InGaAs Ultra-Low Noise Photodetector



Description:

The ultra-low noise Photodetector module integrates ultra-low noise analog PIN detector, low noise broadband transimpedance amplifier and ultra-low noise isolation power supply, and the output signal is not affected by the external power supply. This module is particularly prominent in background noise . Under the same parameters, its background noise is about one third of that of conventional modules, which well meets customers' requirements for smaller signal detection and higher signal-to-noise ratio.

Features:

- Low Noise
- High Bandwidth
- High Transimpedance Gain
- Compact Structure
- Built-in low noise isolation power supply

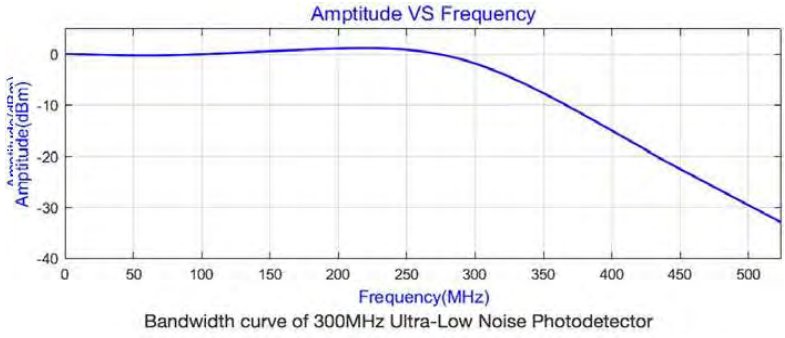
Application:

- Optical Fiber Sensing
- Optical Fiber Communication
- Laser Ranging
- Spectrometry

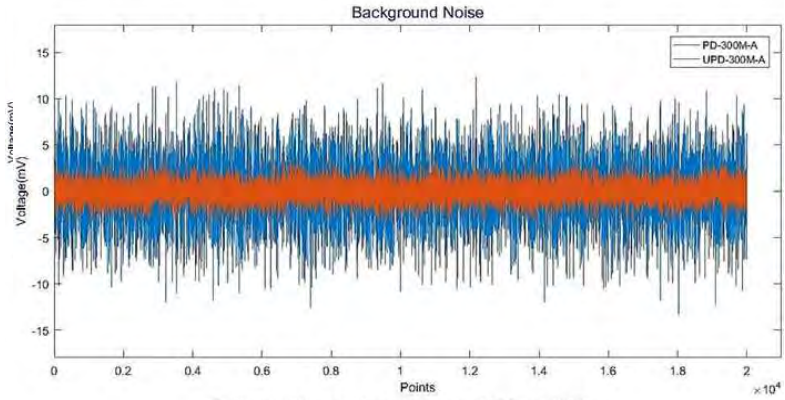
Specifications:

Product Model	UPD-100M-A	UPD-200M-A	UPD-300M-A	UPD-400M-A	UPD-500M-A	UPD-800M-A	UPD-1G-A	UPD-1.2G-A	UPD-1.5G-A	UPD-2G-A	UPD-2.5G-A	UPD-5G-A	Unit
Detector	InGaAs												
Wavelength	800~1700												nm
Bandwidth	100M	200M	300M	400M	500M	800M	1G	1.2G	1.5G	2G	2.5G	5G	Hz
Detector Responsivity	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	A/W@1550nm
Transimpedance Gain	30K	30K	30K	20K	15K	30K	30K	30K	30K	30K	30K	6K	V/W
Saturated Input Optical Power	140	140	140	210	280	140	140	140	420	140	140	700	μW
NEP	2.2	2.2	2.2	2.7	3.1	3.3	3.3	3.3	3.3	3.3	3.3	3.3	pW/Sqrt(Hz)
Output Impedance	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	AC	AC	AC	AC	AC	AC	
Supply Voltage	5	5	5	5	5	12	12	12	12	12	12	12	V
Supply Current	0.5(max)	0.5(max)	0.5(max)	0.5(max)	0.5(max)	0.5(max)	0.5(max)	0.5(max)	0.5(max)	0.5(max)	0.5(max)	0.3	A
Optical Input	FC/APC (or Free Space)											FC/APC	
Radio Frequency Output	SMA											SMA	
Shape Size	65*50*20					65*50*25						80*90*25	mm

Test Result:



Bandwidth curve of 300MHz Ultra-Low Noise Photodetector



Bottom noise contrast between UPD and PD

