



R13-2G-PYZ-VP

2.5Gbps Pigtailed InGaAs PIN-TIA Photodiode Receiver Module

Description

The Lasermate R13-2G-PYZ-VP is a 1100-1630nm wavelength range, InGaAs PIN photodiode receiver module integrated with transimpedance amplifier. The devices are available in fiber pigtailed coaxial packages with optional FC/ST/SC connector. The InGaAs photodiode ROSA is characterized by its high sensitivity and high speed, reaching up to 2.5Gbps 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, OC-48
- SDH STM-1, STM-4, STM-16
- LAN

Ordering Information

Read Model No.	R13-2G-PYZ-VP
R13 = Receiver	InGaAs/InP PIN-TIA photodiode
2G = Data Rate	2.5 Gbps
P = Package	Pigtail
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) ; LC-APC (LA)
Z = Sensitivity	-18dBm (1) , -20dBm (2) , -22dBm (3) , -24dBm (4)
V = Supply voltage	3.3V (3)
P = Pin configuration	5-pin (5)



Specifications

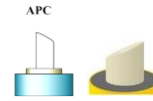
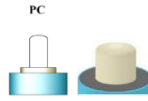
Absolute Maximum Ratings			
Parameters	Symbol	Value	Unit
Storage temperature	Tstg	-40~+85	°C
Operating case temperature	Top	-40~+85	°C
Peak optical power	Po	0	dBm
Power supply Voltage	Vp	3.6	V
Soldering temperature	Stemp	260	°C
Soldering time	Stime	10	sec

Electro-Optical Characteristics (CW @ T _c = 25°C unless otherwise noted)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Wavelength	λ	1100		1630	nm	
Bandwidth	BW	1.4			MHz	Vcc
Low Frequency Cut-off	LF			100	kHz	Vcc
Supply Current	Icc		45	60	mA	Vcc, no load
Sensitivity	S	-18			dBm	λ=1310nm, @2488.32Mbps, PRBS23, ER=10dB, BER=1E ⁻¹⁰
		-20				
		-22				
		-24				
Saturation power	Psat	0			dBm	λ=1310nm, @2488.32Mbps, PRBS23, ER=10dB, BER=1E ⁻¹⁰
Differential Responsivity	Rd	14		30	mV/μW	Rload = 100ohm, P = -18Bm, λ=1310nm
Rise/Fall Time	τ _r /τ _f		170	200	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	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					

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

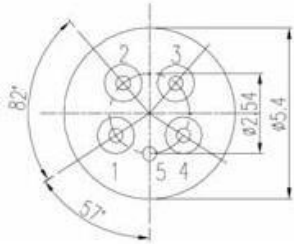
Optical Fiber Connector Types



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

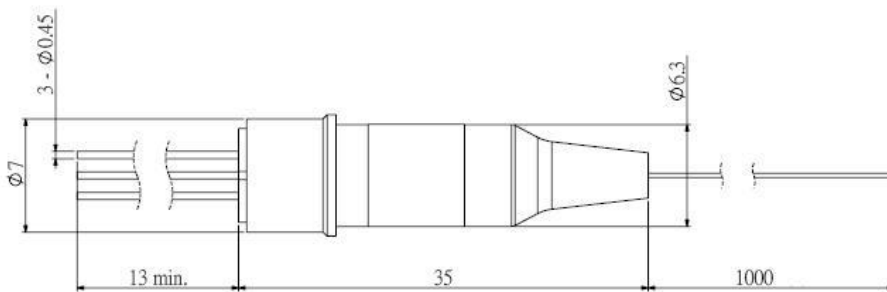
Pin Configuration

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.