



>5GHz Analog InGaAs PIN Photodiode, Single Mode Fiber Pigtailed R13A-5G-Pxx1

Data Sheet

Overview

The Lasermate R13A-5G-Pxx1 series is a high-performance analog InGaAs PIN photodiode designed for broadband CATV and analog optical receiver applications. With a >5GHz bandwidth, high responsivity, and excellent linearity, the device delivers superior performance in demanding analog fiber optic links. The photodiode features a low-capacitance planar InGaAs structure with low dark current and low return loss for optimal signal integrity. The module is offered in a single mode fiber (SMF) pigtailed package with optional FC, ST, SC, or LC connectors for flexible integration.

Features

- Plane structure InGaAs photodetector with high linearity
- High speed
- High responsivity
- Low capacitance
- Low return loss
- Low dark current
- >5GHz bandwidth
- Available with SMF pigtail and FC/ST/SC/LC connectors

Applications

- CATV

Ordering Information

Read Model No.	R13A-5G-Pxx1
R13A = Receiver	Analog InGaAs PIN photodiode
5G = Bandwidth	>5GHz
P = Package	Pigtail
xx = Connector	FC/PC (FC); SC/PC (SC); ST/PC (ST); LC/PC (LC); FC/APC (FA); SC/APC (CA); ST/APC (TA); LC/APC (LA)
1 = Fiber	9/125 μ m SM fiber

Specifications

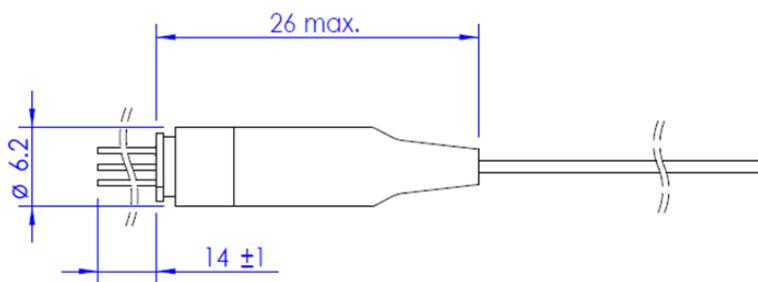
Absolute Maximum Ratings			
Parameters	Symbol	Value	Unit
Operating Temperature Range	T _{op}	-40 to +85	°C
Storage Temperature Range	T _{stg}	-40 to +100	°C
PD Reverse Voltage	V _{RD}	20	V
PD Forward Current	I _{FD}	10	mA
Soldering Temperature	S _{temp}	260	°C
Soldering Time	S _{time}	10	sec

Electro-Optical Characteristics (CW @ T _c = 25°C unless otherwise noted)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Wavelength	λ	1260	-	1620	nm	
Bandwidth	BW	5.0	6.5	-	GHz	V _R =5V
Responsivity	R	0.8	0.9	-	A/W	λ=1550nm, V _R =5V, P _{in} =100uW
Dark Current	I _D	-	0.1	1.0	nA	V _R =5V
Second-Order Intermodulation	IMD2		-75	-65	dBc	λ=1550nm
Capacitance	C	-	0.4	0.55	pF	V _R =5V, f=1MHz
Breakdown Voltage	V _{BD}	25	40	-	V	I _r =10uA

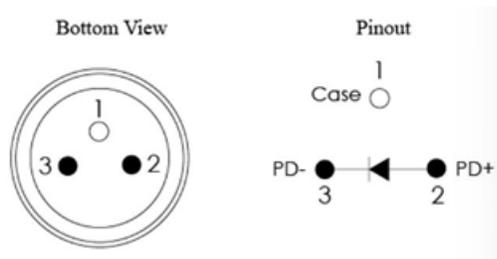
Fiber Pigtail Specifications						
Parameters	Symbol	Min.	Typ.	Max.	Unit	
Fiber type		Single Mode Fiber (Flame Retardant Hytrel Coating)				
Cladding diameter	D _{cl}	122	125	128	um	
Mode field diameter	D _{mf}	-	10	-	um	
Coating diameter	D _{bc}	-	0.9	1	mm	
Pigtail length*	L	0.9	1.0	1.1	m	
Bending radius	R _b	30	-	-	mm	
Connector		TBD				

* From the fiber ferrule-end to the bottom of the TO-header.

Outline Dimensions (unit: mm)



Pin Configuration



Note: Specifications are subject to change without notice.