*Jack Lin*	*M.H Liu*

For Customer Use
If you accept the specifications, please sign it and return to us Print Name: _____ Signature: _____

1270 nm	C-1XXXX-DFB2.5-TX-SXXXI C-1XXXX-DFB2.5-RX-SXXXI C-1XXXX-DFB2.5-PX-SXXXI/XXX-X	*2.5G CWDM Series Laser Diode Module (18 channel)*

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

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

Application

- Design for 2.5G CWDM high speed optic networks

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

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.

Absolute Maximum Ratings(Tc=25℃)

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~+70	℃
Storage Temperature	T_{stg}	-40~+85	℃

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

Optical and Electrical Characteristics(Tc=25℃)

Parameter	Symbo	Min.	Typ.	Max.	Unit	Test condition
Threshold Current	I_{th}	-	-	20	mA	CW
Fiber Output Power L M H 2	P_f	 0.2 0.5 1 2	 - - 1.6 2.5	 0.5 1 - -	mW	 CW, I_{th}+25mA ,kink free CW, I_{th}+30mA ,kink free
Peak Wavelength	λ	n-2 n-3	n n	n+2 n+3	nm	Note 3 Note 3
Side mode Suppression	Sr	30	35	-	dB	CW, P_f=P_f(Min),0~70℃
Forward Voltage	V_F	-	1.2	1.5	V	CW, P_f=P_f(Min)
Rise Time	t_r	-	-	150	ps	I_{bias}=I_{th} ,20~80%, lead length=1mm
Fall Time	t_f	-	-	200	ps	
Tracking Error	$\Delta P_f/P_f$	-	-	±1.5	dB	APC, 0~70℃
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	Tc=25℃ 0℃<Tc<70℃

Ordering Information

C-XXXXX-DFB2.5-XX-SXXXI/XXX-X

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

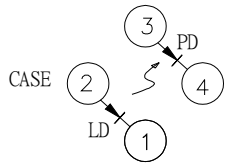
2.5G DFB LD Module-*receptacle*

Part Number：C-XXXXX-DFB2.5-RX-SXXXI

LD Pin Assignment

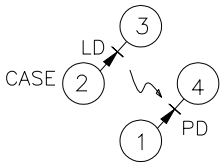
Units in mm

A Type



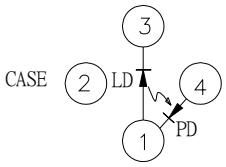
Pin 1 : Laser Cathode
Pin 2 : Laser Anode and Case Gnd
Pin 3 : Monitor Diode Anode
Pin 4 : Monitor Diode Cathode

B Type

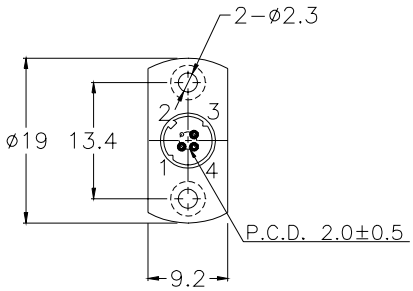


Pin 1 : Monitor Diode Anode
Pin 2 : Laser Anode and Case Gnd
Pin 3 : Laser Cathode
Pin 4 : Monitor Diode Cathode

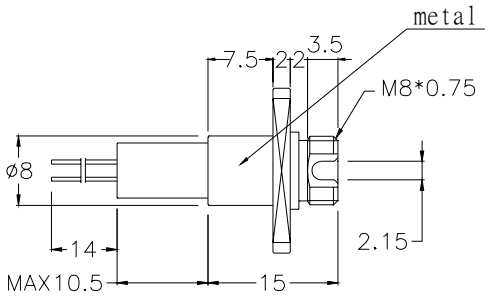
D Type

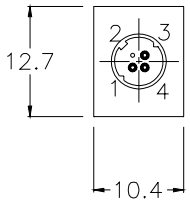


Pin 1 : Laser Anode and Monitor Diode Cathode
Pin 2 : Case Gnd
Pin 3 : Laser Cathode
Pin 4 : Monitor Diode Anode

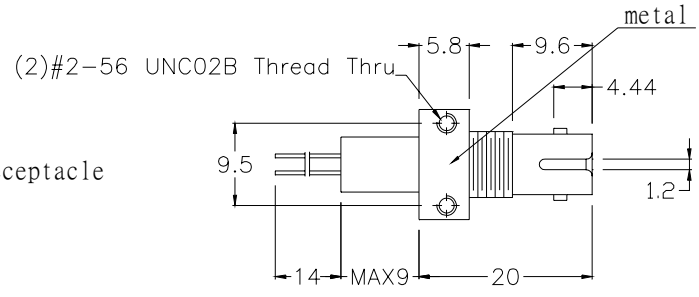


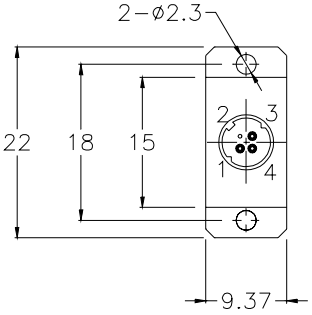
FC Receptacle



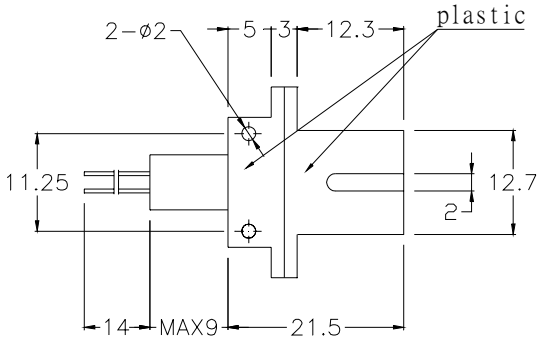


ST Receptacle





SC Receptacle

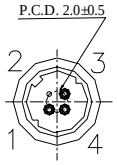


2.5G DFB LD Module-*TOSA*

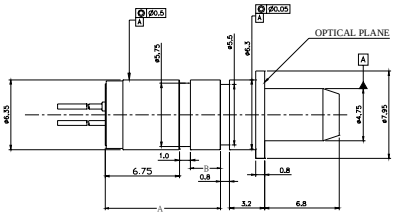
Part Number：C-XXXXX-DFB2.5-TX-SXXXI

Packaging Dimension

Units in mm

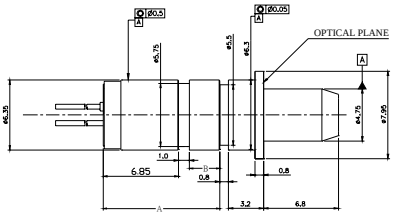


SC TOSA (L&M&H Power)
C-XXXXX-DFB2.5-TX-SSCXI



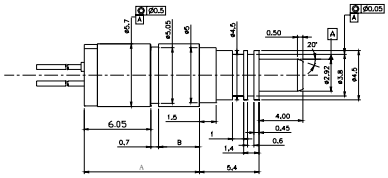
DIMENSION A:Max 11.8mm
B:Max 4.05mm

SC TOSA
C-XXXXX-DFB2.5-TX-SSC2I

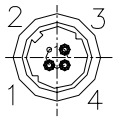


DIMENSION A:Max 11.8mm
B:Max 3.95mm

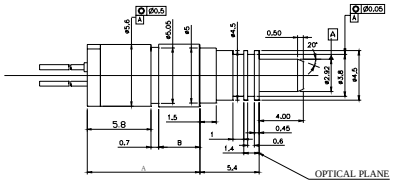
LC TOSA (L&M&H Power)
C-XXXXX-DFB2.5-TX-SLCXI



DIMENSION A:Max 11.8mm
B:Max 5.05mm

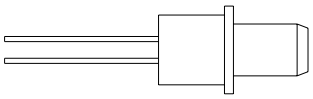


LC TOSA
C-XXXXX-DFB2.5-TX-SLC2I



DIMENSION A:Max 11.8mm
B:Max 5.3mm

Customer Specified
TOSA



2.5G DFB LD Module-*pigtailed*

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

Packaging Dimension

Units in mm