

# InGaAs Photodetector

## InGaAs-AG Photodetector

### InGaAs-based optoelectronic detection devices

- Wide coverage of spectral extension
- Amplification type + adjustable gain
- Low noise and high precision
- High compatibility and easy integration
- Stable adaptation to multiple environments



## One Platform Many Possibilities

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## Overview

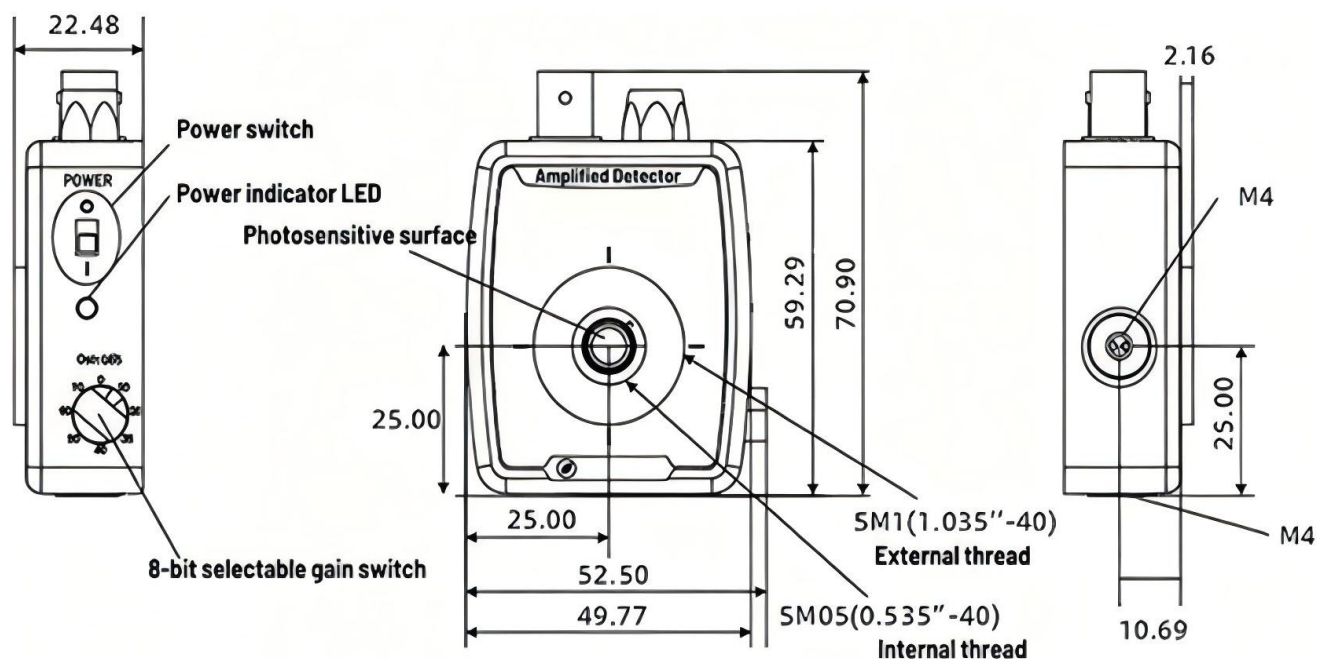
### Introduction:

This indium gallium arsenide detector has a photosensitive range covering 800~2600nm and is commonly used in near and mid-infrared measurements. As an amplifying detector, it features 8 adjustable gain levels to achieve quantitative photoelectric conversion. It also has a wide dynamic range, making it suitable for various infrared optoelectronic development scenarios, with extensive applications. Additionally, it boasts excellent performance and high cost-effectiveness, and offers comprehensive technical support and non-standard customization services.

### Features:

- Indium gallium arsenide material, for near and mid-infrared measurement in the 800~2600nm range
- Amplification type, 8 adjustable gain levels, supporting quantitative photoelectric conversion
- Wide dynamic range, suitable for various infrared optoelectronic development scenarios
- Excellent performance, high cost-effectiveness, providing comprehensive technical support
- non-standard customization

### Dimension:



## Specifications

### InGaAs-AG Series Specifications Sheet

Parameter Item	Parameter Value
Detector Material	Indium Gallium Arsenide (InGaAs)
Spectral Range	800~2600nm (Mid-Infrared Extended)
Detector Type	Amplified type (with built-in low-noise amplifier)
Gain Adjustment	8 gears adjustable (0~70dB)
Output Interface	BNC (compatible with 50 $\Omega$ /Hi-Z)
Power Supply	$\pm 9V$ DC (low-noise linear power supply)

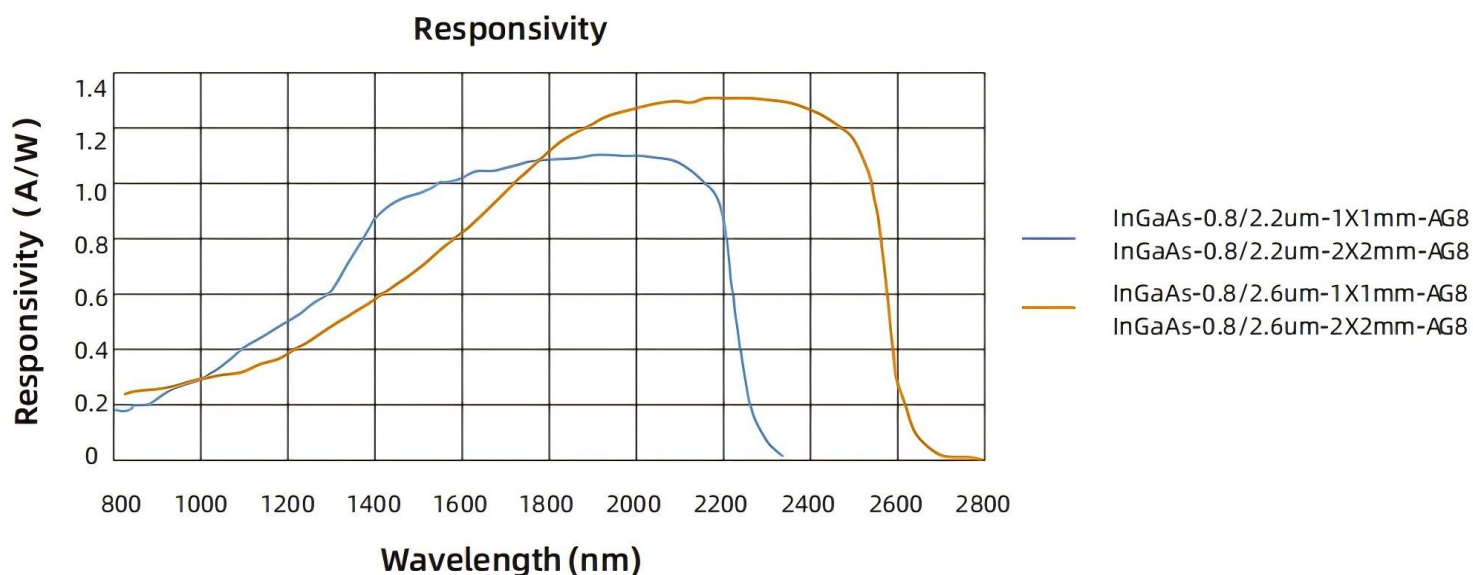
## Adjustable Gain Parameters

### Detailed Adjustable Gain Specifications Sheet

Parameter	0dB	10dB	20dB	30dB
Gain (Hi-Z)	$1.51 \times 10^3$ V/A	$4.75 \times 10^3$ V/A	$1.5 \times 10^4$ V/A	$4.75 \times 10^4$ V/A
Gain (50 $\Omega$ )	$0.75 \times 10^3$ V/A	$2.38 \times 10^3$ V/A	$0.75 \times 10^4$ V/A	$2.38 \times 10^4$ V/A
Bandwidth (BW)	12MHz	1.6MHz	1MHz	260kHz
Noise (RMS)	258 $\mu$ V	192 $\mu$ V	207 $\mu$ V	211 $\mu$ V
Parameter	40dB	50dB	60dB	70dB
Gain (Hi-Z)	$1.51 \times 10^5$ V/A	$4.75 \times 10^5$ V/A	$1.5 \times 10^5$ V/A	$4.75 \times 10^6$ V/A
Gain (50 $\Omega$ )	$0.75 \times 10^5$ V/A	$2.38 \times 10^5$ V/A	$0.75 \times 10^6$ V/A	$2.38 \times 10^6$ V/A
Bandwidth (BW)	90kHz	28kHz	9kHz	3kHz
Noise (RMS)	214 $\mu$ V	234 $\mu$ V	277 $\mu$ V	388 $\mu$ V

## Responsivity

### Responsivity Diagram of the InGaAs-AG Series



## Service & Support

We are dedicated to delivering exceptional optoelectronic solutions to every client. From precision manufacturing and secure delivery to full-lifecycle technical support, we are here to ensure a seamless and reliable experience at every step.

### 1. Warranty Policy

#### Quality First, Worry-Free Operation

**Warranty Period:** We offer a two-year warranty service for all of our core optoelectronic products, effective from the date of shipment.

**Coverage:** We provide free repair or replacement services for malfunctions caused by material defects or workmanship errors under normal operating conditions.

**Rapid Response:** Upon receiving a warranty claim, we guarantee to initiate the assessment process within **24 hours** to minimize your equipment downtime.

## 2. Technical Support

### Expert Team, Full-Process Guidance

**Technical Consultation:** Our team of senior optical engineers provides **24/7 online support** to assist with installation, commissioning, optical path alignment, and parameter optimization.

**Scheduled Maintenance:** We offer full-lifecycle maintenance recommendations, including firmware upgrades, optical component cleaning guidelines, and precision calibration services.

**Training Services:** We provide customized remote or on-site operational and safety training to ensure your team can operate the equipment efficiently and safely.

## 3. Logistics & Delivery

### Precision Packaging, Global Reach

**Professional Packaging:** Given the fragile nature of optical instruments, we utilize industrial-grade shockproof, anti-static, and moisture-proof vacuum packaging to ensure zero damage during transit.

**Logistics Partners:** We partner with top-tier global logistics providers (**DHL / FedEx / UPS / SF Express**) to offer reliable shipping with real-time tracking.

**Shipping Insurance:** All shipments are fully insured to eliminate logistics risks.

## 4. Compliance & Certification


### Strict Standards, Total Compliance

**Quality Certification:** Our manufacturing process is **ISO 9001 certified**, and our products comply with international standards such as **CE** and **RoHS**.

**Export Compliance:** "Committed to environmental responsibility, all our products comply with **RoHS 2.0** and **REACH** standards, ensuring safety and global compliance."

## Explore Series

Model	Spectral Range	Photosensitive Size	Noise Equivalent Power (NEP)	Response Time Constant
InGaAs-0.8/2.2um-1X1mm-AG8	800~2200nm	1mmx1mm	$1.0 \times 10^{13}$ W/Hz <sup>1/2</sup>	35ns
InGaAs-0.8/2.2um-2X2mm-AG8	800~2200nm	2mmx2mm (Large Target)	$2.5 \times 10^1$ W/Hz <sup>1/2</sup>	200ns
InGaAs-0.8/2.6um-1X1mm-AG8	800~2600nm (Mid-IR Extended)	1mmx1mm	$1.0 \times 10^{12}$ W/Hz <sup>1/2</sup>	25ns
InGaAs-0.8/2.6um-2X2mm-AG8	800~2600nm (Mid-IR Extended)	2mmx2mm (Large Target)	$2.0 \times 10^{12}$ W/Hz <sup>1/2</sup>	233ns

 Get in touch with our team to explore configurations, request a quote, or learn more about customized solutions tailored to your needs.

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