

## 500-1700nm InGaAs Bias Photodetector Active

Area Size  $\Phi 1.0\text{mm}$  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

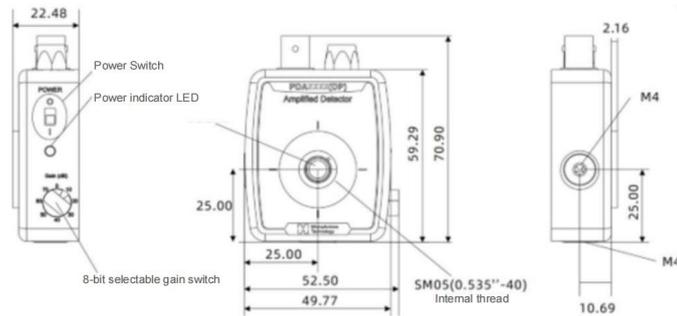
## ● Application area

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 m	900-1700nm m	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	$2.0 \times 10^{-14}$ W/H z <sup>1/2</sup>	$2.5 \times 10^{-14}$ W/H z <sup>1/2</sup>	$1.3 \times 10^{-13}$ W /H z <sup>1/2</sup>	$1.0 \times 10^{-12}$ W/H z <sup>1/2</sup>	$1.5 \times 10^{-12}$ W/H z <sup>1/2</sup>

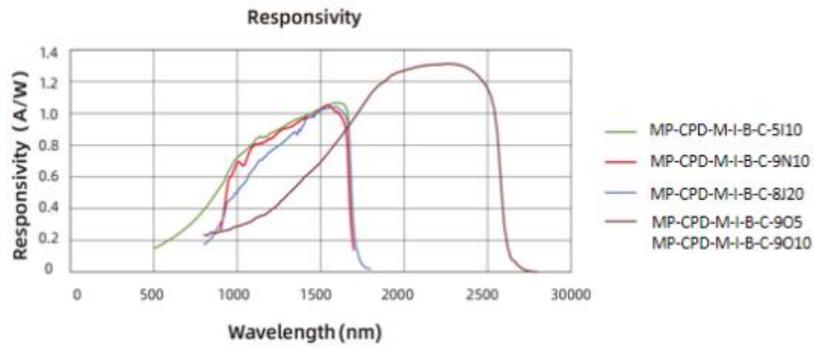


<b>Dark Current</b>	1.5nA(Typ.) /10 nA(Max)	1.0nA(Typ.) /25 nA(Max)	55nA(Typ.) /20 0nA(Ma x)	2uA(Typ.)/ 20u A(Max)	5uA(Typ.) /40uA(Ma x)
<b>Junction Capacitance</b>	50pF(Typ.)	80pF(Typ.)	100pF(Typ.)	140pF(Typ .)	500pF(Ty p.)
<b>Bias Voltage</b>	5V		1.8V		
<b>Output Current</b>	0~5mA				
<b>Output Voltage</b>	~9V(Hi-Z); ~170 mV(50Ω)				
<b>Light-Sensitive Depth</b>	0.09" (2.2 mm)				
<b>Operating Temperature</b>	10-50°C				
<b>Storage Temperature</b>	-20-70°C				
<b>Detector Net Weight</b>	0.10kg				
<b>Undervoltage Indicator</b>	Vout ≤9V(Hi-Z) Vout ≤170mV(50Ω)				
<b>Dimensions</b>	2.79" X 1.96" X 0.89" (70.9 mm X 49.8 mm X 22.5 mm)				



<b>Power Supply Battery</b>	<b>Power Switch</b>	<b>Signal Interface</b>	<b>Battery Monitoring</b>	<b>Support Rod Interface</b>	<b>Optical Interface</b>
<b>A23 , 12VDC , 40mAh</b>	<b>Slide Switch</b>	<b>BNC Female Socket</b>	<b>Instantaneous Button</b>	<b>M4 X 2</b>	<b>SM1 X 1 SM0.5 X 1</b>

**Response Curve:**



**Product Configurations:**



Accessory 1: A23, 12V battery



Accessory 2: BNC-BNC signal cable


**Attachment 1: Optional Configuration Table**

Optional Configuration					
Name	Material	Type	Features	Wavelength Range Light-Sensitive Size	Reserved Optional Configurations
CPD: "Photodetector"	I: InGaAs (Indium Gallium Arsenide)	Bias Type	Conventional Type	5110: 500-1700nm , $\Phi$ 1.0mm	
				9N10: 900-1700nm , $\Phi$ 1.0mm	
				8J20: 800-1700nm , $\Phi$ 2.0mm	
				905 : 900-2600nm , $\Phi$ 0.5mm	
				9010: 900-2600nm , $\Phi$ 1.0mm	


**Attachment 2: Model and Product Number Correspondence Table**

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