



TXD-RYZ-W-I

1270nm~1610nm Series 18 Channels CWDM DFB Laser Diode, TOSA Receptacle

Description

The Lasermate TXD-RYZ-W-I is an 18-channel CWDM DFB laser diode series covering the 1270nm–1610nm wavelength range. Packaged in a TOSA receptacle with fiber stub, the devices provide stable performance with data rates from 155Mbps up to 2.5Gbps. Designed for CWDM fiber optic networks, these modules combine reliability, compact packaging, and optional isolator integration for enhanced performance.



Features

- Uncooled 1270nm~1610nm MQW-DFB laser diode (LD)
- High temperature operation -20°C to +85°C without active cooling
- Data rate: 155Mbps up to 2.5Gbps
- Hermetically sealed active component
- Optional with single stage isolator
- Built-in high performance, high speed InGaAs monitor PIN photodiode (PD)

Packaging

- Packaged in FC or ST Receptacle with fiber stub

Applications

- Design for CWDM fiber optic networks
- ATM/SONET OC-3~OC-24
- SDH STM1~STM-8
- Stable emitting source at specific wavelength

Ordering Information

Read Model No.	TXD-RYZ-W-I
TXD = CWDM DFB Laser	1270nm (27) , 1290nm (29) , 1310nm (31) , 1330nm (33) , 1350nm (35) , 1370nm (37) , 1390nm (39) , 1410nm (41) , 1430nm (43) , 1450nm (45) , 1470nm (47) , 1490nm (49) , 1510nm (51) , 1530nm (53) , 1550nm (55) , 1570nm (57) , 1590nm (59) , 1610nm (61)
R = Package	Receptacle
Y = Connector	FC (FC) ; ST (ST)
Z= Output power	>0.5mW (L) , >1mW (1) , >2mW (2)
W= Pinout configuration	C pinout (C)
I = Isolator	No (0) ; Yes (I)



Specifications

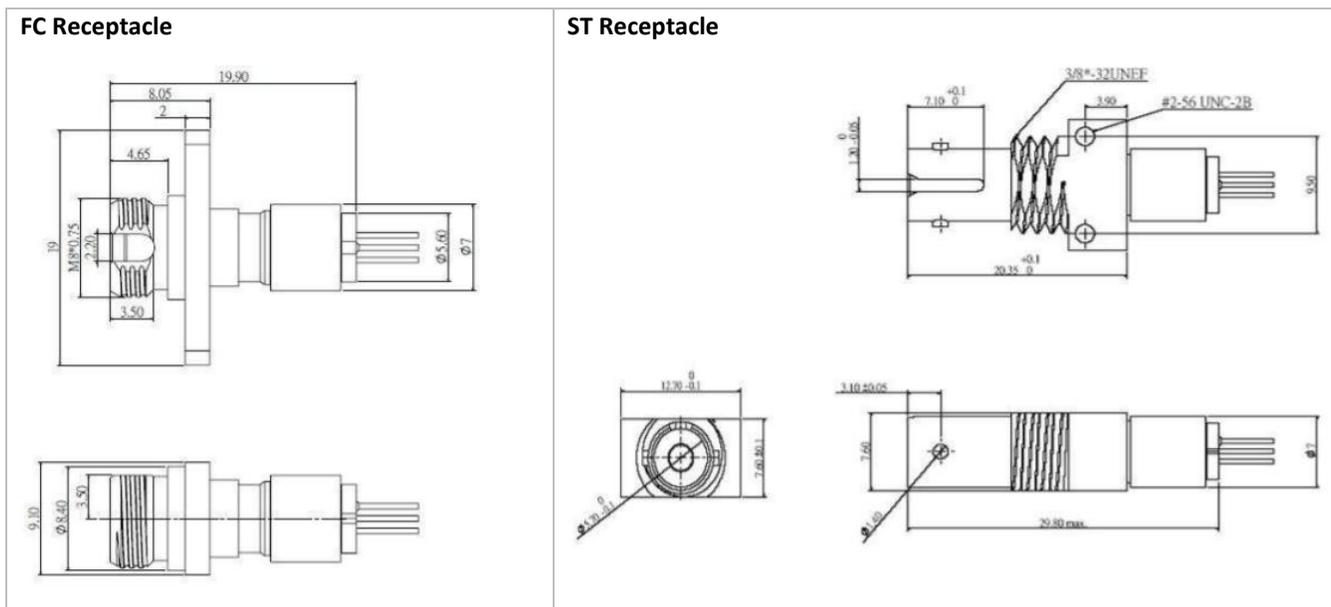
Absolute Maximum Ratings				
Parameters	Symbol	Value	Unit	Conditions
Storage temperature	Tstg	-40 to +85	°C	
Operating case temperature	Top	-20 to +85	°C	
Peak optical output power	Po	5	mW	
Forward current (LD)	I _{FLD}	100	mA	
Reverse voltage (LD)	V _{RLD}	2	V	
Reverse current (PD)	I _{RPD}	5	mA	
Reverse voltage (PD)	V _{RPD}	15	V	
Soldering temperature	Stemp	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	λ_p-3	λ_p	λ_p+3	nm	CW, Pf
Side mode suppression ratio	SMSR	30	40	-	dB	Pf
Spectral width	$\Delta\lambda$	-	0.2	1	nm	Pf
Threshold current	I _{th}	-	10	15	mA	CW
Fiber output power	Pf	0.5			mW	CW, I _f =I _{th} +20mA
		1.0				
		2.0				
Operating voltage	V _{op}	-	1.1	1.5	V	Pf
Rise time / Fall time	t _r /t _f	-	0.1	0.2	nsec	I _b = I _{th} , 20%~80%
Monitor current	I _m	100	-	1000	uA	Pf, V _{rp} =5V
Monitor dark current	I _d	-	0.1	100	nA	V _{rp} =5V
Monitor capacitance	C	-	10	20	pF	V _{rp} =5V, f=1MHz
Tracking error*	$\Delta Pf/ Pf$	-	±1.0	±1.5	dB	APC, T _c =-40~+85°C

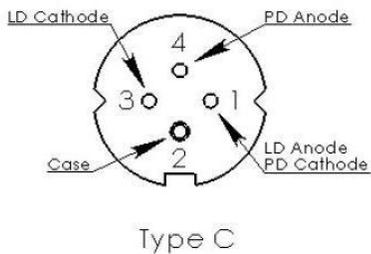
Note: λ_p =1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610

*I_m=constant @ Pf, T_c=25 °C

Outline Dimensions (unit: mm)



Pin Assignment



Pin Number	Type C
1	LD Anode, PD Cathode
2	Case
3	LD Cathode
4	PD Cathode

Additional Notes

- Avoid eye or skin exposure to laser radiations.
- The device is sensitive to electro-static discharge (ESD). The device should be handled with ESD proof tools. To assemble the device on PCB, proper grounding is required to prevent ESD.
- Specifications are subject to change without notice.