Luminent OCI

10Gbps 1310 nm MQW-FP Laser Diode Module-TOSA

C-13-010-TX-SXXXX

Features

- Uncooled FP Laser diode with MQW structure
- Hermetically sealed active component
- Built-in InGaAs monitor photodiode
- Integrated 4-pin TO-18 TOSA package, with built-in isolator, for SC/LC connector
- Designed for 10Gbps Ethernet application.

Absolute Maximum Rating (Tc=25°C)

Parameter	Symbol	Value	Unit
Fiber Output Power (Middle power) (High power)	P_O	3(CW) 4(CW)	mW
LD Reverse Voltage	V_{RLD}	2	V
LD Forward Current	I_{FLD}	150	mA
PD Reverse Voltage	V_{RPD}	10	V
PD Forward Current	I_{FPD}	2.0	mA
Operating Temperature	T_{opr}	0 to +85	°C
Storage Temperature	T_{stg}	-40 to +85	°C

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

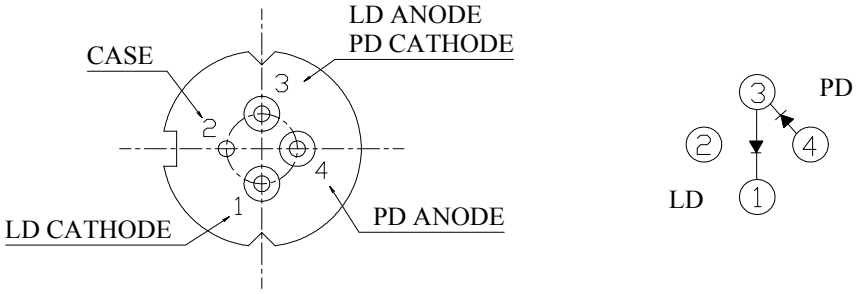
Optical and Electrical Characteristics(T=0 to 85°C unless otherwise noted)

Parameter	Symbol	Min	Typical	Max	Unit	Test Condition
Threshold Current	I_{th}	-	8	12	mA	T=25°C
Optical Output Power (Middle power) (High power)	P_O	0.3 1.5	-	1 2.5	mW	I_{op}=40mA,CW,T=25°
Operating Current	I_{op}	-	40	-	mA	T=25°C
Peak Wavelength	λ	1295	1310	1325	nm	CW, T=25°, @ I_{op}
Spectral Width (RMS)	Δλ	-	2	5	nm	P_O=2mW, CW
Forward Voltage	V_F	-	1.5	-	V	CW, @ I_{op}
Rise/Fall Time, 20 to 80%	t_r/t_f	-	40	-	ps	
Relative Intensity Noise	RIN	-	-	-130	dB/Hz	CW, T=25°C, @ I_{op}
Tracking Error	$\Delta P_f/P_f$	-1.5	-	1.5	dB	I_m=constant, CW
PD Monitor Current	I_m	100	-	-	μA	CW, V_{RPD}=5V, T=25°C @ I_{op}
PD Dark Current	I_{DARK}	-	-	0.1	μA	V_{RPD}=5V
PD Capacitance	C_t	-	6	15	pF	V_{RPD}=5V, f=1MHz

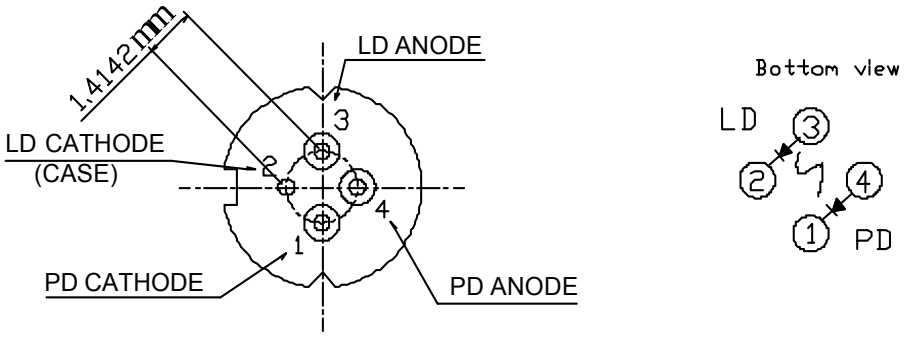
* 10.3125 Gb/s PRBS 2^{31}-1, Er=6.0dB, @ I_{op} and T=25°C

Pin Assignment

Bottom view



G Type



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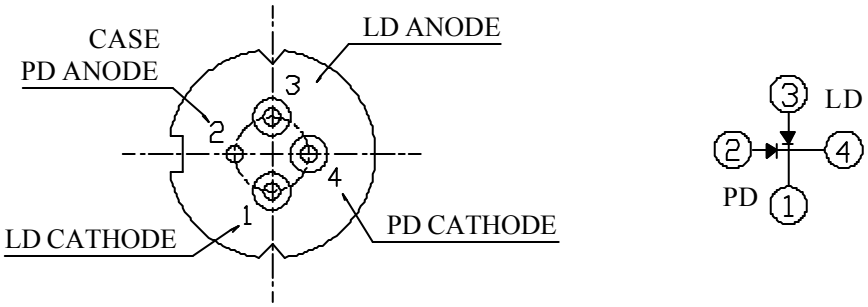
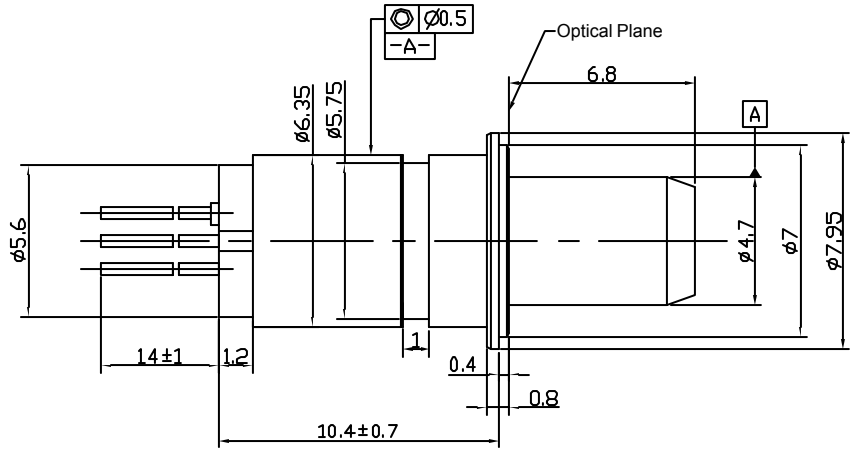


K Type

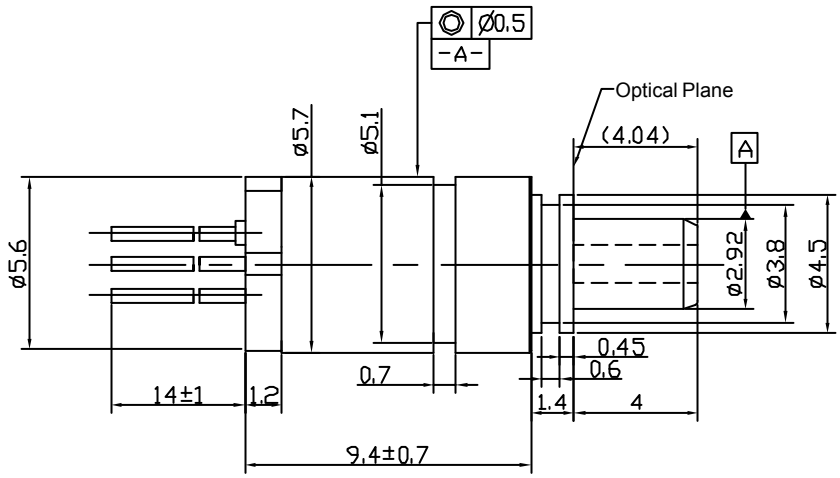
Packaging Dimensions

Units in mm

C-13-010-TX-SSC2I

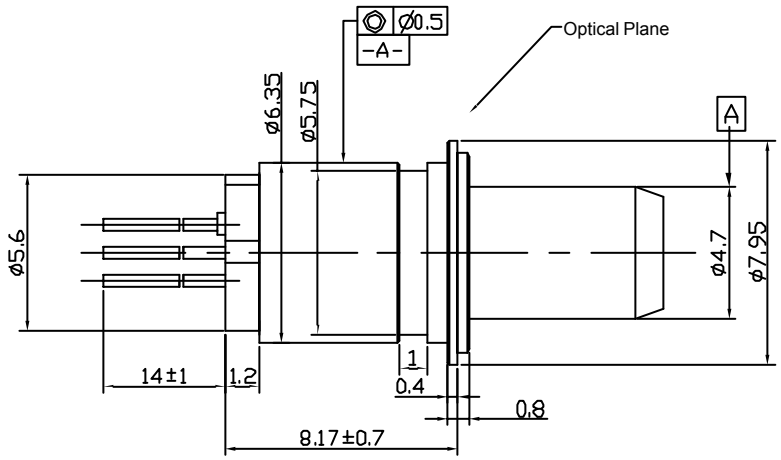


C-13-010-TX-SLC2I

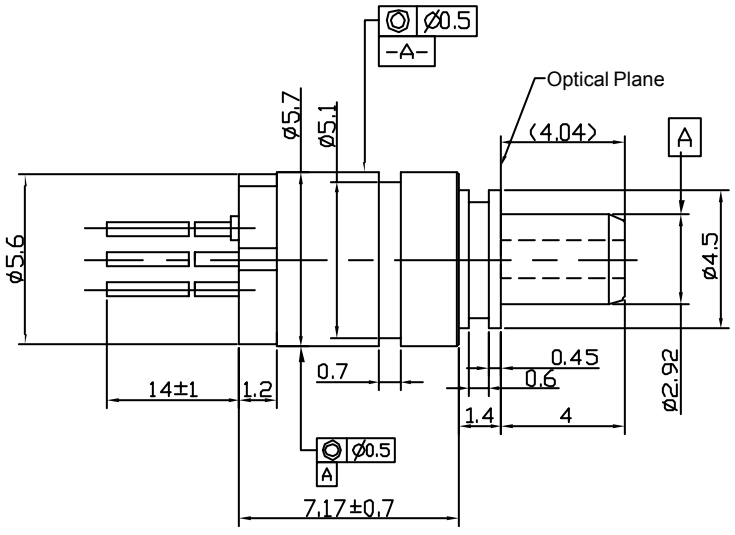


Units in mm

C-13-010-TX-SSCMI

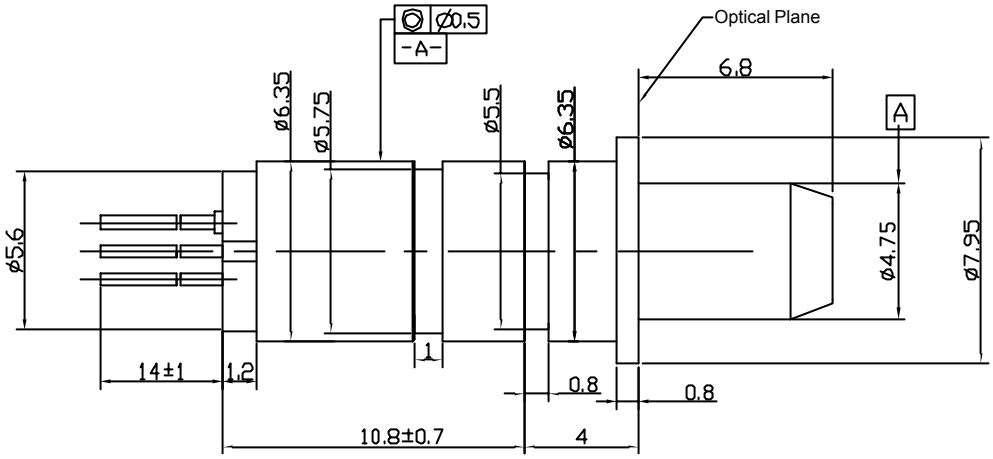


C-13-010-TX-SLCMI

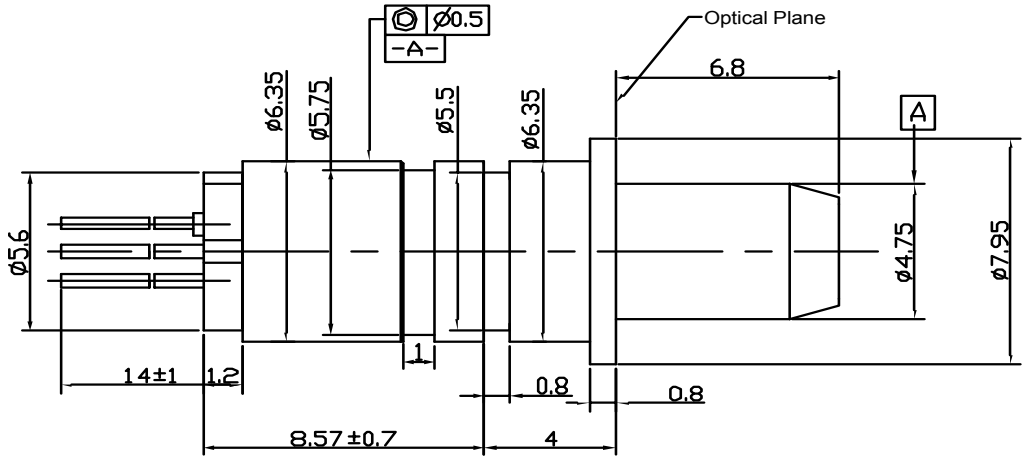


Units in mm

C-13-010-TX-SSC2B

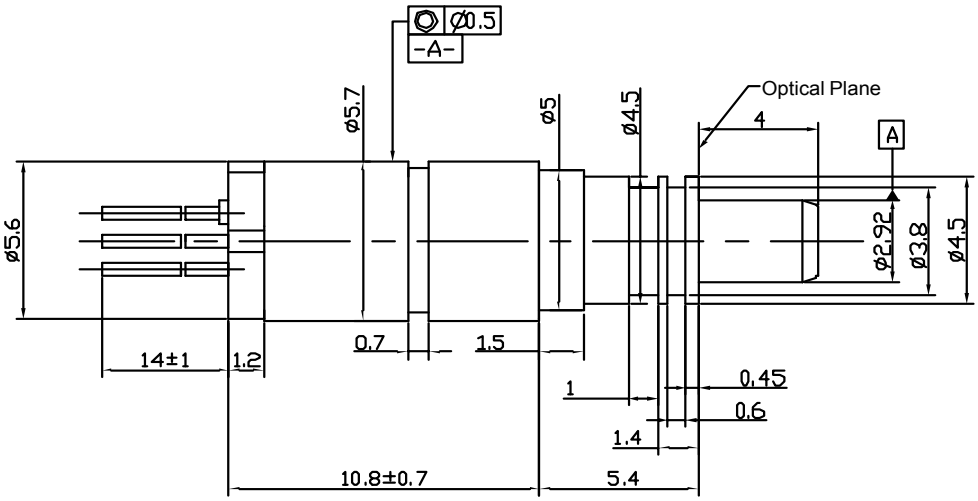


C-13-010-TX-SSCMB



Units in mm

C-13-010-TX-SLCMB
C-13-010-TX-SLC2B



10Gbps 1310 nm MQW-FP Laser Diode Module-TOSA

C-13-010-TX-SXXXX

Ordering Information

Available Options:
C-13-010-TX-SXXXX

Note1 : TX = TG / TJ / TK
Note2 : SXXXX = SSCMI / SLCMI / SSC2I / SLC2I / SSCMB / SLCMB / SSC2B / SLC2B

C	-	13	-	0	10	-	T	X	-	S	XX	X	X
Application		Wavelength		Device	Application		Type	Pinout		Fiber type	Connector	Power	Isolator & Fiber stub
Communicaton		13=1310nm		0=FP	10=10Gbps		T=TOSA	G J K		S=Single mode	SC LC	M=0.3~1mW 2=1.5~2.5mW	I=Isolator B=Both (I+Fiber stub)

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.