

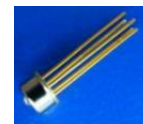


APD-A13P5-1GA3

1.25Gbps 1260-1620nm InGaAs Avalanche Photodiode (APD) plus Burst Mode Pre-Amplifier in TO-46 Package, 0 to 85°C

Overview

The Lasermate APD-A13P5-1GA3 avalanche photodetector is an InGaAs avalanche photodiode integrated with a transimpedance amplifier that provides high-speed response at 1.25Gbps. Designed for use in fiber optic data communication applications.



Features

- 1310nm/1550nm burst mode APDTIA TO
- Industry standard TO-46 package with short cap lens and tab-less
- Optimized for fiber optic application
- Design for long wavelength 1.25Gbps applications
- Supports +3.3V application

Applications

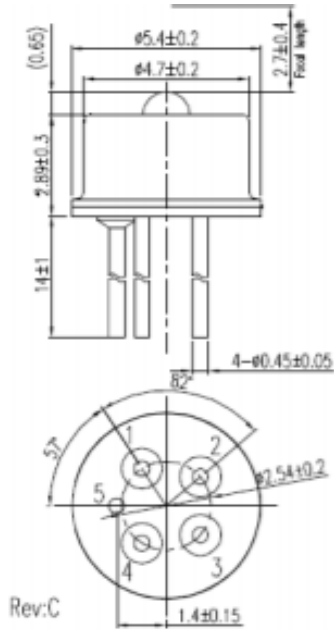
- High speed data communication
- Gigabit Ethernet
- Fiber channel

Specifications

Absolute Maximum Ratings				
Parameters	Min.	Max.	Unit	Conditions
Storage temperature	-40	100	°C	
Operating temperature	0	85	°C	
Lead solder temperature		260	°C	10 seconds

Electro-Optical Characteristics (Typical values are at + 3.3V@25°C)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Power supply	V _{CC}	3.1	3.3	3.6	V	
Supply current	I _{CC}		45	60	mA	No loads
APDTIA breakdown voltage	V _{BR}	33		48	V	I _d =10uA
Operating voltage	V _{OP}		V _{BR} -3		V	V _{CC} =3.3V
V _{BR} temperature coefficient	γ		70		mV/°C	
APD responsivity	R	7.5	10		A/W	V _{apd} =V _{OP} , P=-30dBm, λ=1310nm
APDTIA differential responsivity	R _d	10.4		19.6	mV/uW	R _{load} =100ohm, V _{apd} =V _{OP} , P=-30dBm, λ=1310nm
APDTIA single ended responsivity	R _s	5.2		9.8	mV/uW	R _{load} =50ohm, V _{apd} =V _{OP} , P=-30dBm, λ=1310nm
Small-signal bandwidth	BW		1000		MHz	V _{apd} =V _{OP} , P=-30dBm
Rise/fall time (20-80%)	tr/tf			400	ps	V _{apd} =V _{OP} , P=-30dBm, λ=1310nm
Saturation power	P _{sat}	-10			dBm	λ=1310nm, @1244.16Mbps
Single ended output impedance	R _O		50		ohm	
Wavelength	λ	1260		1620	nm	
Sensitivity				-33	dBm	V _{apd} =V _{OP} , λ 1310nm, @1244.16Mbps, PRBS7, ER=10dB, BER=10 ⁻¹⁰

Outline Dimensions (unit: mm)



Pin Configuration

1. Dout
2. Vcc
3. Vapd
4. $\overline{\text{Dout}}$
5. Gnd

Note: Specifications are subject to change without notice.