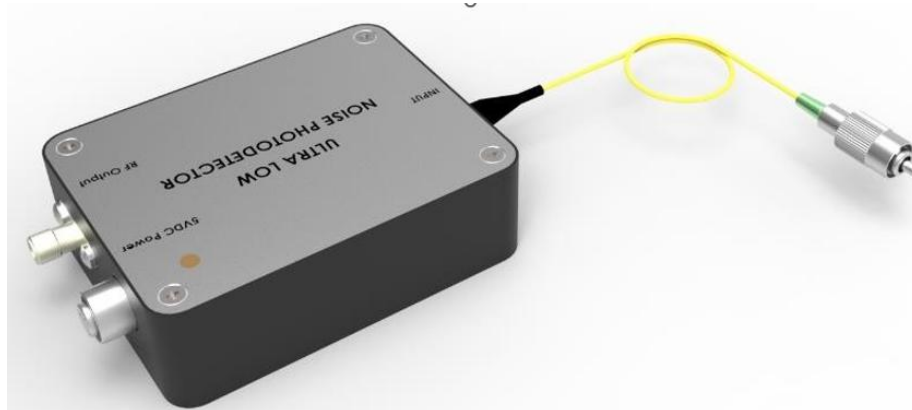


## InGaAs ultra-low noise unit detector 500M



### ● Product Description

The ultra-low noise photodetector module integrates an ultra-low noise analog PIN photodetector, a low-noise broadband transimpedance amplifier, and an ultra-low noise isolated single power supply. The output signal is unaffected by external power supply sources. This module is particularly outstanding in terms of background noise control, with its background noise being approximately one-third of that of conventional modules under the same parameters, effectively meeting customers' needs for smaller signal detection and higher signal-to-noise ratio.

## ● Product features

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

## ● Part Number

MP-UPD-M-I-500-F/S-A

## ● Application area

Fiber optic sensing、 Fiber optic communication、 Laser ranging、 Spectral measurement、 Nanosecond level optical pulse detection

## ● Core parameters

Wavelength	Bandwidth
800-1700nm	500MHz

## ● General Parameters

Parameters

Detect or Type	InGaAs														
Wave length	800~1700														nm
Bandwi	10	20	30	40	50	60	80	1G	1.2	1.	2G	2.5	5	Hz	

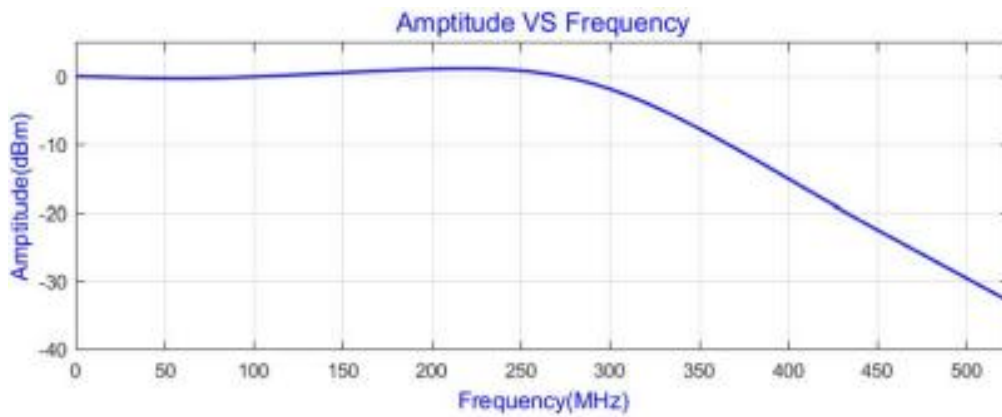


dth	0M	0M	0M	0M	0M	0M	0M		G	5G		G	G	
<b>Detect or Respon sivity</b>	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	A/W @155nm
<b>Transi mpeda nce Gain</b>	30K	30K	30K	20K	15K	15K	30K	30K	30K	30K	30K	30K	30K	6K V/W
<b>Saturat ion Optical Power</b>	140	140	140	420	280	280	140	140	140	420	140	140	700	$\mu$ W
<b>NEP</b>	2.2	2.2	2.2	2.7	3.1	3.1	3.3	3.3	3.3	3.3	3.3	3.3	3.3	pW /Sq rt(Hz)
<b>Output Impeda nce</b>	50	50	50	50	50	50	50	50	50	50	50	50	50	$\Omega$
<b>Output Coupli ng</b>	DC /A C	DC /A C	DC /A C	DC /A C	DC	DC	AC	AC	AC	AC	AC	AC	AC	A C
<b>Power Supply Voltage</b>	5	5	5	5	5	12	12	12	12	12	12	12	12	V
<b>Power Supply</b>	0.5(m	0.5(m	0.5(m	0.5(m	0.5(m	0.5(m	0.5(m	0.5(m	0.5(m	0.5(m	0.5(m	0.5(m	0.5(m	A

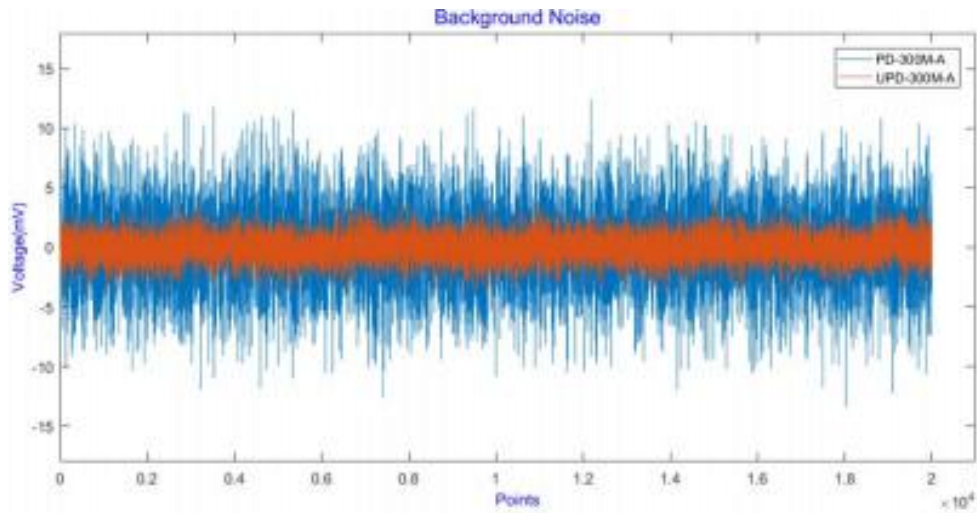


Current	ax)	ax)	ax)	ax)	ax)	ax)	m	m	ax)	m	m	ax		
							ax	ax		ax	ax	)		
							)	)		)	)			
Optical Input	FC/APC (Free space option available)											FC		
												/A		
												P		
												C		
RF Output	SMA											S		
												M		
												A		
Dimensions	65*50*20						65*50*25						80	
													*9	m
													0*	m
													25	

## Test Result



300MHz ultra-low noise unit detector



**Comparison of the Ultra-Low Noise Unit Detector with Conventional Unit  
Detector in Terms of Background Noise**