



R85-1G-PYZ-VP

1.25Gbps Pigtailed GaAs PIN-TIA Photodiode Receiver Module

Description

The Lasermate R85-1G-PYZ-VP series is a 770-860nm wavelength range, fiber coupled GaAs amplified photodiode receiver module integrated with transimpedance amplifier (TIA). The GaAs photodiode receiver module is available with either bare or connectorized 9/125-micron fiber pigtailed in FC/ST/SC/LC optical connector. The GaAs photodiode module features high sensitivity and high-speed reaching up to 1.25Gbps data rate operation.



Features

- High speed
- High Sensitivity
- Hermetically sealed
- Single power supply +3.3V

Packaging

- SM fiber pigtailed with optional FC/ST/SC connector

Applications

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

Ordering Information

Read Model No.	R85-1G-PYZ-VP
R85 = Receiver	GaAs PIN-TIA photodiode
1G = Data Rate	1.25 Gbps
P = Package	Pigtail
Y = Connector	None (NO) ; FC-PC (FC) ; SC-PC (SC) ; ST-PC (ST) ; LC-PC (LC)
Z = Sensitivity	-18dBm (1) , -20dBm (2) , -22dBm (3)
V = Supply voltage	3.3V (3)
P = Pin configuration	4-pin (4) ; 5-pin (5)



Specifications

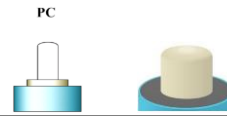
Absolute Maximum Ratings			
Parameters	Symbol	Value	Unit
Storage temperature	Tstg	-40~+85	°C
Operating case temperature	Top	-40~+85	°C
Peak optical power	Po	0	dBm
Power supply Voltage	Vp	3.6	V
Soldering temperature	Stemp	260	°C
Soldering time	Stime	10	sec





Electro-Optical Characteristics (CW @ Tc = 25°C unless otherwise noted)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Wavelength	λ	770		860	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	-18			dBm	$\lambda=850\text{nm}$, @1244.16Mbps, PRBS7, ER=10dB, BER=1E ⁻¹⁰
		-20				
		-22				
Saturation power	Psat	0			dBm	$\lambda=850\text{nm}$, @1244.16Mbps, PRBS7, ER=10dB, BER=1E ⁻¹⁰
Differential Responsivity	Rd	6.4		17.8	mV/ μ W	Rload = 100ohm, P = -22Bm, $\lambda=1310\text{nm}$
Rise/Fall Time	τ_r/τ_f			400	ps	Vcc=3.3V, 20%~80%
Single Ended Impedance	Ro		50		ohm	

Fiber Pigtail Specifications					
Parameters	Symbol	Min.	Typ.	Max.	Unit
Fiber type	Single Mode Fiber (Flame Retardant Hytrel Coating)				
Cladding diameter	Dcl	122	125	128	μ m
Mode field diameter	Dmf	-	10	-	μ m
Coating diameter	Dbc	-	0.9	1	mm
Pigtail length	L	0.9	1.0	1.1	m
Bending radius	Rb	30	-	-	mm
Connector	TBD				

Note: Horizontal mount is available upon request and provided separately.

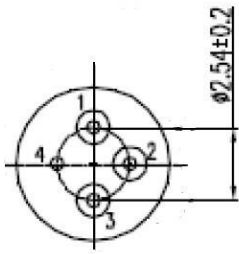
Optical Fiber Connector Types



Type	Ferrule Diameter	Multi mode PC	Type	Ferrule Diameter	Multi mode PC
FC	2.5mm		ST	2.5mm	
SC	2.5mm		LC	1.25mm	

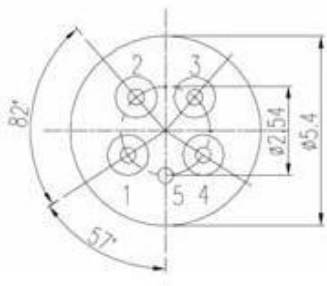
Pin Configuration

4-pin:



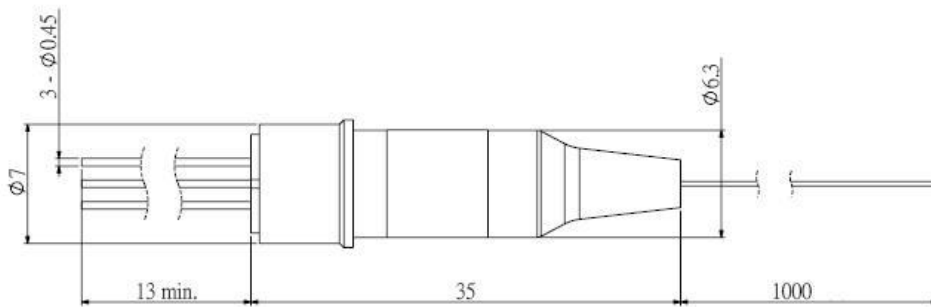
Number	Function
1	VCC
2	Dout-
3	Dout+
4	GND

5-pin:



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

Outline Dimensions (unit: mm)



Note: Specifications are subject to change without notice.