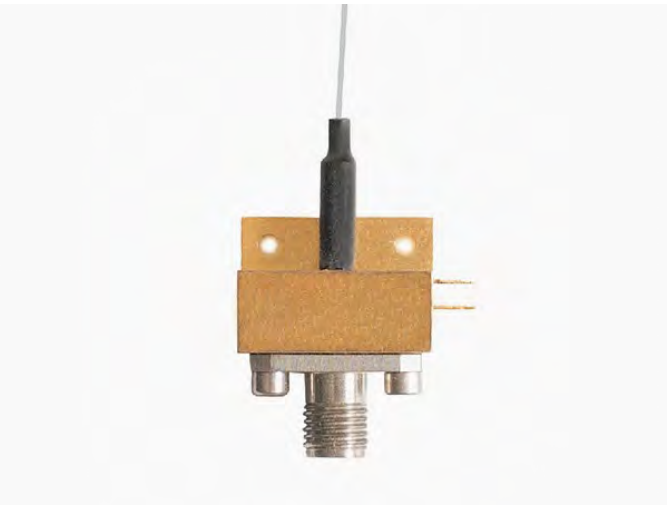
12GHz Microwave Photonics Receiver



Description:

LD-PD manufactures a wide range of component photoreceivers with wide bandwidths up to 40 GHz. The MPR0030 Microwave Photonics Receiver extends link response to greater than 30 GHz via direct optical-to-analog RF conversion for signal remoting, communications, radar and information processing applications.

The unit consists of a high speed InGaAs PIN photodiode coupled to the RF output connector. It includes internal bias decoupling and can operate over a wide range of supply voltages (+3 to +15V). The detector response covers 1300 to 1600 nm. It is pigtailed with 900µm jacketed, single mode (ITU-T G.652.D compliant) fiber and can be terminated with a variety of optical connector options. The entire unit is contained in a sealed housing and weighs less than 25 grams.

Features:

- Greater than 40GHz RF bandwidth
- DC Coupled
- Compact lightweigth design
- High responsivity
- Positive supply voltage
- 50Ω output impedance

Application:

- Signal remoting
- Communications
- Radar and information processing

Main Characteristics:

Parameters	Symbol	Test Conditions	Specifications	Units
Resposivity	Re	VR=5V, λ=1.55μm, Pin=1mW	≥0.8	A/W
3dB bandwidth	f3dB	VR=5V, λ=1.55μm, Pin=1mW, RFin=-10dB	DC~12	GHz
Dark Current	ID	VR=5V, Pin=0mW	≤20	nA
Saturated input optical power	PS	VR=5V, λ=1.55μm, fc=4 GHz, RFin=-10dB	≥10	mW

Absolute maximum rating:

Parameters		Values	Units
Storage temperature range	TSTG	-45~+85	°C
Operating temperature range	TC	-40~+70	°C
Bias voltage	VR	≤9	V
Input power1	Pin (VR=5V)	≤20	mW
Welding Temperature	Tsolder	260 (10s)	°C
Electrostatic discharge sensitivity	ESD	≥250	V

Recommended Operation Conditions:

Parameters	Symbol	Values	Units
Bias voltage	VR	3~5	V
Input Optical power	Pin	1~8	mW

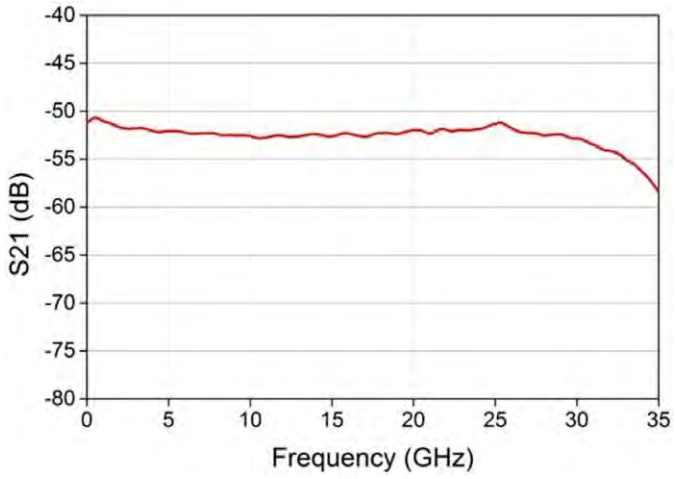
Mechanical Characteristics:

RF Connector	3.5 mm (SMA) female
Fiber Pigtail	G.652.D, single mode 900um buffer, 1 m typ
Fiber Connector	FC/APC
Bias Connectors	0.018" dia. Kovar pins with Sn/Pb coating
Max Weight (Grams)	25

Note:

1. Exceeding maximum optical input power may damage the device.

Typical Link Response:



Input Saturation optical power curve:



Mechanical Outline(Unit in mm):

