

400-1700nm Visible Extended InGaAs

Amplified Photodetector Active Area: 1mm ×

1mm



- **Product Description**

IdealPhotonics' visible light extended InGaAs amplified photodetector has a wavelength range of 400nm~1700nm, with 8 adjustable gain levels, enabling quantitative photoconversion. It offers a wide dynamic range, making it suitable for various optoelectronic development scenarios. It provides excellent performance, high cost-effectiveness, and comprehensive technical support. It is commonly used in visible light and



near-infrared light measurements.

● Product features

Light-sensitive range 400nm-1700nm, commonly used in visible and near-infrared light measurements、 Amplified detector with 8 adjustable gain levels for quantitative optoelectronic conversion、 Wide dynamic range, suitable for various optoelectronic development scenarios、 Excellent performance, high cost-performance ratio, with complete technical support.. Customization services available

● Part Number

MP-PDJAA4H10

● Application area

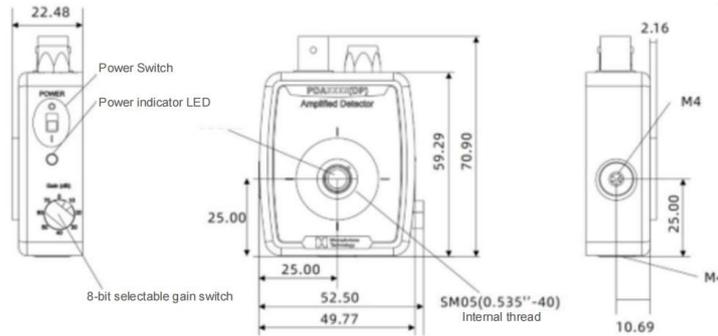
Visible and infrared light measurement

● Core parameters

Wavelength Range	Active area	Response Time Constant
400-1700nm	1mm×1mm	5ns



● Dimension Drawing



● General Parameters

Main Parameters

Parameter	Value	
Wavelength Range	400-1700nm	
Response Time Constant	5ns	35ns
Gain Range	Hi-Z load: 1.51kV/A to 4.75MV/A; 50Ω load: 0.75kV/A to 2.38MV/A	
Signal Amplitude	Hi-Z load: 0 to 10V; 50Ω load: 0 to 5V	
Gain Adjustment Method	Rotary switch adjustment: 0 to 70dB, with 8 levels, each with a 10dB increment. Bandwidth is inversely proportional to gain.	

NEP	$1.4 \times 10^{-12} \text{W/Hz}^{1/2}$		$5.2 \times 10^{-13} \text{W/Hz}^{1/2}$		
Active area	1mm × 1mm		2mm × 2mm		
Active area Depth	0.13" (3.3 mm)				
Detector Net Weight	0.10kg				
Operating Temperature	10-40°C				
Storage Temperature	-20-70°C				
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 Rod Interface	Optical Interface
LUMBERG R SMV3 FEMALE	Slide switch with LED indicator	BNC Female Socket	8-step rotary knob	M4 × 2	SM1 × 1 SM0.5 × 1

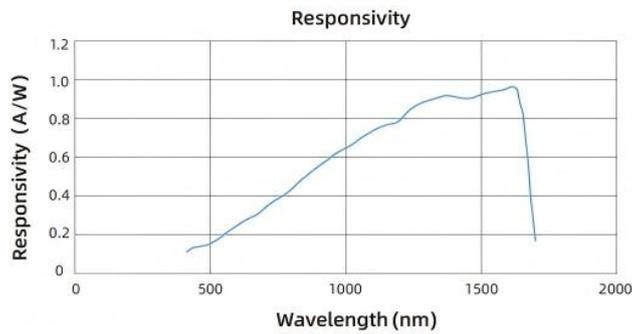


8-step Quantitative Adjustable Gain Parameters

0dB		10dB		20dB		30dB	
Gain (Hi-Z)	1.51 $\times 10^3\text{V}/\text{A}$	Gain (Hi-Z)	4.75 $\times 10^3\text{V}/\text{A}$	Gain (Hi-Z)	$1.5 \times 10^4\text{V}/\text{A}$	Gain (Hi-Z)	4.75 $\times 10^4\text{V}/\text{A}$
Gain (50Ω)	0.75 $\times 10^3\text{V}/\text{A}$	Gain (50Ω)	2.38 $\times 10^3\text{V}/\text{A}$	Gain (50Ω)	$0.75 \times 10^4\text{V}/\text{A}$	Gain (50Ω)	2.38 $\times 10^4\text{V}/\text{A}$
Bandwidth (BW)	13MHz	Bandwidth (BW)	1.7MHz	Bandwidth (BW)	1.1MHz	Bandwidth (BW)	300kHz
Noise (RMS)	$\leq 250\mu\text{V}$	Noise (RMS)	$\leq 250\mu\text{V}$	Noise (RMS)	$\leq 250\mu\text{V}$	Noise (RMS)	$\leq 250\mu\text{V}$
40dB		50dB		60dB		70dB	
Gain (Hi-Z)	1.51 $\times 10^5\text{V}/\text{A}$	Gain (Hi-Z)	4.75 $\times 10^5\text{V}/\text{A}$	Gain (Hi-Z)	$1.5 \times 10^6\text{V}/\text{A}$	Gain (Hi-Z)	4.75 $\times 10^6\text{V}/\text{A}$
Gain (50Ω)	0.75 $\times 10^5\text{V}/\text{A}$	Gain (50Ω)	2.38 $\times 10^5\text{V}/\text{A}$	Gain (50Ω)	$0.75 \times 10^6\text{V}/\text{A}$	Gain (50Ω)	2.38 $\times 10^6\text{V}/\text{A}$

	A		/A		/A		V/A
Bandwidth (BW)	90kHz	Bandwidth (BW)	28kHz	Bandwidth (BW)	9kHz	Bandwidth (BW)	3kHz
Noise (RMS)	≤ 250uV	Noise (RMS)	≤ 250uV	Noise (RMS)	≤ 300uV	Noise (RMS)	≤ 400uV
Signal Bias	±8mV(Typ.) , ±12mV(Max)						

Response Curve:



Product Configurations:



Accessory 1: A23, 12V battery



Accessory 2: BNC-BNC signal cable

Attachment 1: Optional Configuration Table

Optional Configurations					
Visible Light Extended InGaAs Amplified Photodetector					
Product Name	Material	Type	Features	Wavelength Range Sensitive Area	Reserved Optional Configuratio ns
Photodetector	InGaAs	Amplifi ed Type	Adjustabl e Gain	400-1700nm, 1mm × 1mm	
				400-1700nm, 2mm × 2mm	

Attachment 2: Model Correspondence Table

Model	Specs
MP-PDJAA4H10	400-1700nm Visible light extended InGaAs amplified photodetector, Active area 1mm × 1mm, 0 to 70dB eight-level quantitatively adjustable gain, response time constant 5ns



MP-PDJAA4H20	400-1700nm Visible light extended InGaAs amplified photodetector, Active area 2mm × 2mm, 0 to 70dB eight-level quantitatively adjustable gain, response time constant 35ns
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