



InGaAs PIN Photodiode Modules Pigtailed for Analog Application

R13A-PYZ-M

Data Sheet



Description

The Lasermate R13A-PYZ-M series are high-quality analog InGaAs photodiode modules optimized for CATV and broadband optical applications. These modules feature a plane structure InGaAs photodetector with excellent linearity and responsivity, while maintaining low dark current, low capacitance, and minimal back reflection. Designed for 1100–1620 nm wavelength range, the R13A-PYZ-M supports high-speed analog applications up to 3GHz and comes with a single-mode fiber pigtail with optional FC, ST, or SC/APC connectors.

Features

- Plane structure InGaAs photodetector with high linearity
- Covers 1100nm to 1620nm wavelength range
- Low capacitance and low return loss
- Low dark current
- High responsivity
- High-speed operation: 3GHz bandwidth
- Single-mode fiber pigtailed with optional FC, ST, or 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)

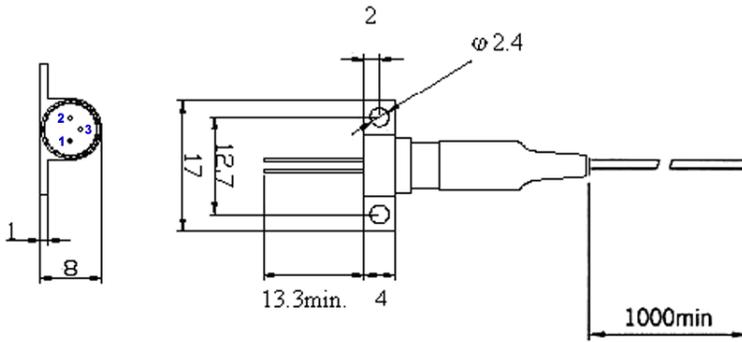
Specifications

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

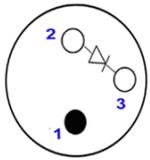
Electro-Optical Characteristics (CW @ T _c = 25°C unless otherwise noted)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Fiber Length		1.0	1.05	1.1	m	
Optical Wavelength Range	λ	1100	-	1620	nm	
Responsivity	R	-	≥ 0.8	-	mA/mW	λ=1310nm
Frequency Response	F _r	-	±2	-	dB	
Second-Order Intermodulation	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.

Outline Dimensions (unit: mm)



Pin Configuration



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

Note: Specifications are subject to change without notice.