TXD-PYZ-WM-I
1270nm~1610nm Series 18 Channels CWDM Coaxial DFB Pigtail Laser Diode

Description

The Lasermate TXD-PYZ-WM-I laser diode is an 18 channel 1270nm-1610nm wavelength, DFB laser diode designed for use in CWDM applications. The devices are in fiber pigtailed coaxial packages.

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

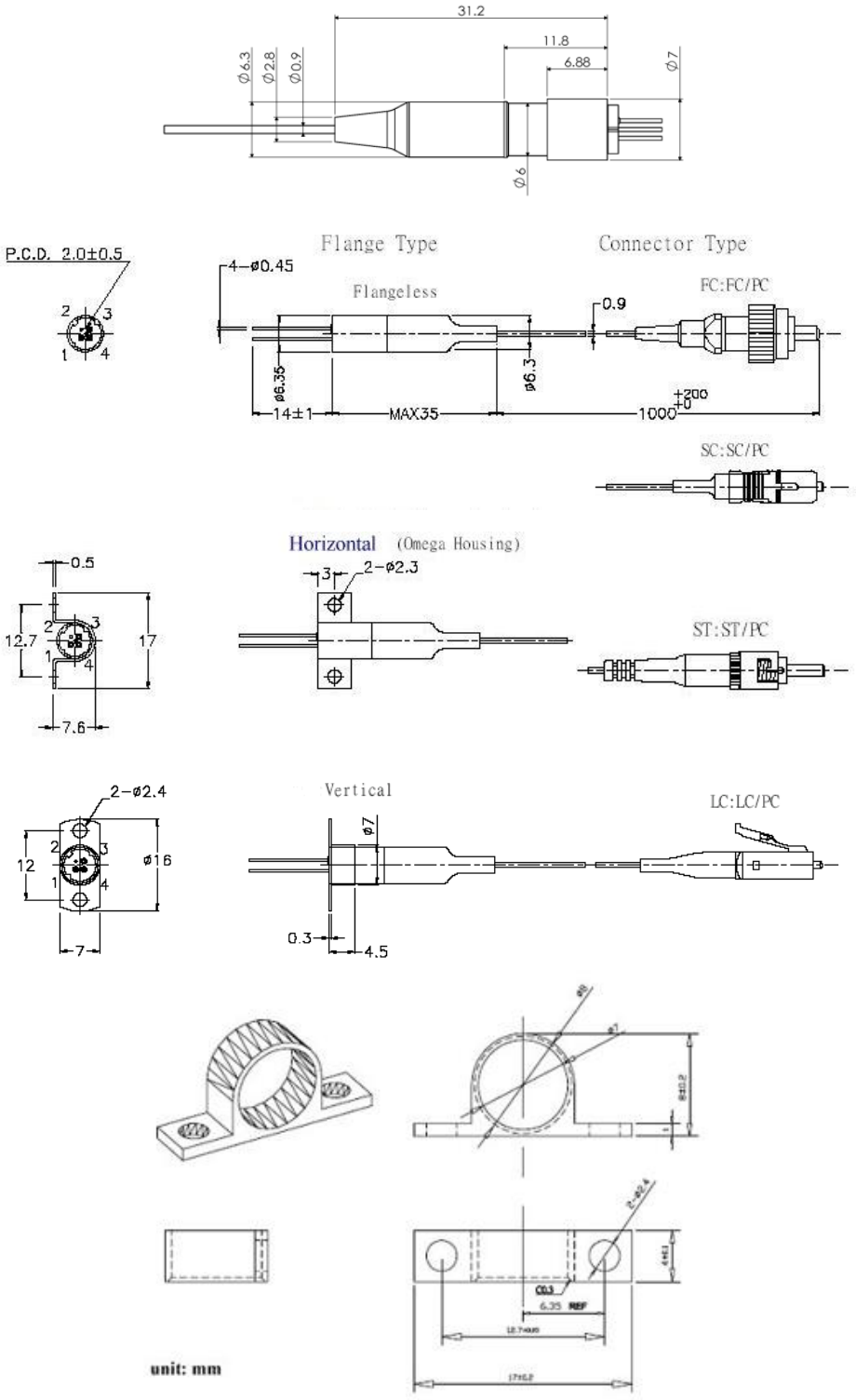
Electro-Optical Characteristics (CW @ T_C = 25°C unless otherwise noted)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Central wavelength	λ_c	λ_p-3	λ_p	λ_p+3	nm	CW, Pf
Side mode suppression ratio	SMSR	30	40	-	dB	Pf
Spectral width	$\Delta\lambda$	-	0.2	1	nm	Pf
Threshold current	I_{th}	-	10	15	mA	CW
Fiber output power	Pf	0.5			mW	CW, If=I_{th}+20mA
		1.0				
		2.0				
Operating voltage	Vop	-	1.1	1.5	V	Pf
Rise time / Fall time	t_r/t_f	-	0.1	0.2	nsec	Ib= I_{th}, 20%~80%
Monitor current	Im	100	-	1000	uA	Pf, Vrp=5V
Monitor dark current	Id	-	0.1	100	nA	Vrp=5V
Monitor capacitance	C	-	10	20	pF	Vrp=5V, f=1MHz
Tracking error*	ΔPf/ Pf	-	±1.0	±1.5	dB	APC, Tc=-40~+85°C

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

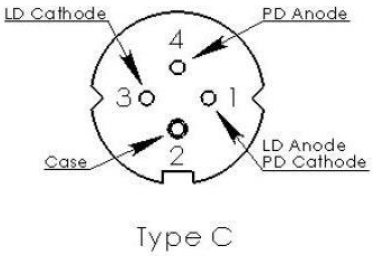
*Im=constant @ Pf, Tc=25 °C

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



Type C

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.