



1.25Gbps Pigtailed InGaAs/InP PIN Photodiode Receiver R13-PYZ-M

Data Sheet



Description

The Lasermate R13-PYZ-M series are InGaAs PIN photodiode receiver modules designed for operation in the 1100–1630 nm wavelength range. The R13-PYZ-M is available in a fiber-coupled version, offered with a 62.5/125 μm fiber pigtail that can be left unterminated or terminated with FC, ST, SC, or LC connectors. The modules integrate an InGaAs/InP PIN photodiode and support data rates up to 1.25 Gbps, providing high-performance optical detection for communication and sensing applications.

Features

- Plane structure InGaAs PD with high linearity
- High speed operation up to 1.25 Gbps
- High Responsivity at 1310nm and 1550nm
- Low dark current and low capacitance
- Low return loss
- Single-mode or multimode fiber pigtailed with optional FC/ST/SC/LC connector

Applications

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

Ordering Information

Read Model No.	R13-PYZ-M
R13 = Receiver	InGaAs/InP PIN photodiode
P = Package	Pigtailed
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)
Z = Fiber	9/125 μm SM fiber (1), 50/125 μm MM fiber (2), 62.5/125 μm MM fiber (3)
M = Mount	Pigtailed: No flange (0), Horizontal mount (1)

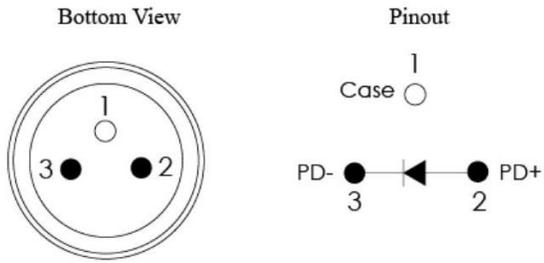
Specifications

Absolute Maximum Ratings			
Parameters	Symbol	Min.	Unit
Storage Temperature	Tstg	-40 to +85	°C
Operating Case Temperature	Top	-40 to +85	°C
Peak Optical Power	Po	3	mW
PD Reverse Voltage	V _{RD}	20	V
PD Forward Current	I _{FD}	10	mA
Soldering Temperature	Stemp	260	°C
Soldering Time	Stime	10	sec

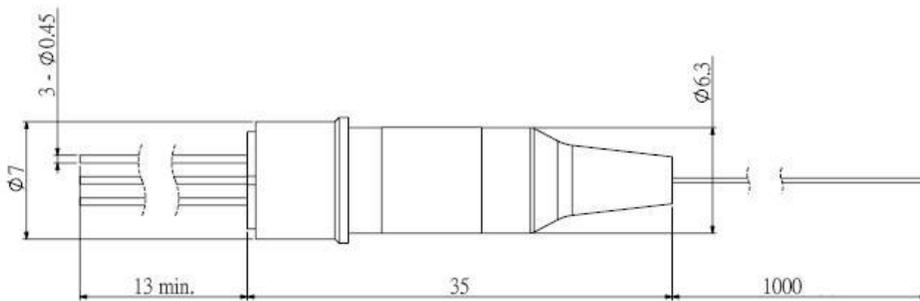
Electro-Optical Characteristics (CW @ T _C = 25°C unless otherwise noted)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Optical Wavelength Range	λ	1100	-	1630	nm	
Bandwidth	BW	-	1.5	-	GHz	V _R =5V
Responsivity	R	0.8	0.9	-	A/W	λ=1310nm, V _R =5V, P _{in} = 100uW
Dark current	I _d	—	0.2	2.0	nA	V _R =5V
Capacitance	C	—	—	0.5	pF	V _R =5V
Rise/Fall Time	T _r /T _f	—	—	300	ps	V _R =5V, 20%~80%

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					

Pin Configuration



Outline Dimensions (unit: mm)



Note: Specifications are subject to change without notice.