



2.5Gbps Receptacle GaAs PIN Photodiode Receiver Module with Integrated TIA

R85-2G-RYZ-VP

Data Sheet



Description

The R85-2G-RYZ-VP series includes GaAs-based photodiode receiver modules with integrated transimpedance amplifiers (TIA), optimized for the 770–860 nm spectral range and data rates up to 2.5 Gbps. These compact modules feature a GaAs PIN photodiode and are available in FC or ST receptacle packages for direct fiber connector mating. Designed for high-speed signal detection and system integration, they offer excellent performance and flexible packaging options.

Features

- High-speed operation up to 2.5 Gbps
- High sensitivity GaAs PIN photodiode
- Hermetically sealed package
- Single +3.3V power supply
- Integrated transimpedance amplifier (TIA)
- FC or ST receptacle interface

Applications

- SONET OC3, OC-12, OC-48
- SDH STM-1, STM-4, STM-16
- LAN

Ordering Information

Model Number Format	R85-2G-RYZ-VP
R85 = Receiver	GaAs PIN-TIA photodiode
2G = Data Rate	2.5 Gbps
R = Package	Receptacle
Y = Connector	FC (FC) , ST (ST)
Z = Sensitivity	-18dBm (1) , -20dBm (2)
V = Supply voltage	3.3V (3)
P = Pin configuration	5-pin (5)

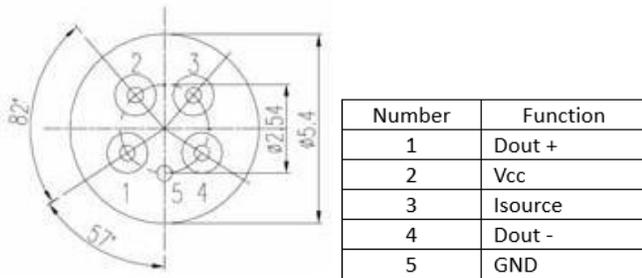
Specifications

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

Electro-Optical Characteristics (CW @ T _c = 25°C unless otherwise noted)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Wavelength	λ	770		860	nm	
Bandwidth	BW	1.4			MHz	V _{cc}
Low Frequency Cut-off	LF			100	kHz	V _{cc}
Supply Current	I _{cc}		25	35	mA	V _{cc} , no load
Sensitivity	S	-18 -20			dBm	$\lambda=850\text{nm}$, @2488.32Mbps, PRBS23, ER=10dB, BER=1E ⁻¹⁰
Saturation power	Psat	0			dBm	$\lambda=850\text{nm}$, @2488.32Mbps, PRBS23, ER=10dB, BER=1E ⁻¹⁰
Differential Responsivity	Rd	1.8		3.8	mV/ μ W	$\lambda=850\text{nm}$, @2488.32Mbps, PRBS23, ER=10dB, BER=1E ⁻¹⁰
Rise/Fall Time	τ_r/τ_f		170	200	ps	V _{cc} =3.3V, 20%~80%
Single Ended Impedance	Ro		50		ohm	

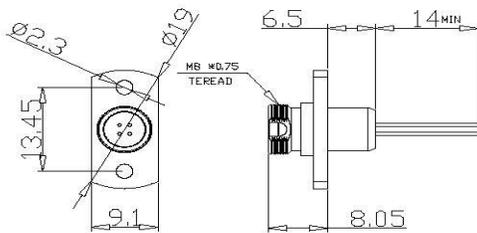
Pin Configuration

5-pin:

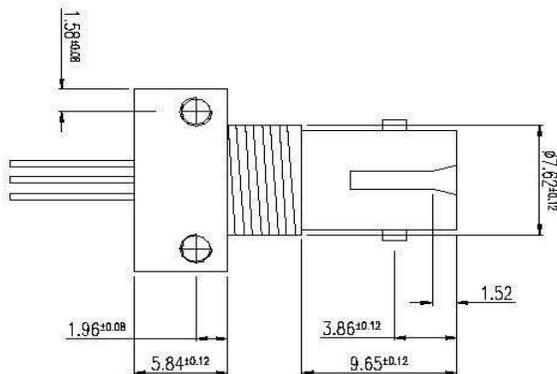


Outline Dimensions (unit: mm)

FC Receptacle



ST Receptacle



Note: Specifications are subject to change without notice.