T13D-R-LCMD-I-10G
10Gbps 1310nm DFB Laser Diode Receptacle LC TOSA

Overview

The Lasermate T13D-R-LCMD-I-10G is a 1310nm MQW Distributed Feedback (DFB) laser diode integrated into an LC TOSA receptacle package. Engineered for 10Gbps transmission, the device includes a built-in monitor photodiode, low threshold current, and hermetically sealed construction. With its integrated isolator, the T13D-R-LCMD-I-10G is ideal for high-performance telecom and datacom applications.

Features

- 1310nm MQW-DFB laser diode (LD)
- Built-in monitor PIN photodiode (PD)
- Low threshold current for efficient operation
- Supports 10Gbps data transmission
- Uncooled operation, hermetically sealed package
- LC TOSA receptacle package
- Integrated optical isolator

Applications

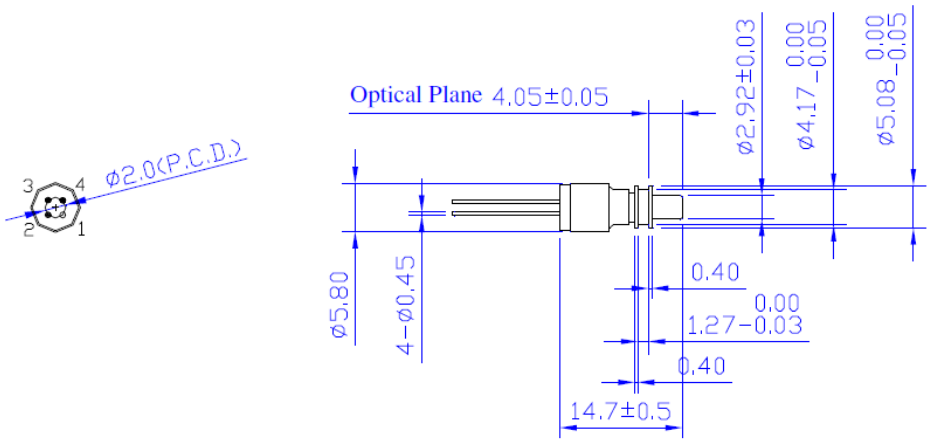
- 10GBASE-LR Ethernet networks
- 10G Fiber Channel systems
- High-speed optical transceivers

Specifications

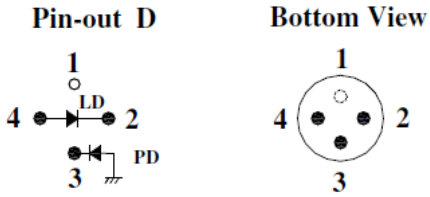
Absolute Maximum Ratings				
Parameters	Symbol	Value	Unit	Conditions
Storage temperature	Tstg	-40 to +85	°C	
Operating case temperature	Top	-40 to +85	°C	
Reverse voltage (LD)	V_{RL}	2	V	
Forward current (PD)	I_{FP}	2	mA	
Reverse voltage (PD)	V_{RP}	20	V	
Soldering temperature	S_{temp}	260	°C	10 seconds

Electro-Optical Characteristics (CW @ T_C = 25°C unless otherwise noted)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Central wavelength	λ_c	1300	-	1320	nm	CW, Pf=0.7mW
Side mode suppression ratio	SMSR	30	-	-	dB	CW, I_{th}+20mA
Threshold current	I_{th}	-	10	15	mA	CW
Fiber output power	Pf	0.25	-	0.75	mW	CW, I_{th}+20mA
Slope efficiency	SE	0.01	-	0.03	W/A	CW
Operating voltage	Vop	-	-	1.5	V	CW, I_{th}+20mA
Rise time	Tr	-	50	-	ps	Ib= I_{th}, 20%~80%
Fall time	Tf	-	50	-	ps	Ib= I_{th}, 20%~80%
Monitor current	Im	100	-	-	uA	CW, I_{th}+20mA
Tracking error	ΔPf/ Pf	-	±1.5	-	dB	APC, Tc=-40~+85°C

Outline Dimensions (unit: mm)



Pin Assignment



Note: Specifications are subject to change without notice.