622Mbps Receptacle InGaAs PIN Photodiode Receiver Module with Integrated TIA

R13-622-RYZ-VP

Data Sheet

Description

The Lasermate R13-622-RYZ-VP series is an InGaAs PIN photodiode receiver module with integrated transimpedance amplifier (TIA), optimized for operation within the 1100–1630 nm wavelength range. The R13-622-RYZ-VP is offered in receptacle-style housings with FC or ST connectors. It features high optical sensitivity and supports high-speed data transmission up to 622 Mbps, making it ideal for broadband optical signal detection applications.

Features

- High speed operation up to 622Mbps
- High sensitivity
- Integrated InGaAs PIN photodiode with TIA
- Hermetically sealed package
- Single power supply +3.3V
- FC or ST receptacle package

Applications

- SONET OC3, OC-12 / SDH STM-1, STM-4
- LAN

Ordering Information

Model Number Format	**R13-622-RYZ-VP**
R13 = Receiver	InGaAs/InP PIN-TIA photodiode
622 = Data Rate	622 Mbps
R = Package	Receptacle
Y = Connector	FC **(FC),** ST **(ST)**
Z = Sensitivity	-28dBm **(1)**, -30dBm **(2)**
V = Supply voltage	3.3V **(3)**
P = Pin configuration	4-pin **(4);** 5-pin **(5)**

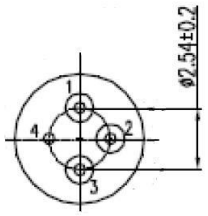
Specifications

Absolute Maximum Ratings			
Parameters	Symbol	Value	Unit
Storage temperature	Tstg	-40~+85	ºC
Operating case temperature	Top	-40~+85	ºC
Peak optical power	Po	0	dBm
Power supply Voltage	Vp	3.6	V
Soldering temperature	Stemp	260	ºC
Soldering time	Stime	10	sec

Electro-Optical Characteristics (CW @ T_C = 25ºC unless otherwise noted)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Wavelength	λ	1100		1630	nm	
Bandwidth	BW	700			MHz	Vcc
Low Frequency Cut-off	LF			100	kHz	Vcc
Supply Current	Icc		22	35	mA	Vcc, no load
Sensitivity	S	-22			dBm	λ=1310nm, @622.08Mbps, PRBS23, ER=10dB, BER=1E^{-10}
		-24				
		-26				
Saturation power	Psat	0			dBm	λ=1310nm, @622.08Mbps, PRBS23, ER=10dB, BER=1E^{-10}
Differential Responsivity	Rd	12		30	mV/μW	Rload = 100ohm, P = -22Bm, λ=1310nm
Rise/Fall Time	τ_r/τ_f			400	ps	Vcc=3.3V, 20%~80%
Single Ended Impedance	Ro		50		ohm	

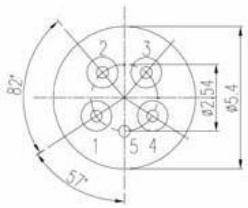
Pin Configuration

4-pin:



Number	Function
1	VCC
2	Dout-
3	Dout+
4	GND

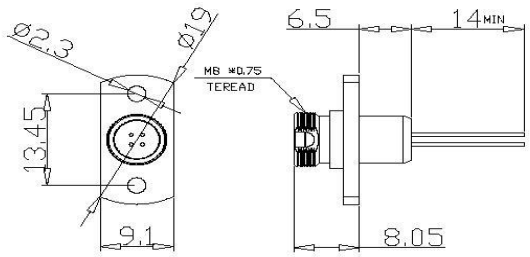
5-pin:



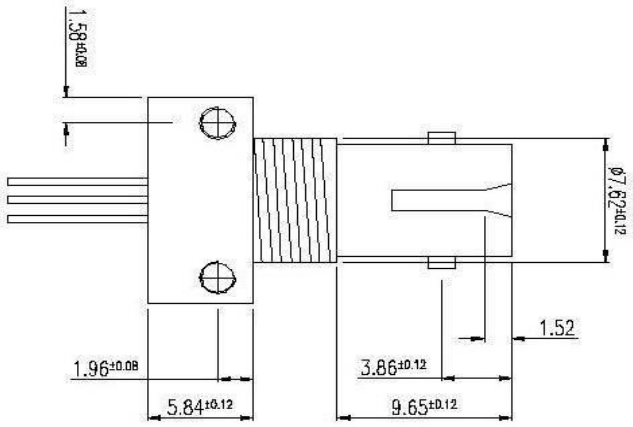
Number	Function
1	Dout +
2	Vcc
3	Isource
4	Dout -
5	GND

Outline Dimensions (unit: mm)

FC Receptacle



ST Receptacle



Note: Specifications are subject to change without notice.