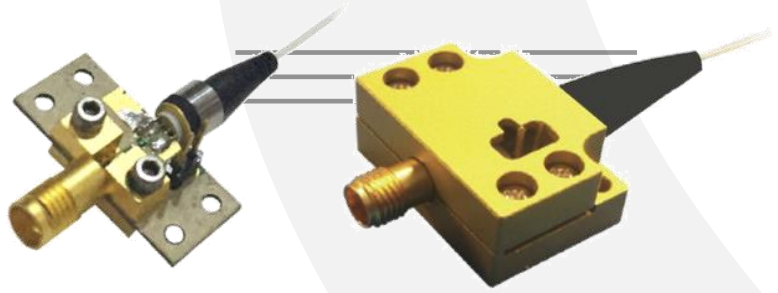


# PD-28-MM



## DEVICE

# 28 GHz Linear InGaAs PIN Photodetector, Multimode Fiber

## OVERVIEW

The Optilab PD-28-MM is a highly linear, 28 GHz bandwidth InGaAs PIN photodetector that is ideal for use in O/E front-ends requiring wide band frequency response. The coplanar waveguide photodiode design optimizes speed and sensitivity for the 1260 nm through 1610 nm wavelength range and assures a 28 GHz frequency response necessary for digital and analog applications. PD-28-MM utilize a lensed PD with a large aperture size to allow stable optical coupling over a wide temperature range. The PD-28-MM is available in a standard 2-pin package with SMA RF connector output for ease of assembly and can be ordered with or without the external protective housing. Contact Optilab for more information.

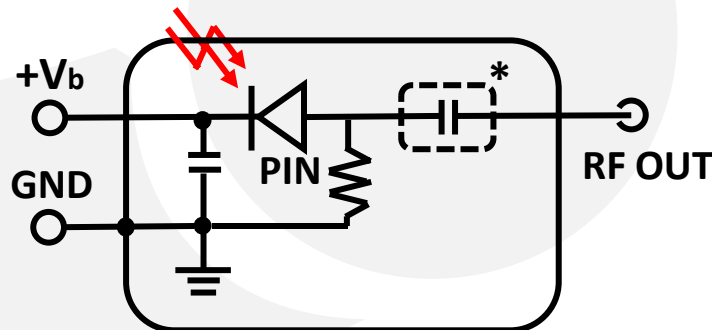
## FEATURES

- 28 GHz Bandwidth
- Lensed PD Design
- High Sensitivity
- Highly Linear Response

## USE IN

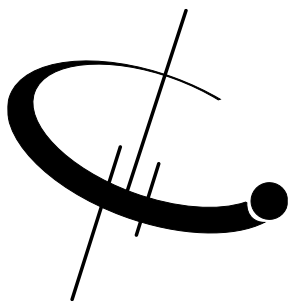
- 28 GHz Analog RF over Fiber
- Optically amplified photonics link
- RZ and NRZ up to 30 Gb/s
- Coherent lightwave systems
- Front-End O/E converter for test instrument

## FUNCTION DIAGRAM



\*Optional DC Block for AC Coupled Version





# PD-28-MM

## SPECIFICATIONS

Operating Wavelength	1260 nm to 1610 nm
Max Optical Input Level	10 mW average, 20 mW Peak
S21 3 dB Bandwidth	28 GHz typ., 25 GHz Min.
S22 Characteristics	< -10 dB up to 12 GHz
Low Frequency Cut Off	60 kHz for AC Version; DC for DC version
Responsivity @ 1550 nm	0.8 A/W min., 0.83 A/W typ.
Dark Current @ 25°C, +5V bias	10 nA typ., 100 nA max.
Optical Return Loss	-30 dB typ.
Optical PDL @ 1550 nm	0.1 dB max.
Reverse Bias Voltage	+4 to +5 V
Impedance	50 Ω

## GENERAL

## MECHANICAL

Operating Temperature	-20 °C to +50 °C
Storage Temperature	-65 °C to +75 °C
Operating Humidity	85% max
Package Type	2-pin module with SMA Female RF connector
Dimensions	27 mm x 18 mm x 12 mm
Fiber Connector	FC/APC by default, other options available
Optical Fiber	OM2 Fiber 50/125 multimode, 900 μm tight buffer
Fiber Pigtail Length	0.8 m min. 1 m typ.

## ABSOLUTE MAXIMUM RATINGS

PIN Reverse Bias Voltage	+6 V max
Forward Current	18 mA
Optical Input Power	20 mW peak
Lead Soldering Temp (10s)	250 °C

## PD-28-MM-X-YY

## OPTIONS

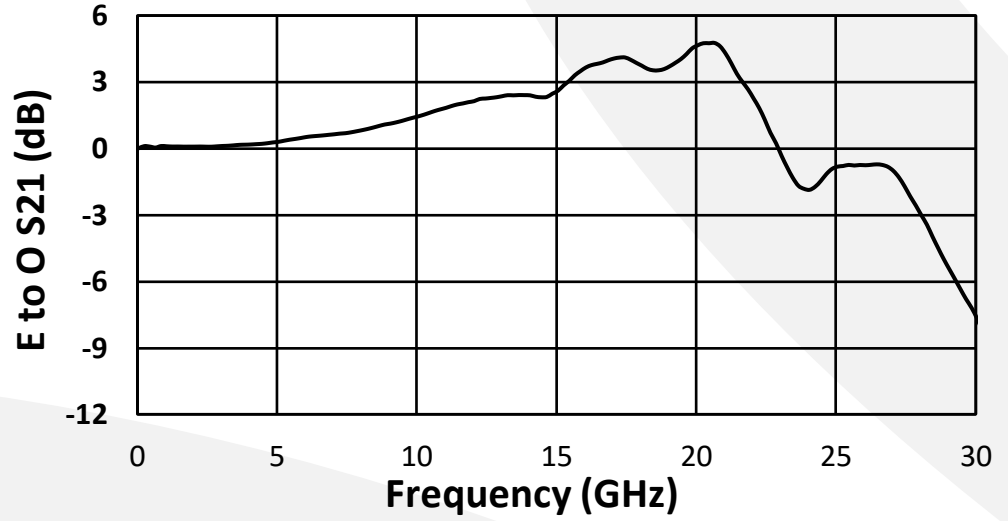
<b>X:</b>	A, No Housing, default	<b>YY:</b>	DC, DC Version
	C, External Housing		AC, AC Version



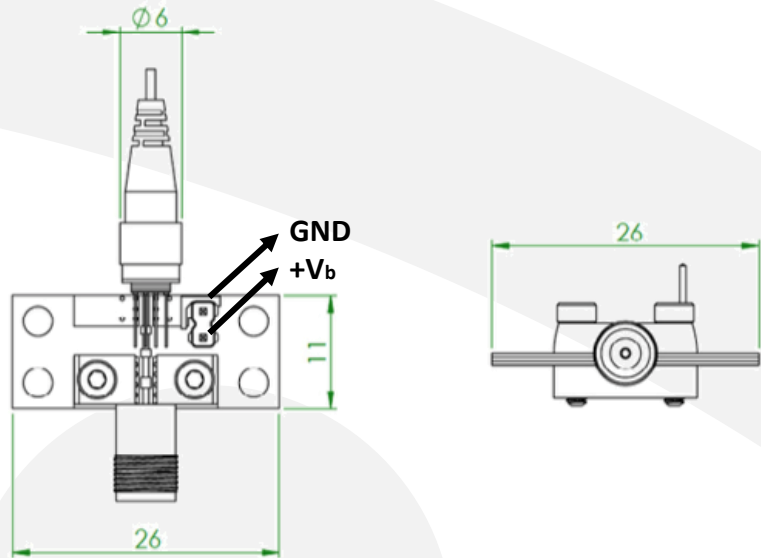


# PD-28-MM

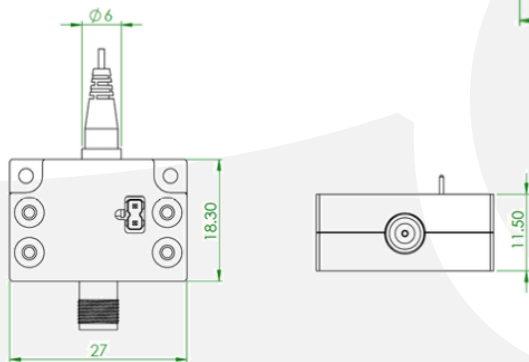
S21 O/E RESPONSE



PD-28-A Mechanical Drawing



PD-28-C Mechanical Drawing



- <sup>1</sup> All measurements are in Metric
  - <sup>2</sup> External housing is for Mechanical Protection Only
- Legacy housing information available upon request

Unit: mm

