800-2200nm infrared extended InGaAs amplified photodetector, response time constant 35ns

Product Description

Idealphotonics' infrared extended InGaAs amplified photodetector has a sensitivity range of 800nm~2600nm, 8 levels of adjustable gain, can achieve quantitative photoelectric conversion, and has a wide dynamic range. It is suitable for various optoelectronic development scenarios, has excellent performance, and is cost-effective. It provides all-round technical support and is often used in near- and mid-infrared light measurement.

Product features

The photosensitive range covers 800nm~2600nm, which is often used for near-mid-infrared light measurement 、 Amplified detector, 8-level adjustable gain, quantitative photoelectric conversion 、 Wide dynamic range, suitable for various infrared photoelectric development scenarios、 Excellent performance, high cost performance, omnidirectional technical support、 Provide non-standard customization services

Part Number

MP-CPD-M-I-A-A-8L10

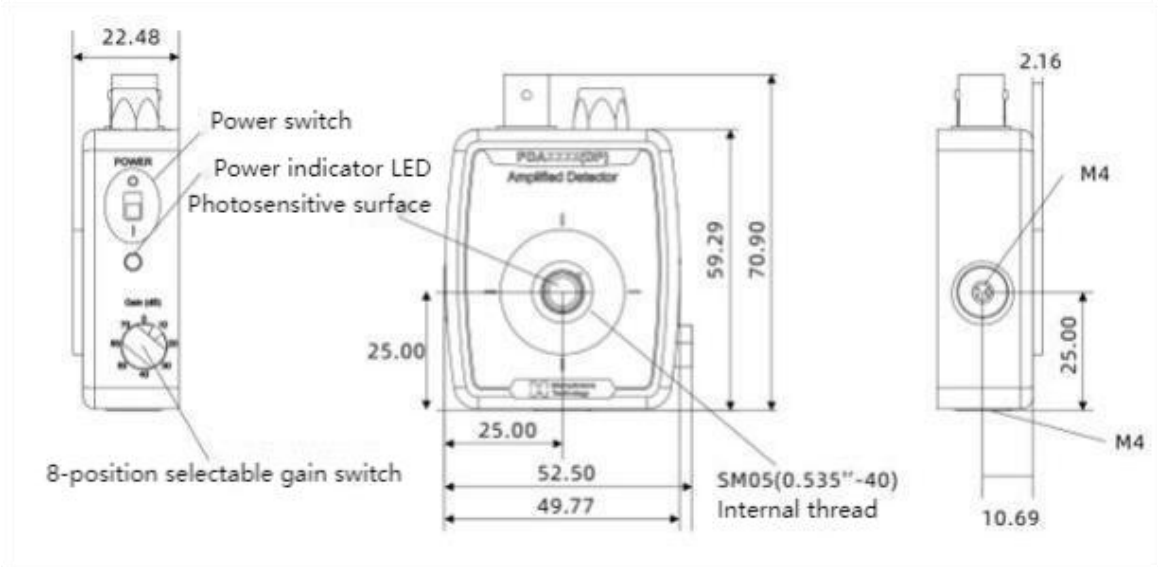
Application area

Near- and mid-infrared light measurement

Core parameters

Wavelength Range	Photosensitive Size	Response Time Constant
800-2200nm	1mm×1mm	35ns

Dimension Drawing



General Parameters

Main Parameters

Parameters	Value		
Wavelength Range	800-2600nm	800-2200nm	
Response Time Constant	25ns	35ns	200ns
Gain Range	Hi-Z Load: 1.51kV/A～4.75MV/A; 50Ω Load: 0.75kV/A～2.38MV/A		
Signal Amplitude	Hi-Z Load: 0～10V; 50Ω Load: 0～5V		
Gain Adjustment Mode	Rotatable switch adjustment: 0～70dB, 10dB per step, 8 steps. Bandwidth is inversely proportional to gain.		

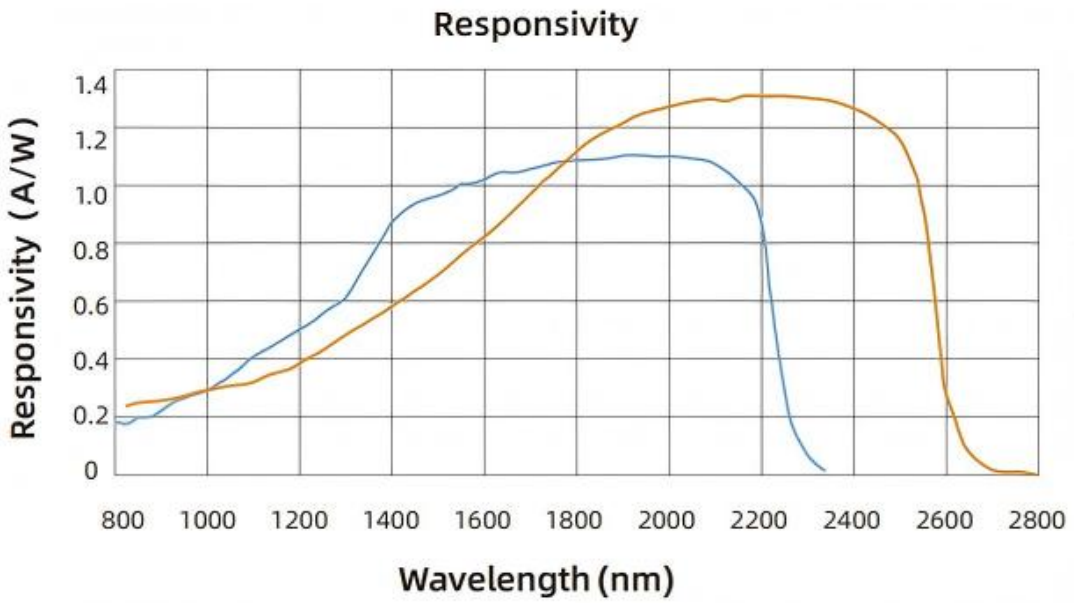
NEP	1.0×10-^{12}W/Hz$^{1/2}$	1.0×10^{-12}W/Hz$^{1/2}$		2.5×10^{-14}W/Hz$^{1/2}$	
Active Area	1mm×1mm	1mm×1mm		2mm×2mm	
Sensitive Surface Depth	0.13" (3.3 mm)				
Detector Net Weight	0.10kg				
Operating Temperature	10-40℃				
Storage Temperature	-20-70℃				
Appearance Dimensions	2.79" X 2.07" X 0.89" (70.9 mm X 52.5 mm X 22.5 mm)				
Power Interface	Power Switch	Signal Interface	Gain Adjustment	Mounting Interface	Optical Interface
LUMBERG R SMV3 FEMA LE	Sliding Switch With LED Indicator	BNC Female Socket	8-Step Knob Adjustment	M4×2	SM1× 1 SM0.5 × 1

Eight-Step Quantitative Adjustable Gain Parameters

0dB		10dB		20dB		30dB	
Gain (Hi-Z)	1.51× 10^3V /A	Gain (Hi-Z)	4.75× 10^3V /A	Gain (Hi-Z)	1.5 × 10^4V/ A	Gain (Hi-Z)	4.75× 10^4V/ A
Gain (50 Ω)	0.75× 10^3V /A	Gain (50Ω)	2.38× 10^3V /A	Gain (50 Ω)	0.75× 10^4V /A	Gain (50Ω)	2.38× 10^4V/ A
Bandwidth (BW)	13MHz	Bandwidth	1.7MHz	Bandwidth	1.1MHz	Bandwidth	300kHz
Noise(RMS)	⩽258uV	Noise(RMS)	⩽250uV	Noise(RMS)	⩽ 250uV	Noise(RMS)	⩽ 250uV
40dB		50dB		60dB		70dB	
Gain (Hi-Z)	1.51× 10^5V /A	Gain (Hi-Z)	4.75× 10^5V /A	Gain (Hi-Z)	1.5 × 10^6V/ A	Gain (Hi-Z)	4.75× 10^6 V/ A
Gain (50 Ω)	0.75× 10^5V	Gain (50Ω)	2.38× 10^5V	Gain (50 Ω)	0.75× 10^6V	Gain (50Ω)	2.38× 10^6
	/A		/A		/A		V/A
Bandwidth (BW)	90kHz	Bandwidth	28kHz	Bandwidth	9kHz	Bandwidth	3kHz
Noise	⩽250uV	Noise	⩽250uV	Noise	⩽	Noise	⩽

(RMS)		(RMS)		(RMS)	300uV	(RMS)	400uV
Signal Offset	±8mV(Typ.) ， ±12mV(Max)						

Response Curve



Product Configuration

Attachment 1: Optional Configuration Table

Infrared Extended InGaAs Amplified Photodetector	Optional Configuration				
Product Name	Material	Type	Features	Wavelength range Photosensitive size	Reserved Optional Configuration
Photodetector	InGaAs	Amplified	Adjustable Gain	800-2600nm , 1mm × 1mm	
				800-2200nm , 1mm× 1mm	
				800-2200nm , 2mm× 2mm	