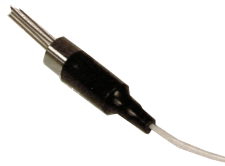


Low Dark Current Avalanche Photodiode

The Optilab APD-L is a InGaAs/InP avalanche photodetector with very low dark current for single photon counting.

APD-L Low Dark Current Avalanche Photodiode



Product Description

The Optilab APD-L is a InGaAs/InP avalanche photodetector (APD) with very low dark current. Its applications include RFoG/FTTH, telecommuncation, fiber sensor, and single photon counting. With a commercially available TIA the APD-L can be used for receiver applications up to 3.2 Gb/s with a -35 dBm sensitivity. For return path applications in RFoG, the APD-L can enable a return signal level as low as -30 dBm input. Combined with appropriate pulse detection circuitry, this device allows for the detection of single photons in the wavelength range from 0.95 μm to 1.65 μm . The 3 dB frequency response is over 3.2 GHz.

Features

- High Sensitivity
- Low Dark Current of 0.2 nA
- Coaxial Module with 9/125 μm Single-Mode Fiber
- Wide Bandwidth of 3 GHz

Applications

- Single Photon Counting
- Fiber Sensors
- RFoG/FTTH
- Telecommunications
- Instruments

PRODUCT SPECIFICATIONS

General Specifications

Operating Wavelength Range	950 nm to 1600 nm
APD Breakdown Voltage	40 to 60 V
V_{BR} Temperature Coefficient	0.3 %/ $^{\circ}$ C max.
Total Dark Current	0.3 nA at V_{BR} - 2 V typ. 0.5 nA @ V_{BR} - 0.5 V max.
Responsivity	0.85 A/W typ. @ 1550 nm
Sensitivity	-35 dBm with TIA
Gain (M)	10 typ.
Capacitance	0.6 pF typ.
Optical Return Loss	27 dB min.
3dB S21 Bandwidth	3.2 GHz typ.
Digital Bandwidth	4 Gb/s

Maximum Rating Specifications

Optical Input Power	3 mW max.
Reverse Current	5 mA max.
Forward Current	10 mA max.

Ordering Information

APD-L-xxx

xxx

Optical Connector: FCA, SCA



5110 N 44th St, Ste 200L, Phoenix AZ 85018

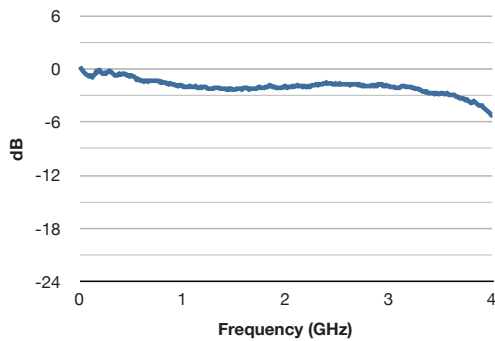
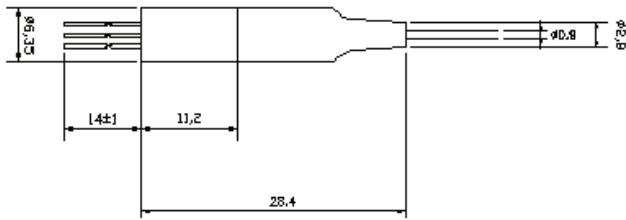
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Product specifications and description are subject to change without notice.
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Mechanical Drawing



Typical S21 Response

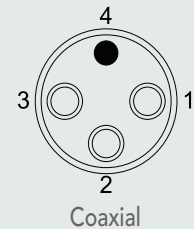
Low Dark Current Avalanche Photodiode

Mechanical Specifications

Operating Temperature	-40° C to +85° C
Storage Temperature	-55° C to +100° C
Optical Connectors	FC/APC, SC/APC

Optical Fiber	SMF-28 with 900 nm Tubing
Housing Dimensions	28 mm x 6 mm x 6 mm
Housing	Coaxial with Fiber Pigtail

PIN Out Diagram



Pin 1	APD Anode
Pin 2	NC
Pin 3	APD Cathode
Pin 4	Case

Ordering Information

APD-L



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