500-1700nm InGaAs Bias Photodetector Active Area Size Φ1.0mm Rise Time 5ns

- ## Product Description

IdealPhotonics' InGaAs bias photodetector covers a wavelength range of 500nm to 2600nm, with extremely low noise, fast response, no gain, and low cost. It is suitable for general photodetection applications and delivers excellent performance with a high cost-performance ratio. The company offers comprehensive technical support and customization services. It is commonly used for visible and infrared light measurements.

Product features

Wavelength range from 500nm to 2600nm, commonly used for visible and infrared light measurements、 Bias-type detector with extremely low noise, fast response, and no gain、 Low cost, suitable for standard photodetection applications、 Excellent performance with a high cost-performance ratio and comprehensive technical support、 Customization services available for non-standard requirements

Part Number

MP-CPD-M-I-B-C-5I10

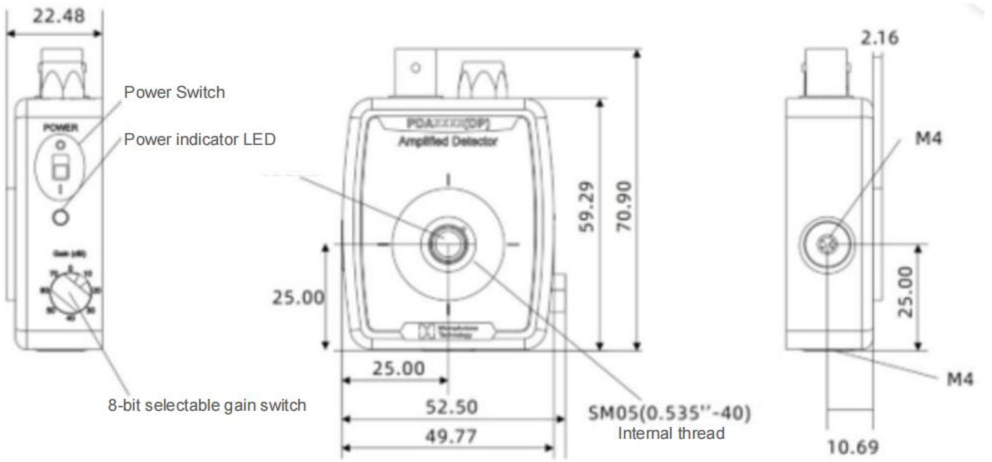
Application area

Visible and infrared light measurements

Core parameters

Wavelength Range	Active Area	Bandwidth
500-1700nm	Φ1.0mm	70MHz

Dimension Drawing



General Parameters

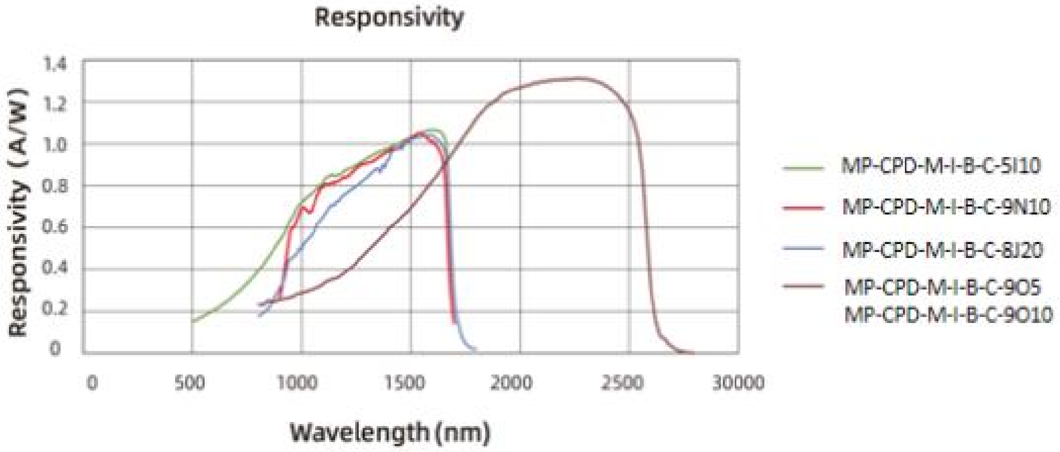
Main Parameters

Parameter	Value				
Wavelength Range	500-1700nm	900-1700nm	800-1700nm	900-2600nm	
Active area	Φ1.0mm	Φ1.0mm	Φ2.0mm	Φ0.5mm	Φ1.0mm
Bandwidth Range	70MHz	35MHz	11.7MHz	20.6MHz	14MHz
Rise Time (@50Ω)	5ns	10ns	30ns	17ns	25ns
NEP	2.0×10^{-14} W/Hz$^{1/2}$	2.5×10^{-14} W/Hz$^{1/2}$	1.3×10^{-13}W/Hz$^{1/2}$	1.0×10^{-12} W/Hz$^{1/2}$	1.5×10^{-12} W/Hz$^{1/2}$
Dark Current	1.5nA(Typ.)	1.0nA(Typ.)	55nA(Typ.)	2uA(Typ.)/	5uA(Typ.)

	/10 nA(Max)	/25 nA(Max)	/20 0nA(Max)	20uA(Max)	/40uA(Max)
Junction Capacitance	50pF(Typ.)	80pF(Typ.)	100pF(Typ.)	140pF(Typ.)	500pF(Typ.)
Bias Voltage	5V		1.8V		
Output Current	0~5mA				
Output Voltage	~9V(Hi-Z); ~170 mV(50Ω)				
Light-Sensitive Depth	0.09" (2.2 mm)				
Operating Temperature	10-50℃				
Storage Temperature	-20-70℃				
Detector Net Weight	0.10kg				
Undervoltage Indicator	Vout ≤9V(Hi-Z) Vout ≤170mV(50Ω)				
Dimensions	2.79" X 1.96" X 0.89" (70.9 mm X 49.8 mm X 22.5 mm)				
Power Supply Battery	Power Switch	Signal Interface	Battery Monitoring	Support Rod	Optical

				Interface	Interface
A23，12VDC，40mAh	Slide Switch	BNC Female Socket	Instantaneous Button	M4 X 2	SM1 X 1 SM0.5 X 1

Response Curve：



Product Configurations：


Accessory 1: A23, 12V battery


Accessory 2: BNC-BNC signal cable

Attachment 1: Optional Configuration Table

Silicon-based Biased Photodetector	Optional Configuration				
Name	Material	Type	Features	Wavelength Range Light-Sensitive Size	Reserved Optional Configurations
CPD: "Photodetector"	I: InGaAs (Indium Gallium Arsenide)	Biased Type	Conventional Type	5I10：500-1700nm，Φ1.0mm	
				9N10：900-1700nm，Φ1.0mm	
				8J20：800-1700nm，Φ2.0mm	
				9O5：900-2600nm，Φ0.5mm	
				9O10：900-2600nm，Φ1.0mm	

Attachment 2: Model and Product Number Correspondence Table

Model	Specs
MP-CPD-M-I-B-C-5I10	500-1700nm InGaAs biased photodetector, Active area Φ 1.0mm, rise time 5ns, bandwidth 70MHz
MP-CPD-M-I-B-C-9N10	900-1700nm InGaAs biased photodetector, Active area Φ 1.0mm, rise time 10ns, bandwidth 35MHz
MP-CPD-M-I-B-C-8J20	800-1700nm InGaAs biased photodetector, Active area Φ 2.0mm, rise time 30ns, bandwidth 11.7MHz
MP-CPD-M-I-B-C-9O5	900-2600nm InGaAs biased photodetector,Active area Φ 0.5mm, rise time 17ns, bandwidth 20.6MHz
MP-CPD-M-I-B-C-9O10	900-2600nm InGaAs biased photodetector, Active area Φ 1.0mm, rise time 25ns, bandwidth 14MHz