



30 GHz Linear InGaAs PIN Photodetector, Enhance for DEVICE 1064nm

The Optilab PD-30e is a highly linear, 30 GHz bandwidth InGaAs PIN OVERVIEW 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 PD-30e is available in a standard 2-pin package with K type RF connector output for ease of assembly and can be ordered with or without the external protective housing. Contact Optilab for more information.

FFATURES • Optimized for 1064nm

- - 60 kHz to 30 GHz, AC coupled
 - DC to 30 GHz, DC coupled

USE IN

- 30 GHz Analog RF over Fiber
- YDFA amplified photonics link
- 1064nm picosecond pulse detection

- Responsivity 0.6 A/W @1060nm
- Flat frequency response, $\pm 1 \, \text{dB}$
- Highly linear to 20 mW+ input power
- Coherent lightwave systems
- Front-End O/E converter for test instrument





	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
GENERAL	Responsivity	0.60 A/W @ 1060 nm typ. 0.75 A/W @ 1550 nm typ.
GENERAL	Dark Current @ 25°C, 5V	10 nA typ., 100 nA max.
	Optical Return Loss	-30.00 dB typ.
	Optical PDL @ 1550 nm	0.05 dB max.
	Bias Voltage	5 V typ.
	Impedance	50 Ω
	Coupling	DC-Coupled, AC-Coupled is available

-10 °C to +60 °C Operating Temperature -55 °C to +75 °C Storage Temperature Operating Humidity 85% 5 V, ±1 V DC Photodiode Bias Voltage 2-pin module with K Female RF connector Package Type MECHANICAL 30 mm x 20 mm x 14 mm Dimensions Fiber Connector FC/APC SMF-28 with 900 mm tube **Optical Fiber** (HIIO60 fiber available upon request)

IANICAL	

		PIN Bias Voltage
ABSOLUTE	MAXIMUM	Forward Current
RATINGS		Optical Input Power
		Lead Soldering Tem

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





CSO, CTB LINEARITY MEASUREMENT



Second and Third Order Distortion vs. Optical Input







PD-30e-C Mechanical Drawing



PD-30e-M: Module



Ready to use module

- Power and Remote Monitoring via USB Port
- Status Monitoring: RS-232 (Standard)
- No TIA for Intrinsic Phase Linearity



Product specifications and description are subject to change without notice. © 2020 Optilab, LLC. PD-30e. Aug 2020 Rev. 1.1



• YDFA-PA-MSA



The Optilab YDFA-PA-MSA is a high-gain 1064nm pre-amplifier module in a compact housing

Related Modulator

• IM-1064-20-PM



The Optilab IM-1064-20-PM Intensity Modulator is designed for external modulation of 1064 nm laser up to 20 GHz or generation of 100ps pulse

Related Laser Source

• DFB-1064-PM-100



The Optilab DFB-1064-PM-100-CW is a 100mW Distributed FeedBack Laser designed for seed laser for MOPA laser

ORDERING OPTIONS



PD-30e-X-YY X : A - No Housing, default, C - External Housing YY : AC - AC coupled, DC - DC coupled