T13F-PYZ-WM-D
1310nm Coaxial FP Pigtail Laser Diode

Overview

The Lasermate T13F-PYZ-WM-D is a 1310nm wavelength, Fabry-Perot laser diode in pigtailed package. The laser is designed for use in telecommunication applications.

Features

- Laser diode with multi-quantum well structure
- Data Rate: 155Mbps up to 2.5Gbps
- Uncooled operation at -40 to 85°C
- Hermetically sealed active component
- Built-in InGaAs monitor PIN photodiode (PD)

Packaging

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

Applications

- ATM/SONET OC-3/OC-12/OC-24
- SDH STM-1/STM-4/STM-8
- Stable emitting source at specific wavelength

Ordering Information

Read Model No.	**T13F-PYZ-WM-D**
T13F = Laser	1310nm FP laser
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	>0.2mW **(S)**; >0.5mW **(M)**; >1mW **(H)**; >2mW **(2)**
W = Pin configuration	A pinout **(A)**; B pinout **(B)**; C pinout **(C)**
M = Mount	No flange **(0)**; Horizontal mount **(1)**
D = Data rate	1.25Gbps **(1G)**; 2.5Gbps **(2G)**

Specifications

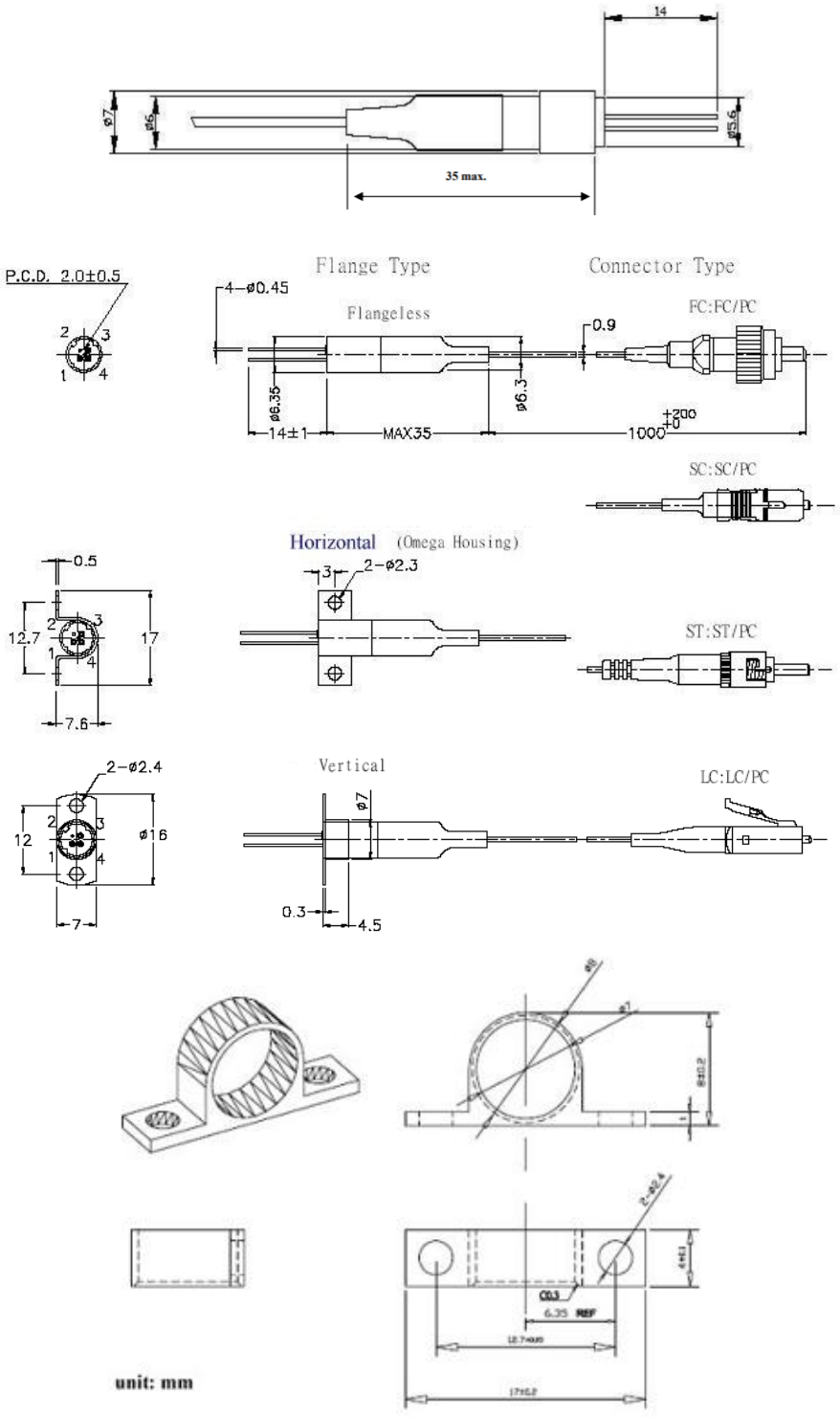
Absolute Maximum Ratings				
Parameters	Symbol	Value	Unit	Conditions
Storage temperature	Tstg	-40 to +85	°C	
Operating case temperature	Top	-40 to +85	°C	
Peak optical output power	Po	3	mW	
Forward current (LD)	I_{FLD}	100	mA	
Reverse voltage (LD)	V_{RLD}	2	V	
Reverse current (PD)	I_{RPD}	5	mA	
Reverse 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	1290	1310	1330	nm	CW, Pf
Spectral width	$\Delta\lambda$	-	2	3	nm	Pf
Threshold current	I_{th}	-	10	15	mA	CW
Fiber output power	Pf	0.2			mW	CW, If=I_{th}+20mA
		0.5				
		1.0				
		2.0				
Operating voltage	Vop	-	1.1	1.5	V	Pf
Rise time / Fall time	t_r/t_f	-	0.15	0.3	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

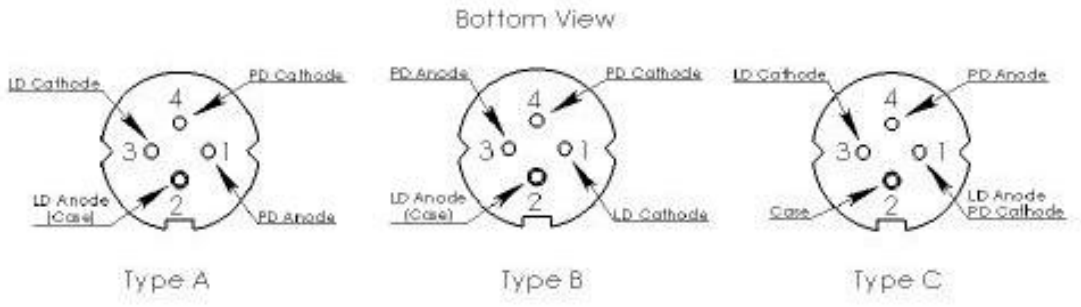
*Im=constant @ Pf, Tc=25 °C

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



Pin Number	Type A	Type B	Type C
1	PD Anode	LD Cathode	LD Anode, PD Cathode
2	LD Anode (case)	LD Anode (case)	Case
3	LD Cathode	PD Anode	LD Cathode
4	PD Cathode	PD Cathode	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.