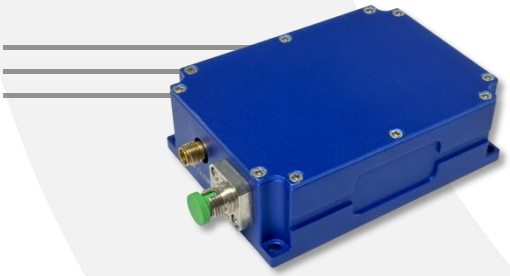
SPD-15-M



DEVICE

15 GHz Linear GaAs PIN Photodetector, 850 nm, Module

OVERVIEW

The Optilab SPD-15-M is a highly linear, 15 GHz bandwidth GaAs PIN photodiode module that is optimized for 850 nm 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 850 nm and assures a 15 GHz frequency response necessary for digital and analog applications. The front-illuminated mesa-structured PIN design allows a high input power level of up to 20 mW This compact, cost-effective receiver module can provide users with status monitoring through the use of an on-board processor that communicates to a host computer over an RS-232 I/O interface via a standard USB 2.0 port. Contact Optilab for more information.

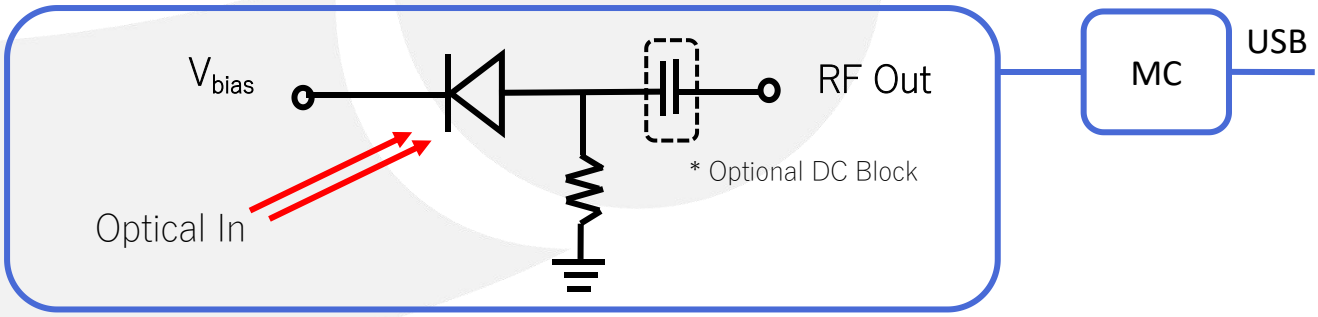
FEATURES

- Optimized for 850 nm
- DC to 15 GHz, DC coupled
- Low Bias Voltage
- Responsivity 0.55 A/W @850 nm

USE IN

- 15 GHz Analog RF over Fiber
- 850 nm picosecond pulse detection
- Coherent lightwave systems
- Front-End O/E converter for test instrument

FUNCTION DIAGRAM



SPD-15-M

SPECIFICATIONS

GENERAL

Optimized Operating Wavelength	830 nm to 870 nm
Optical Input Level	20 mW Peak max.
S21 3 dB Bandwidth	12 GHz min.
S22 Up to 10 GHz	≤ -10 dB
Responsivity @ 850 nm	0.5 A/W min. 0.55 A/W typ.
Dark Current @ 25C, +3V Bias	0.1 nA typ., 10 nA max.
Reverse Bias Voltage	+3 V typ., +30 V max.
Impedance	50 Ω
Coupling	DC-Coupled

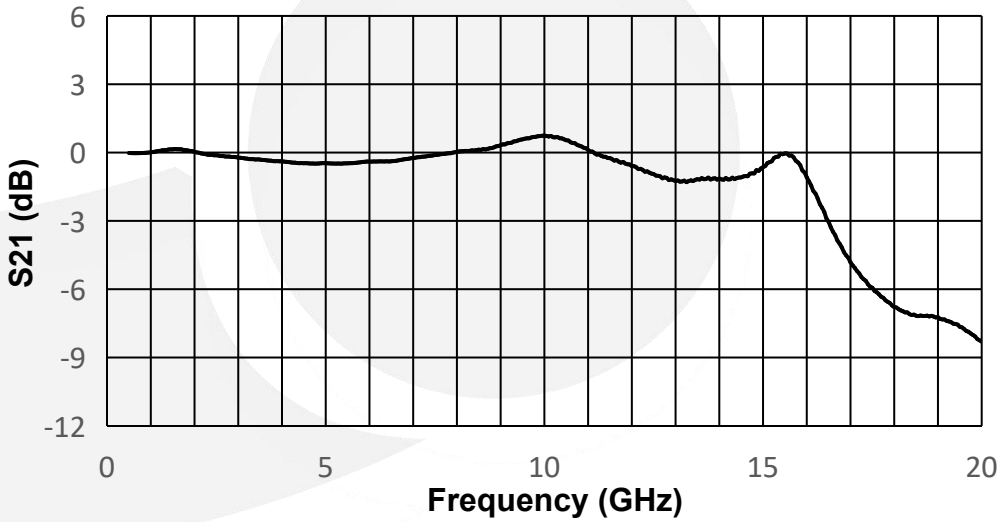
MECHANICAL

Operating Temperature	-10 °C to +60 °C
Storage Temperature	-55 °C to +75 °C
Operating Humidity	85%
RF Connector	SMA Female
Dimensions	82 x 56 x 25 mm
Fiber Connector	FC/APC
Optical Fiber	SMF-28 with 900 mm tight buffer
Accessories Included	110 V – 240 V AC USB Adaptor & Cable
Housing	Precision Mach. Anodized Aluminum
Local Alarm	LED: Optional Input Power
Remote Alarm	RS-485 Interface (standard) via USB

ABSOLUTE MAXIMUM RATINGS

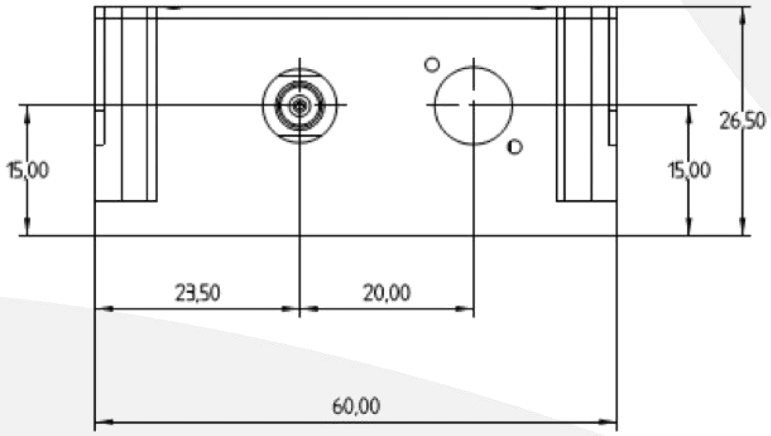
PIN Bias Voltage	+30 V max.
Optical Peak Input Power	20 mW
Lead Soldering Temp. (10s)	250 °C

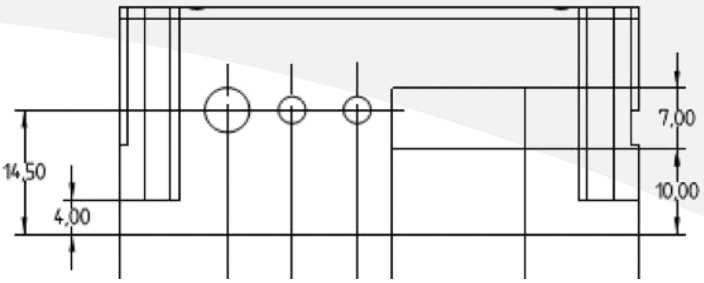
Typical S21 O/E RESPONSE



SPD-15-M

SPD-15-M-A Mechanical Drawing

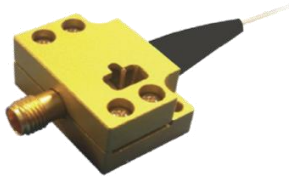




SPD-15-M

Related Laser Source

- LD-850-60-CX



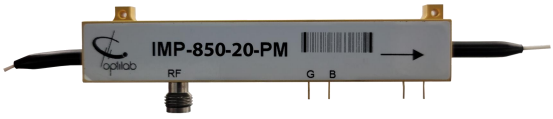
The Optilab SPD-15 is a highly linear, 15 GHz bandwidth GaAs PIN photodetector that is optimized for 850 nm operational wavelength.

- LD-850-60-CX

The Optilab LD-850-60-CX is an 850 nm laser diode, packaged in compact coaxial housing with single mode fiber pigtail.

Related Modulator

- IMP-850-20-PM



The Optilab IMP-850-20-PM Intensity Modulator is designed for external modulation of 850 nm laser up to 20 GHz.