InGaAs Ultra Low Noise PIN Detector Module

500M

Product Description

The high-speed low-noise photodetector module integrates an ultra-low-noise analog PIN detector, a low-noise broadband transimpedance amplifier, and an ultra-low-noise power supply. It has the characteristics of high gain, high sensitivity, high bandwidth, low noise, and high common-mode rejection ratio, which can effectively reduce the common-mode noise of the signal and improve the signal-to-noise ratio of the system.

Product features

Low noise、 High gain、 High bandwidth、 Compact structure、 Built-in low noise isolated power supply

Part Number

MP-CPD-M-I-500-F/S-D/A

Application area

Distributed fiber optic sensing、 Laser wind radar、 Optical coherence tomography、Spectral measurement、Nanosecond optical pulse detection、Fiber optic communication、 Other scientific research applications

Core parameters

Wavelength	Bandwidth	Responsivity
800-1700nm	500MHz	0.95A/W@1550nm

General Parameters

Parameters

Material	InGaAs													
Wavelength	800~1700													nm
Bandwidth	100M	200M	300M	400M	500M	600M	800M	1G	1.2G	1.5G	2G	2.5G	5G	Hz
Detector	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.9	A/W@1

responsivity													5	550nm
Transimpedance gain	30K	30K	30K	10K	5K	5K	30K	30K	30K	20K	15K	15K	3K	V/A
Saturated optical power	140	140	140	420	840	840	140	140	140	210	280	280	1400	μW
NEP	5	5	5	7	7	8	9	9	9	9	9	9	9	pW/Sqrt(Hz)
Output impedance	50	50	50	50	50	50	50	50	50	50	50	50	50	Ω
Output coupling mode	DC/AC	DC/AC	DC/AC	DC/AC	DC/AC	DC	AC	AC	AC	AC	AC	AC	AC	
Supply voltage	5	5	5	5	5	5	12	12	12	12	12	12	12	V
Supply current	0.3(max)	0.3(max)	0.3(max)	0.3(max)	0.3(max)	0.3(max)	0.2(max)	0.2(max)	0.2(max)	0.2(max)	0.2(max)	0.2(max)	0.2(max)	A
Optical input	FC/APC（Free space light optional）													
RF output	SMA													

Dimensions	65*50*20	75* 55* 25	mm

Instructions for use

1. The module has a power supply voltage of 5V and a maximum power supply current of 0.25A.

2. Input is an optical input interface; RF is a radio frequency output interface.

3. Before connecting to the input terminal, please ensure that the end surface is clean to prevent dirt from affecting the measurement results.