



900-1700nm InGaAs Bias Photodetector Active

Area Size $\Phi 1.0\text{mm}$ Rise Time 10ns



● Product Description

The InGaAs bias photodetector from IdealPhotonics has a light-sensitive range covering from 500nm to 2600nm. It features extremely low noise, fast response, no gain, and low cost. This detector is suitable for conventional photodetection applications and offers excellent performance and high cost-performance ratio. It also provides comprehensive technical support and is commonly used in visible and infrared light measurements



● Product features

Light-sensitive range from 500nm to 2600nm, commonly used in visible and infrared light measurements、 Bias-type detector with extremely low noise, fast response, and no gain 、 Low cost, suitable for conventional photodetection applications 、 Excellent performance, high cost-performance ratio, with complete technical support、 Customization services available

● Part Number

MP-CPD-M-I-B-C-9N10

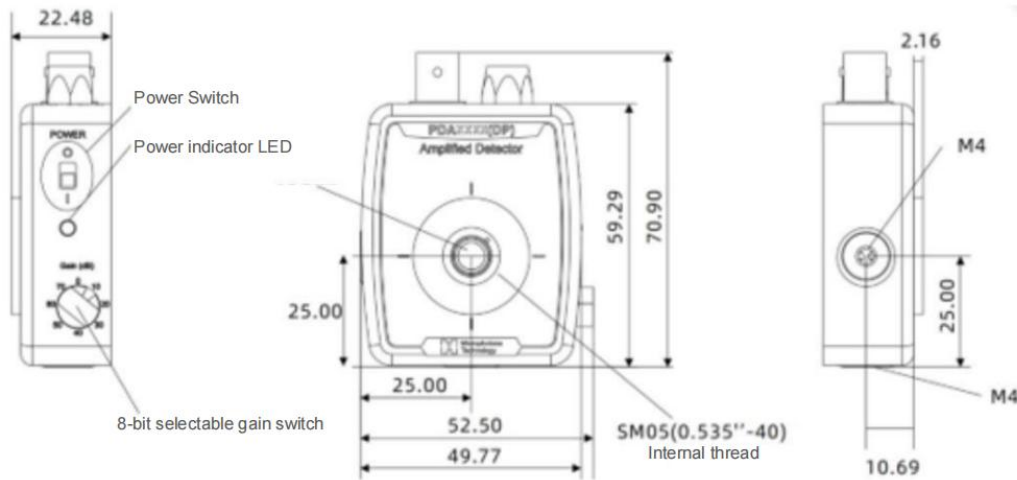
● Application area

Visible and infrared light measurements

● Core parameters

| Wavelength Range | Active Area | Bandwidth |
|------------------|-------------|-----------|
| 900-1700nm | Φ1.0mm | 35MHz |

● 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 | 2.0×10^{-14} W/H z ^{1/2} | 2.5×10^{-14} W/H z ^{1/2} | 1.3×10^{-13} W /H z ^{1/2} | 1.0×10^{-12} W/H z ^{1/2} | 1.5×10^{-12} W/Hz ^{1/2} |
| Dark Current | 1.5nA(Typ.) | 1.0nA(Typ.) | 55nA(Typ.) | 2uA(Typ.) | 5uA(Typ.) |

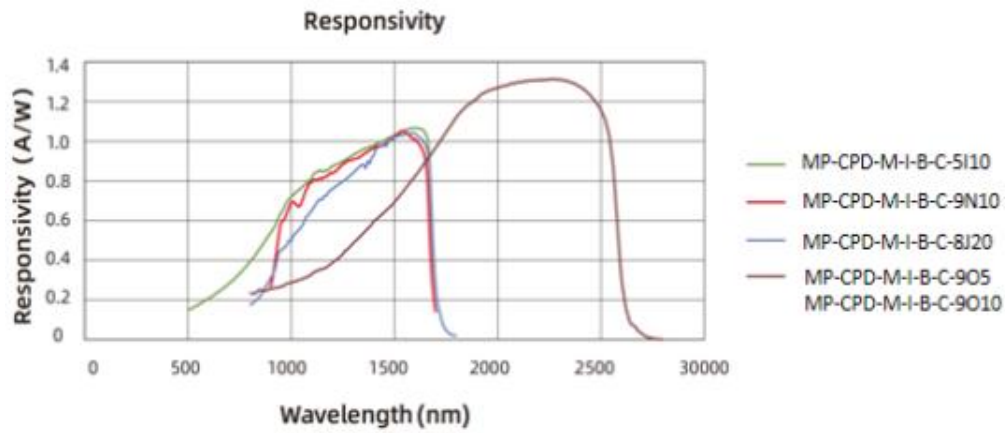


| | | | | | |
|---------------------------|--|---------------------|------------------------|-----------------------------|--------------------------|
| | /10 nA(Max) | /25 nA(Max) | /20 0nA(Ma x) | 20u A(Max) | /40uA(Ma x) |
| Junction Capacitance | 50pF(Typ.) | 80pF(Typ.) | 100pF(Typ.) | 140pF(Typ .) | 500pF(Ty p.) |
| 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 Temperatu re | 10-50°C | | | | |
| Storage Temperature | -20-70°C | | | | |
| 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 mmX49.8 mm X 22.5mm) | | | | |
| Power Supply Battery | Power Switch | Signal Interface | Battery Mon itoring | Support Rod Interface | Optic al Interface |



| | | | | | |
|--------------------|-----------------|-------------------------|--------------------------|--------|--------------------|
| A23 , 12VDC, 40mAh | Slide Switch | BNC Female Socket | Instantaneo us Button | M4 X 2 | SM1X 1 SM0.5X 1 |
|--------------------|-----------------|-------------------------|--------------------------|--------|--------------------|

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 | 5I10: 500-1700nm, Φ 1.0mm | |
| | | | | 9N10: 900-1700nm, Φ 1.0mm | |
| | | | | 8J20: 800-1700nm, Φ 2.0mm | |
| | | | | 9O5 : 900-2600nm, Φ 0.5mm | |
| | | | | 9O10: 900-2600nm, Φ 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 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 |