



TXD-PYZ-WM-I

1270nm~1610nm Series 18 Channels CWDM Coaxial DFB Pigtail Laser Diode

Description

The Lasermate TXD-PYZ-WM-I Series are 18-channel CWDM DFB pigtail laser diodes operating across the 1270nm to 1610nm wavelength range. Designed for CWDM transmission applications, these laser diodes integrate into compact coaxial packages with single-mode fiber pigtails. With an optional isolator and built-in InGaAs monitor photodiode, the devices deliver stable and reliable optical performance for high-speed data transmission.



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

- Single-mode Fiber pigtailed with optional FC/ST/SC/LC connector

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-PYZ-WM-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)
P = Package	Pigtailed with 9/125um SM fiber
Y = Connector	None (NO) ; FC/PC (FC) , SC/PC (SC) , ST/PC (ST) , LC/PC (LC) , FC/APC (FA) , SC/APC (CA) , ST/APC (TA)
Z= Output power	>0.5mW (L) , >1mW (1) , >2mW (2)
W= Pinout configuration	C pinout (C)
M= Mount	Flangeless (0) , Horizontal (1)
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

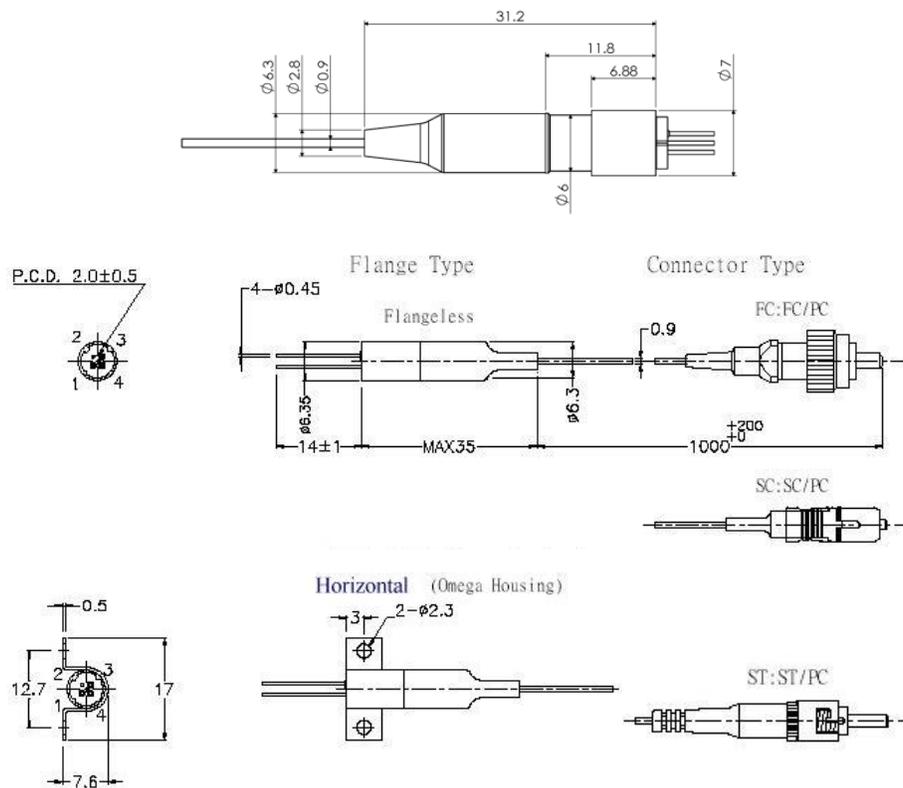
Electro-Optical Characteristics (CW @ T _c = 25°C unless otherwise noted)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Central wavelength	λ_c	λ_p-3	λ_p	λ_p+3	nm	CW, Pf
Side mode suppression ratio	SMSR	30	40	-	dB	Pf
Spectral width	$\Delta\lambda$	-	0.2	1	nm	Pf
Threshold current	I _{th}	-	10	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*	Δ Pf/ Pf	-	±1.0	±1.5	dB	APC, T _c =-40~+85°C

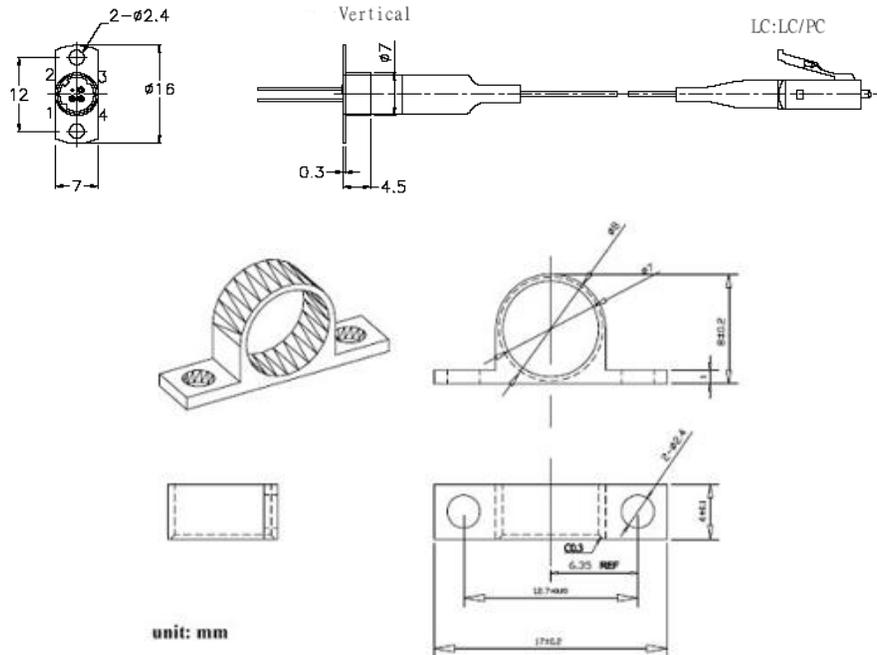
Note: λ_p =1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610

*I_m=constant @ Pf, T_c=25 °C

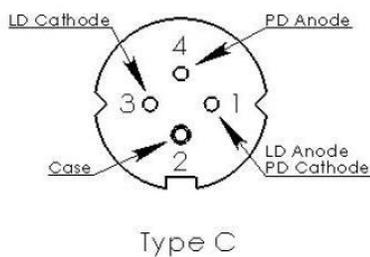
Fiber Pigtail Specifications						
Parameters	Symbol	Min.	Typ.	Max.	Unit	
Fiber type	Single Mode Fiber (Flame Retardant Hytrel Coating)					
Cladding diameter	Dcl	122	125	128	um	
Mode field diameter	Dmf	-	10	-	um	
Coating diameter	Dbc	-	0.9	1	mm	
Pigtail length*	L	0.9	1.0	1.1	m	
Bending radius	Rb	30	-	-	mm	
Connector	TBD					
*From the ferrule-end to the bottom of TO-header.						

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.