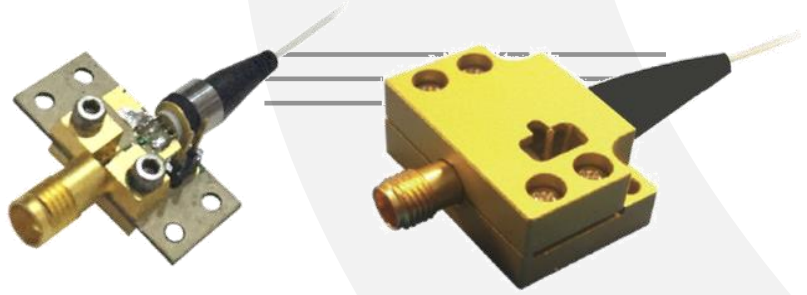




PD-28-TQ



DEVICE

Temperature Qualified 28 GHz Linear InGaAs PIN Photodetector, TQ ver.

OVERVIEW

The Optilab PD-28-TQ is a temperature qualified, 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-TQ utilize a lensed PD with a large aperture size to allow stable optical coupling over a wide temperature range. The PD-28-TQ 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.

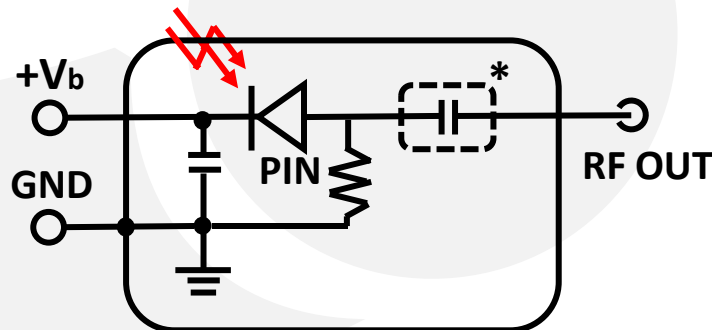
FEATURES

- Temperature Range : -40 °C ~ +75 °C
- 28 GHz Bandwidth
- Lensed PD Design
- High Sensitivity
- Highly Linear Response

USE IN

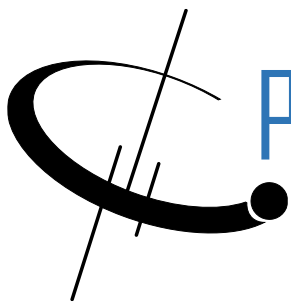
- 28 GHz Analog RF over Fiber
- Optically amplified photonics link
- RZ and NRZ up to 30 Gb/s
- Coherent lightwave systems
- Front-End O/E converter for test instrument

FUNCTION DIAGRAM



*Optional DC Block for AC Coupled Version





PD-28-TQ

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	-40 °C ~ +75 °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	SMF complied with G652D, 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-TQ-X-YY

OPTIONS

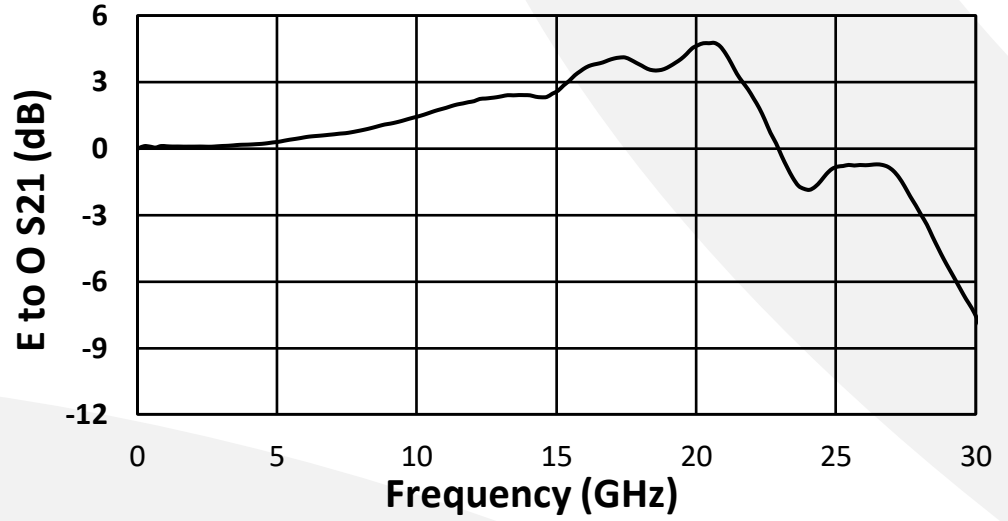
X:	A, No Housing, default	YY:	DC, DC Version
	C, External Housing		AC, AC Version



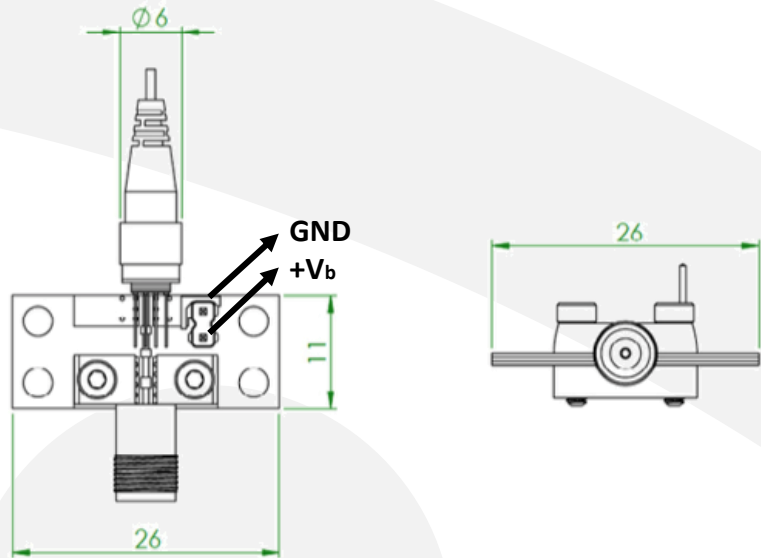


PD-28-TQ

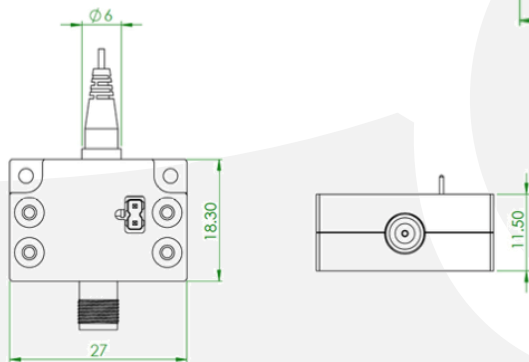
S21 O/E RESPONSE



PD-28-TQ-A Mechanical Drawing



PD-28-TQ-C Mechanical Drawing



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

Unit: mm

