



R13A-PYZ-M

InGaAs PIN Photodiode Modules Pigtailed for Analog Application

Description

The Lasermate R13A-PYZ-M series are high quality analog photodetectors designed for CATV receiver applications. The analog PD modules are optically aligned to optimize performance and balance the parameters of responsivity, distortion, and back reflection.



Features

- Plane structure InGaAs photodetector with high linearity
- Covers 1100nm to 1620nm wavelength range
- Low capacitance
- Low return loss
- Low dark current
- High responsivity
- Single mode pigtail
- 3GHz bandwidth

Packaging

- SM fiber pigtailed with optional FC, ST, SC/APC connectors

Applications

- LANS
- FDDI
- SONET OC-3/OC-12/OC-24
- SDH STM-1/STM-4
- Gigabit Ethernet
- Power Meter

Ordering Information

Read Model No.	R13A-PYZ-M
R13A = Receiver	Analog InGaAs/InP PIN photodiode
P = Package	Pigtail
Y = Connector	None (NO) ; FC/APC (FA) ; SC/APC (CA) ; ST/APC (TA)
Z = Fiber	9/125 μ m SM fiber (1)
M = Mount	No flange (0) ; Standard flange (1)





Specifications

Absolute Maximum Ratings				
Parameters	Symbol	Min.	Max.	Unit
Operating Temperature Range	T_{op}	-40	85	°C
Storage Temperature Range	T_{stg}	-40	85	°C
Input Power Saturation	P_{IN}		1	mW
Reverse Voltage	V_R		25	V
Forward Current	I_F		10	mA
Power Dissipation	P_{DISS}		<100	mW

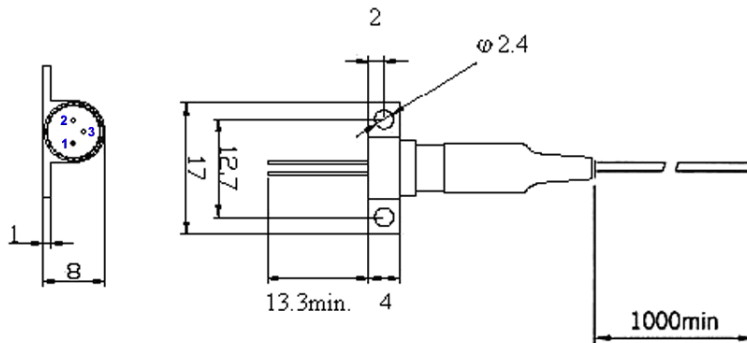
Electro-Optical Characteristics (CW @ $T_C = 25^\circ\text{C}$ unless otherwise noted)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Fiber Length		1.0	1.05	1.1	m	
Optical Wavelength Range	λ	1100	-	1620	nm	
Responsivity	R	-	≥ 0.8	-	mA/mW	$\lambda=1310\text{nm}$
Frequency Response	F_r	-	± 2	-	dB	
Second-Order Intermodulation	IMD2		-70		dBc	
Third-Order Intermodulation	IMD3		-80		dBc	
Back Reflection	RL	-	-50	-40	dB	
Dark Current	I_D	-	0.1	1	nA	
Capacitance	C	-	0.9	1	pF	
Bandwidth	BW	-	3.0	-	GHz	

Note: 1310nm two tone test, OMI=40% and total received power is 0dBm. The distortion measured at 54MHz, 446.5MHz, 548.5MHz, 746.5MHz and 854.5MHz.

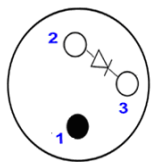
Optical Fiber Connector Types

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

Outline Dimensions (unit: mm)



Pin Configuration



- 1. Case
- 2. PD Anode
- 3. PD Cathode

Note: Specifications are subject to change without notice.