800-2600nm infrared extended InGaAs amplified photodetector, response time constant 25ns

Product Description

Idealphotonics' InGaAs Amplified Photodetector with infrared extension covers a sensing range from 800nm to 2600nm. It features 8 adjustable gain levels for quantifiable photoelectric conversion and offers a wide dynamic range. This detector is ideal for various photoelectric development scenarios, providing excellent performance at a high cost-performance ratio. It is commonly used for near-infrared and mid-infrared light measurements.

Product features

Sensing range of 800nm to 2600nm, often used in near- and mid-infrared light measurements、 Amplified detector with 8 adjustable gain levels for quantifiable photoelectric conversion、 Wide dynamic range, suitable for various infrared photoelectric development scenarios 、 Excellent performance and high cost-effectiveness 、 Full technical support 、 Customization available

Part Number

MP-CPD-M-I-A-A-8M10

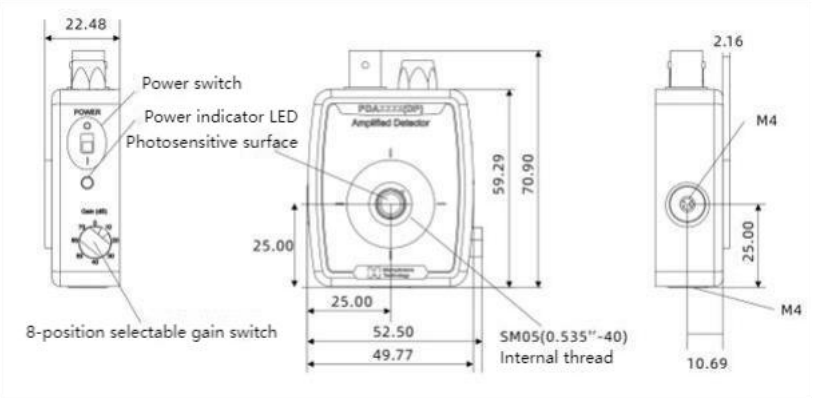
Application area

Near- and mid-infrared light measurement

Core parameters

Wavelength Range	Photosensitive Size	Response Time Constant
800-2600nm	1mm×1mm	25ns

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

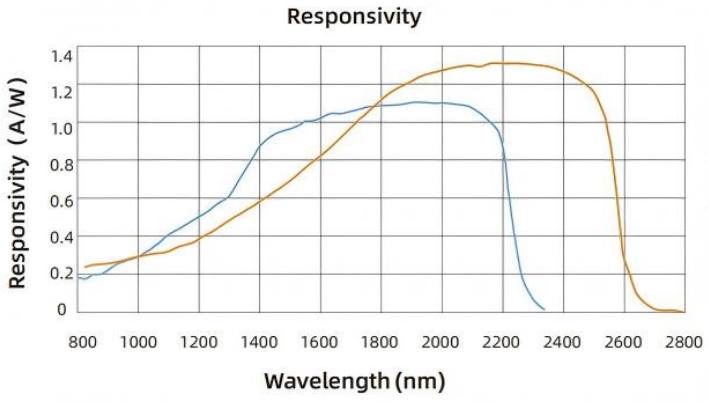
LUMBERG R SMV3 FEMA LE	Sliding Switch With LED Indicator	BNC Female Socket	8-Step Knob Adjustment	M4×2	SM1× 1 SM0.5 × 1

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 (50Ω)	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	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 (50Ω)	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	90kHz	Bandwidth	28kHz	Bandwidth	9kHz	Bandwidth	3kHz
Noise (RMS)	⩽250uV	Noise (RMS)	⩽250uV	Noise (RMS)	⩽ 300uV	Noise (RMS)	⩽ 400uV
Signal Offset	±8mV(Typ.) ， ±12mV(Max)						

Response Curve



Product Configuration

Attachment 1: Optional Configuration Table

Infrared Extended InGaAs Amplified Photodetector	Optional Configurations				
Product Name	Material	Type	Features	Wavelength Range Photosensitive Area	Reserved Optional Configurations
Photodetector	InGaAs (Indium Gallium Arsenide)	Amplified Type	Adjustable Gain	800-2600nm , 1mm × 1mm	
				800-2200nm , 1mm× 1mm	
				800-2200nm , 2mm× 2mm	