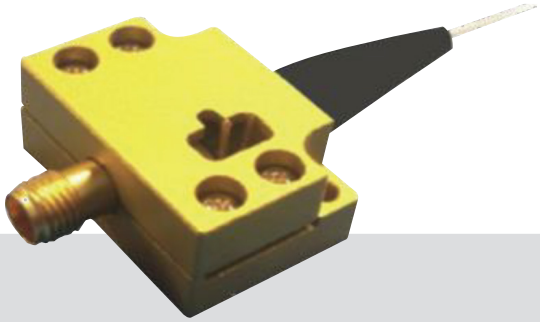
F-PD-30-1064

30 GHz Linear InGaAs PIN Photodetector, Enhance for 1064nm

The F-PD-30-1064 is a highly linear, 30 GHz bandwidth InGaAs PIN photodetector that is optimized for 1064nm operational wavelength; it 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 1030 nm through 1570 nm wavelength range and assures a 30 GHz frequency response necessary for digital and analog applications. The front-illuminated mesastructured PIN design allows a high input power level of up to 20 mW. The F-PD-30-1064 is available in a standard 2-pin package with K type RF connector output for ease of assembly.



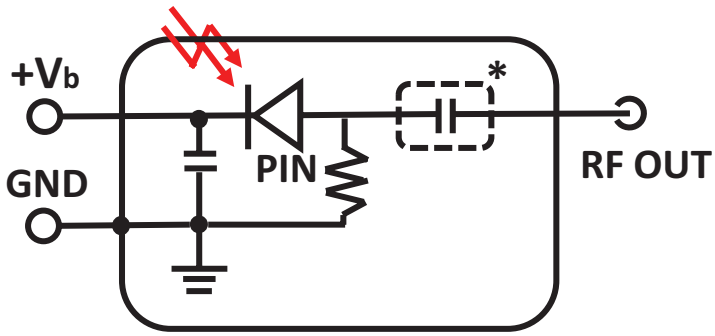
Features

- Optimized for 1064nm
- 60 kHz to 30 GHz, AC coupled
- DC to 30 GHz, DC coupled
- Responsivity 0.6 A/W @1060nm
- Flat frequency response, ± 1 dB
- Highly linear to 20 mW+ input power

Use in:

- 30 GHz Analog RF over Fiber
- YDFA amplified photonics link
- 1064nm picosecond pulse detection
- Coherent lightwave systems
- Front-End O/E converter for testinstrument

Functional Diagram



Specifications

General

Optimized Operating Wavelength	1030 nm to 1090 nm
Useful Operating Wavelength	1030 nm to 1570 nm
Optical Input Level	20 mW max.
S21 3 dB Bandwidth	28 GHz min., 30 GHz typ.
S22 Characteristics	< -10 dB @ 20 GHz
Low Frequency Cut Off	60 kHz
Responsivity	0.60 A/W @ 1060 nm typ. 0.75 A/W @ 1550 nm typ.
Dark Current @ 25°C	10 nA typ., 100 nA max.
Optical Return Loss	-30.00 dB typ.
Optical PDL @ 1550 nm	0.05 dB max.
Bias Voltage	4 V typ.
Impedance	50 Ω
Coupling	DC-Coupled, AC-Coupled is available

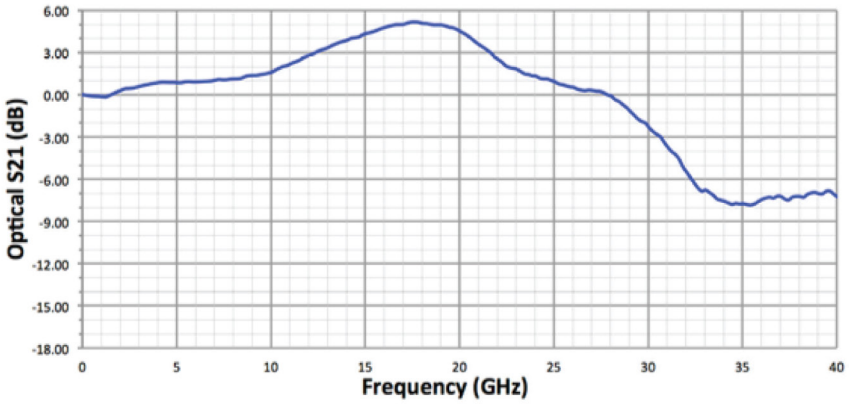
Mechanical

Operating Temperature	-10 °C to +60 °C
Storage Temperature	-55 °C to +75 °C
Operating Humidity	85%
Photodiode Bias Voltage	5 V, ± 1 V DC
Package Type	K Connector Female
Dimensions	30 mm x 20 mm x 14 mm
Fiber Connector	FC/APC
Optical Fiber	SMF-28 with 900 mm tube (HI1060 fiber available upon request)

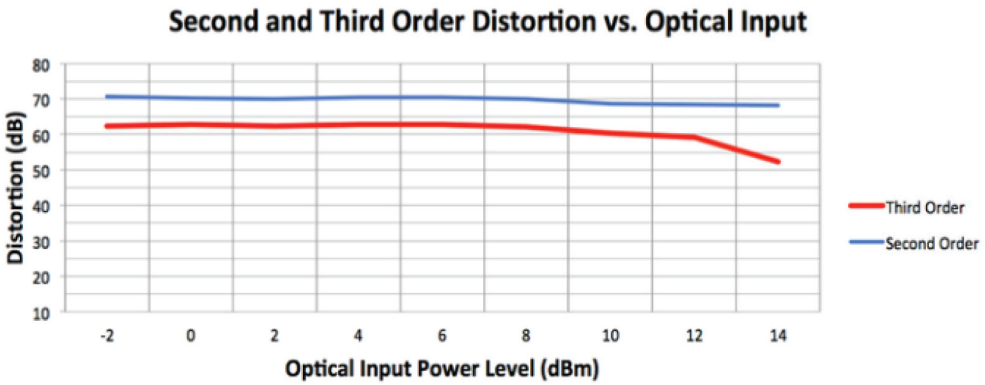
Absolute Maximum Ratings

PIN Bias Voltage	+2.0 to +7 V
Forward Current	35 mA
Optical Input Power	30 mW
Lead Soldering Temp (10s)	250 °C

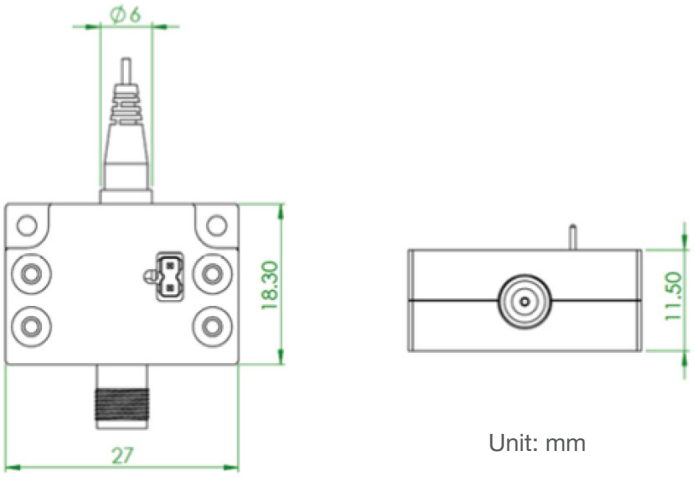
S21 O/E Response



CSO, CTB Linearity Measurement



Mechanical Drawing



Unit: mm

Related Amplifier

- F-AMP-SM

The F-AMP-SM is a high-gain 1064nm pre-amplifier module in a compact housing

DS-092304 F-PD-30-D-1064_09/23