



## T15F-RYZ-W-D 1550nm FP Laser Diode, TOSA Receptacle



### Overview

The Lasermate T15F-RYZ-W-D is a 1550nm Fabry-Perot (FP) laser diode housed in a TOSA receptacle package with two-hole flange. Delivering output power above 2mW and supporting data rates up to 2.5Gbps, it is ideal for telecommunication and optical networking applications. The device includes a built-in InGaAs monitor photodiode and hermetically sealed MQW structure, ensuring stable and reliable optical performance over the full industrial temperature range.

### Features

- 1550nm MQW-FP laser diode (LD)
- 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

- FC/ST/SC receptacle package with 2-hole flange

### 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.	T15F-RYZ-W-D
T15F = Laser	1550nm FP laser
R = Package	Receptacle
Y = Connector	FC ( <b>FC</b> ); SC ( <b>SC</b> ); ST ( <b>ST</b> )
Z = Output power	>0.2mW ( <b>S</b> ); >0.5mW ( <b>M</b> ); >1mW ( <b>H</b> ); >2mW ( <b>2</b> )
W = Pin configuration	A pinout ( <b>A</b> ); B pinout ( <b>B</b> ); C pinout ( <b>C</b> )
D = Data rate	1.25Gbps ( <b>1G</b> ); 2.5Gbps ( <b>2G</b> )



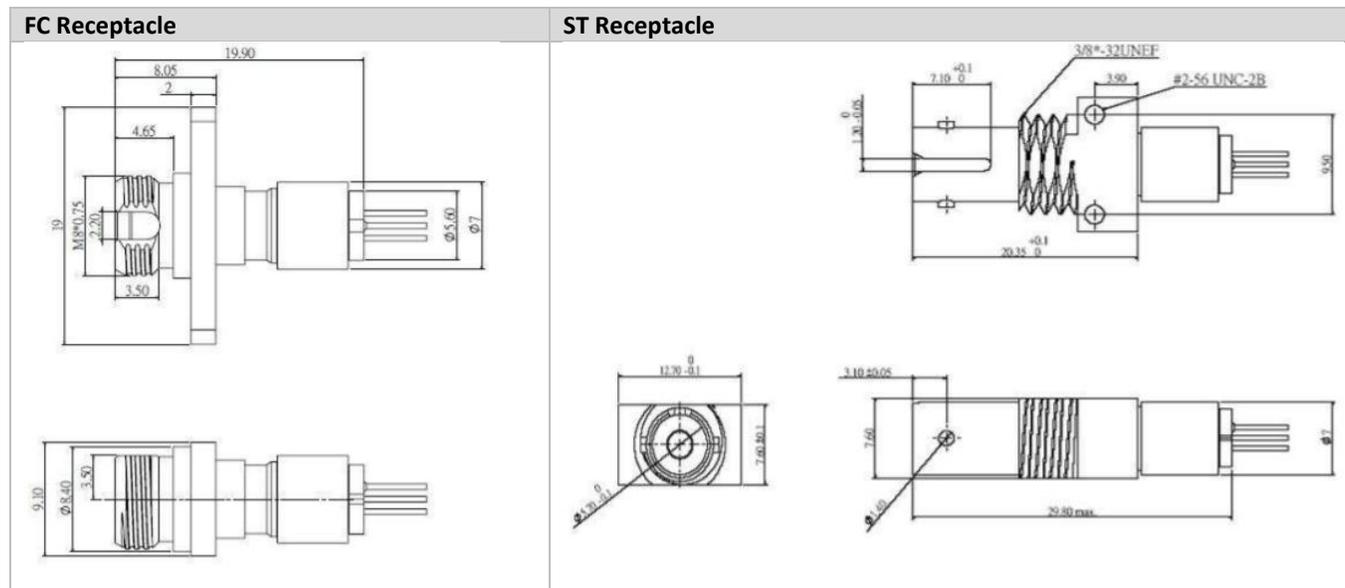
## Specifications

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 <sub>FLD</sub>	100	mA	
Reverse voltage (LD)	V <sub>RLD</sub>	2	V	
Reverse current (PD)	I <sub>RPD</sub>	5	mA	
Reverse voltage (PD)	V <sub>RPD</sub>	15	V	
Soldering temperature	Stemp	260	°C	10 seconds

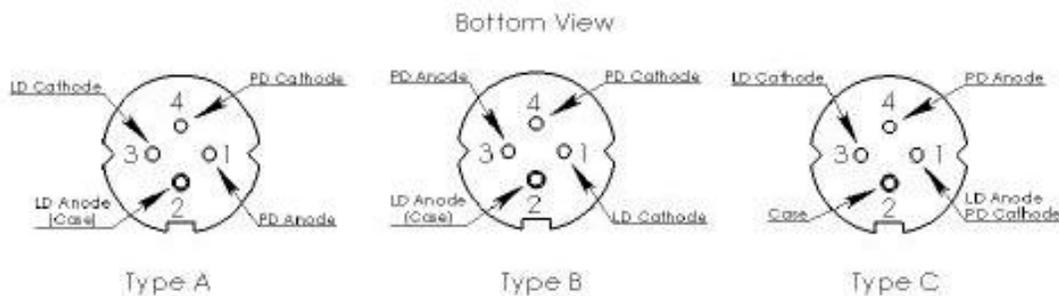
Electro-Optical Characteristics (CW @ T <sub>c</sub> = 25°C unless otherwise noted)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Central wavelength	$\lambda_c$	1520	1550	1570	nm	CW, Pf
Spectral width	$\Delta\lambda$	-	2	3	nm	Pf
Threshold current	I <sub>th</sub>	-	10	15	mA	CW
Fiber output power	Pf	0.2			mW	CW, I <sub>f</sub> =I <sub>th</sub> +20mA
		0.5				
		1.0				
		2.0				
Operating voltage	V <sub>op</sub>	-	1.1	1.5	V	Pf
Rise time / Fall time	t <sub>r</sub> /t <sub>f</sub>	-	0.15	0.3	nsec	I <sub>b</sub> = I <sub>th</sub> , 20%~80%
Monitor current	I <sub>m</sub>	100	-	1000	uA	Pf, V <sub>rp</sub> =5V
Monitor dark current	I <sub>d</sub>	-	0.1	100	nA	V <sub>rp</sub> =5V
Monitor capacitance	C	-	10	20	pF	V <sub>rp</sub> =5V, f=1MHz
Tracking error*	$\Delta$ Pf/ Pf	-	±1.0	±1.5	dB	APC, T <sub>c</sub> =-40~+85°C

\*I<sub>m</sub>=constant @ Pf, T<sub>c</sub>=25 °C

**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.