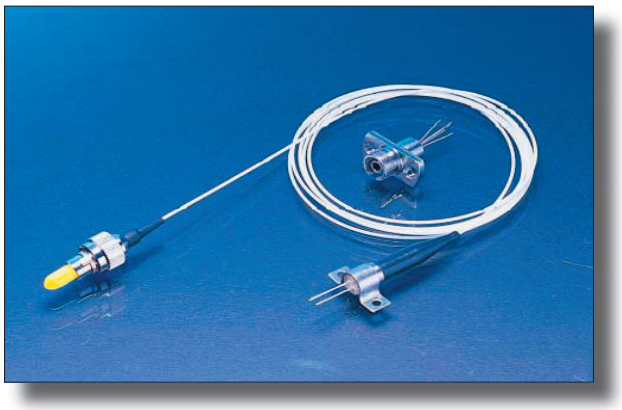
1310nm 2.5G MQW-DFB Laser Diode Module

C-13-DFB2.5-XX-SXXXX/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 Telcordia Technologies GR-468-CORE
- Single frequency operation with high SMSR

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

Application
- Design for 2.5Gbps high speed optics networks
- RoHS Compliant available

Absolute Maximum Ratings (Tc=25°C)

Parameter	Symbol	Rating	Unit
Fiber Output Power L/M/H/2	P_f	1(L) / 1.5(M) / 2.5(H) / 3(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 9/125μm SM fiber)

Optical and Electrical Characteristics (Tc=25°C)

Parameter		Symbol	Min	Typ	Max	Unit	Test Conditions
Threshold Current		I_{th}	-	10	15	mA	CW
Fiber Output Power	L	P_f	0.2	-	0.5	mW	CW,I_{th}+20mA, kink free
	M		0.5	-	1		
	H		1	1.6	-		
	2		2	2.5	-		
Peak Wavelength		λ	1295	1310	1325	nm	Note 3
Side mode Suppression Ratio		Sr	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	-	-	150	ps	Ibias=Ith,20~80% Lead length=1mm
Tracking Error		$\Delta P_f/P_f$	-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

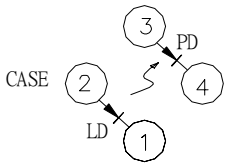
Note: 1.Pin assignment can be customized.
2.Specifications subject to change without notice.
3.Selected wavelength is available for WDM application.

20550 Nordhoff St. • Chatsworth, CA 91311 • tel: 818.773.9044 • fax: 818.576.9486
9F, No 81, Shui Lee Rd. • Hsinchu, Taiwan, R.O.C. • tel: 886.3.5169222 • fax: 886.3.5169213
LUMNDS893-NOV0305
rev. A.0

LD Pin Assignment

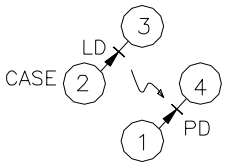
Part Number: C-13-DFB2.5-RX-SXXXX-XX

A Type



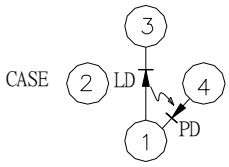
Pin 1 : Laser Cathode
Pin 2 : Laser Anode and Case Gnd
Pin 3 : Monitor Diode Anode
Pin 4 : Monitor Diode Cathode

B Type

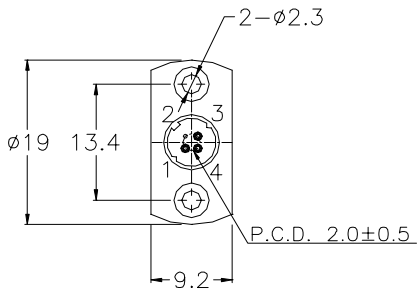


Pin 1 : Monitor Diode Anode
Pin 2 : Laser Anode and Case Gnd
Pin 3 : Laser Cathode
Pin 4 : Monitor Diode Cathode

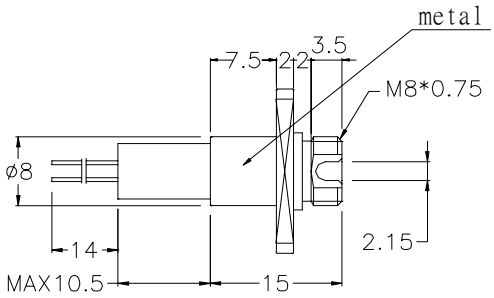
D Type

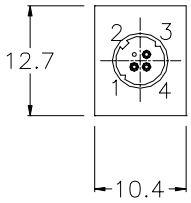


Pin 1 : Laser Anode and Monitor Diode Cathode
Pin 2 : Case Gnd
Pin 3 : Laser Cathode
Pin 4 : Monitor Diode Anode

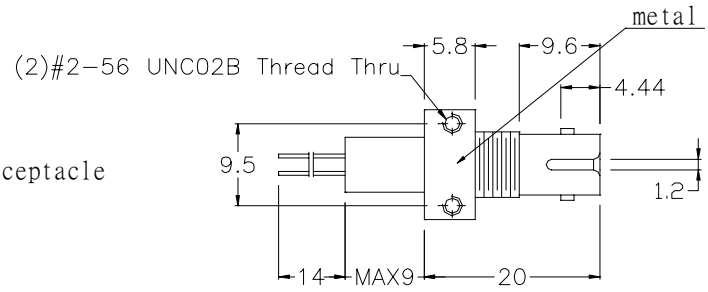


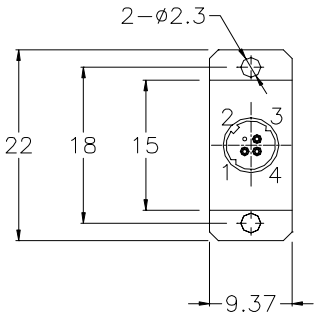
FC Receptacle



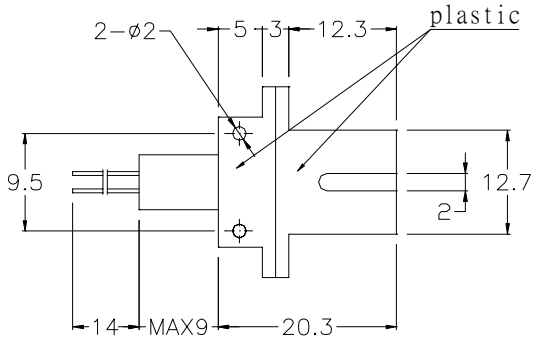


ST Receptacle



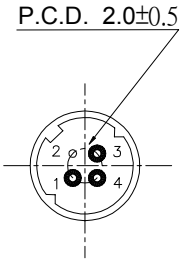


SC Receptacle

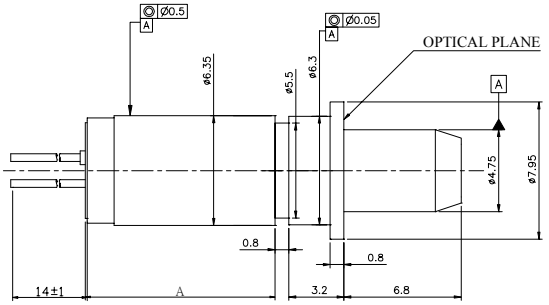


Packaging Dimension Units in mm.

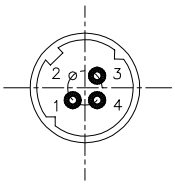
Part Number: C-13-DFB2.5-TX-SSCXX-XX



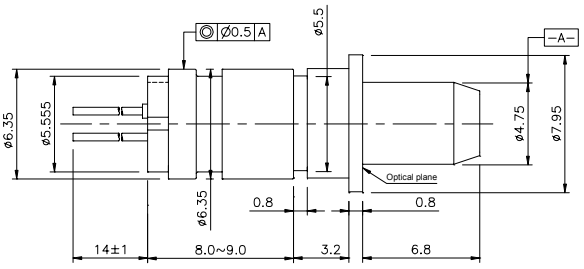
SC TOSA (L&M Power)
C-13-DFB2.5-TX-SSCX-XX

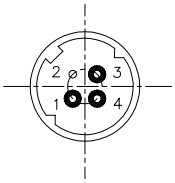


DIMENSION A:7.77~8.37mm

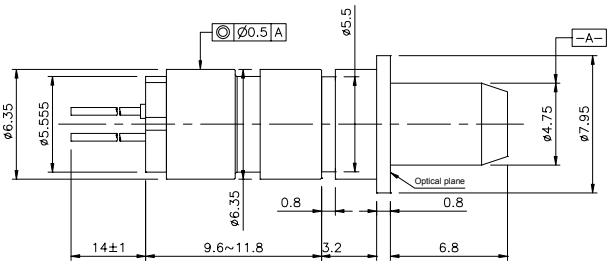


SC TOSA
(L&M Power with Isolator)
C-13-DFB2.5-TX-SSCXI-XX



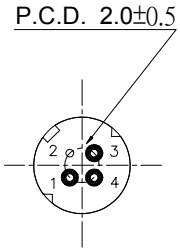


SC TOSA (H&2 Power)
C-13-DFB2.5-TX-SSCXX-XX

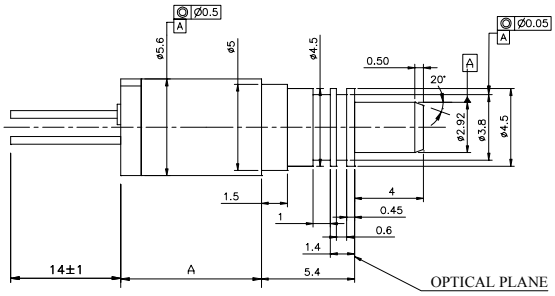


Packaging Dimension **Units in mm.**

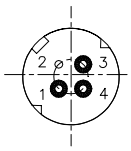
Part Number: C-13-DFB2.5-TX-SLCXX-XX



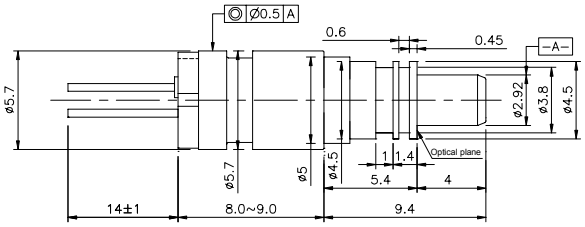
LC TOSA (L&M Power)
C-13-DFB2.5-TX-SLCX-XX

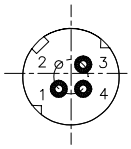


DIMENSION A:7.77~8.37mm

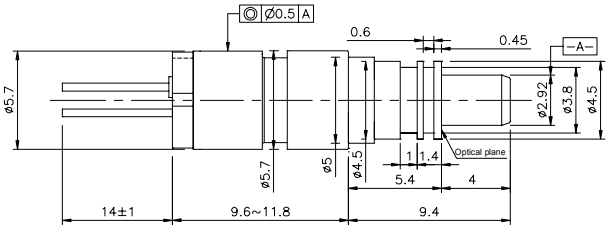


LC TOSA
(L&M Power with Isolator)
C-13-DFB2.5-TX-SLCXI-XX



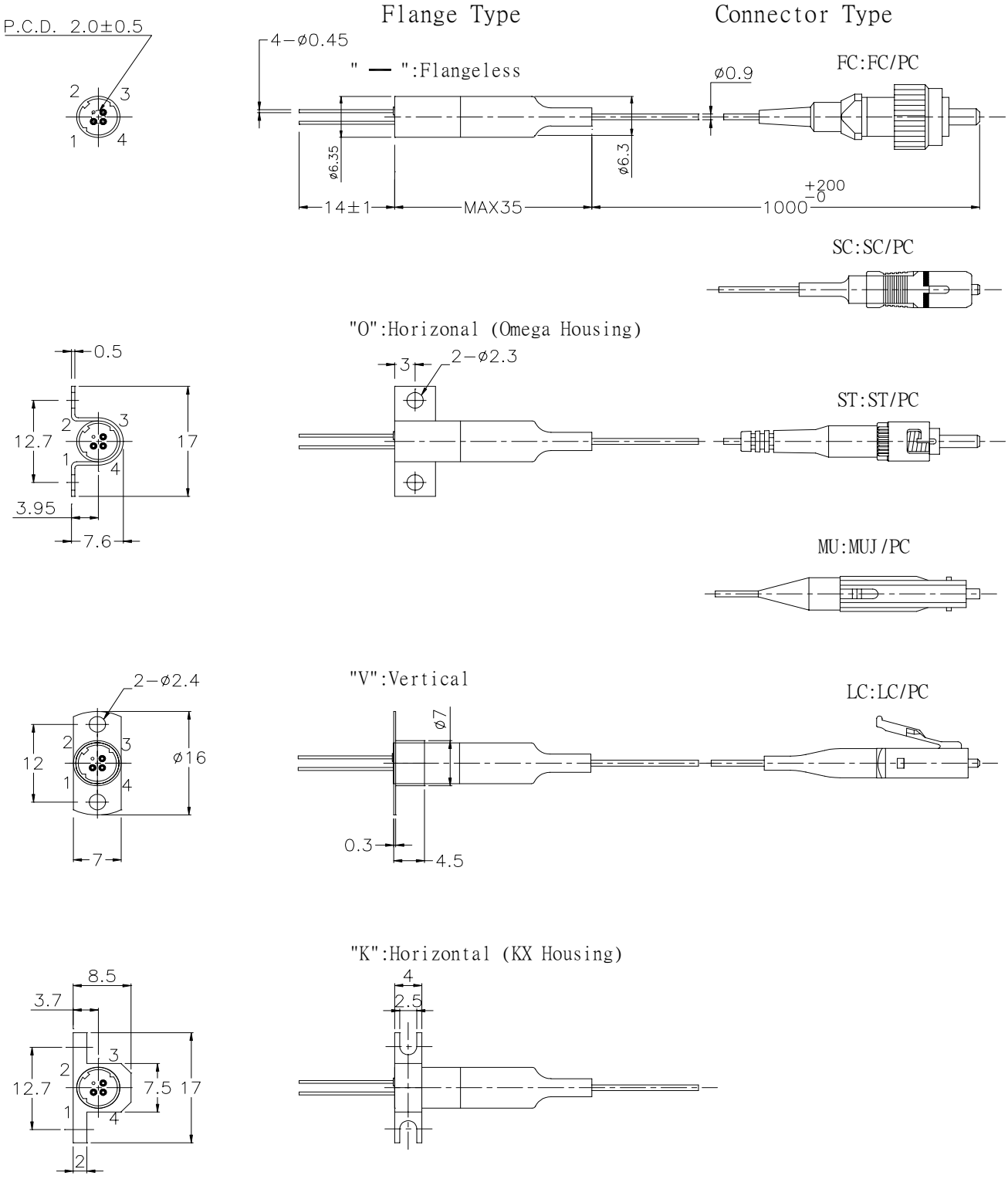


LC TOSA (H&2 Power)
C-13-DFB2.5-TX-SLCXX-XX



Packaging Dimension Units in mm.

Part Number: C-15-DFB2.5-PX-SXXXX/XXX-X-XX



Ordering Information

C-13-DFB2.5-XX-SXXXX/XXX-X-XX

- Wavelength: 13=1310nm
- Package: T=TOSA, R=Receptacle, P=Pigtail
- Pin Assignment: "-" =A Type, B =B Type, D =DType
- Connector: FC/ST/SC/MU/LC/-
- Fiber Output Power: L/M/H/2
- "I" = Isolator, "-" = No isolator
- - = PC Fiber, APC = APC Fiber
- Flange type (-;O;V;K)
- RoHS Compliant: -/G5/GR
  - Blank = RoHS non-compliant product
  - G5 = RoHS 5/6-compliant product (lead exemption)
  - 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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