

# UV Photodetector

## SiC-AG Photodetector

Focus on industrial & research mid-UV accurate measurement needs

- Material-Enabled High Stability
- Pure Signal and Anti-Interference
- Flexible Gain for Full-Scenario Adaptation
- Multi-Scenario Compatible Design
- Long-Term Reliability and Low Maintenance



## One Platform Many Possibilities

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## Overview

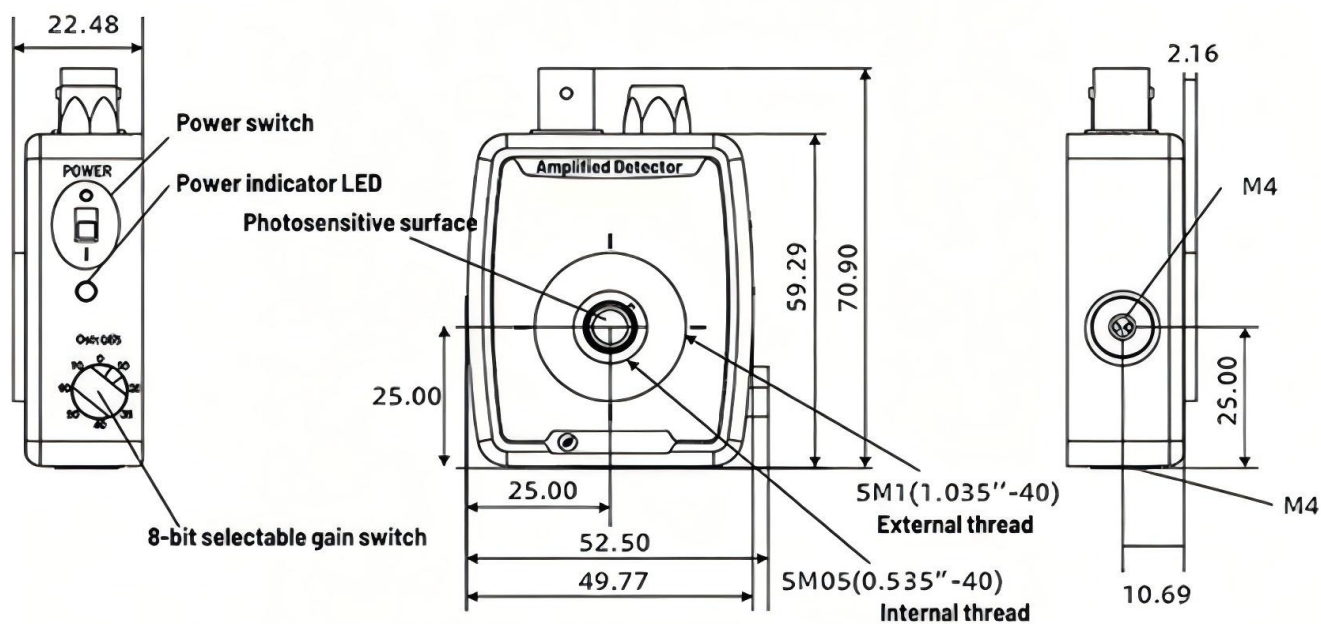
### Introduction:

This product is a SiC-based ultraviolet amplification-type photodetector with a photosensitive range of 220nm– 380nm, primarily designed for ultraviolet light measurement scenarios such as large-area coating uniformity inspection and UV light source spatial distribution characterization. It exhibits high stability, long service life, and resistance to high-flux UV radiation, along with visible-blind property and ultra-low dark current. Equipped with 8-level adjustable gain for quantitative photoelectric conversion, it supports integration into high-vacuum environments ( $\leq 10^{-4}$  Pa) via a vacuum flange, and provides technical support and non-standard customization services.

### Features:

- SiC-based photodetector covering 220nm– 380nm, optimized for UV measurement scenarios (e.g., coating uniformity inspection, UV source far-field distribution testing);
- High stability and long operational lifespan, withstanding high-flux UV radiation without performance degradation;
- Visible-blind property (visible light rejection ratio  $>10^{10}$ ) and fA-level dark current, ensuring noise-free detection of weak UV signals;
- High responsivity at key UV wavelengths (e.g., 254nm, 365nm), enabling efficient photoelectric conversion;
- Vacuum flange design, compatible with high-vacuum environments ( $\leq 10^{-4}$  Pa) for integration into precision test systems;
- 8-level adjustable gain, allowing flexible switching between low-light signal amplification and high-light linear measurement;
- Cost-effective performance paired with comprehensive technical support (e.g., calibration, system integration guidance);
- Customizable specifications (photosensitive area, gain range) to meet specific application requirements.

### Dimension:



## Specifications

### SiC-AG Series Specifications Sheet

Product Model	SiC-AG
Gain Range	High-Z Load: 1.51 kV/A to 4.75 MV/A; 50 Load: 0.75 kV/A to 2.38 MV/A
Signal Amplitude	High-Z Load: 0 V– 10V; 50 Load: 0– 5 V
Gain Adjustment Method	Rotary step adjustment: 0– 70 dB, 10 dB per step, 8 steps total. Bandwidth is inversely proportional to gain.
Operating Temperature	-55°C to 200°C
Storage Temperature	-55°C to 200°C
Signal Interface	SMA Connector

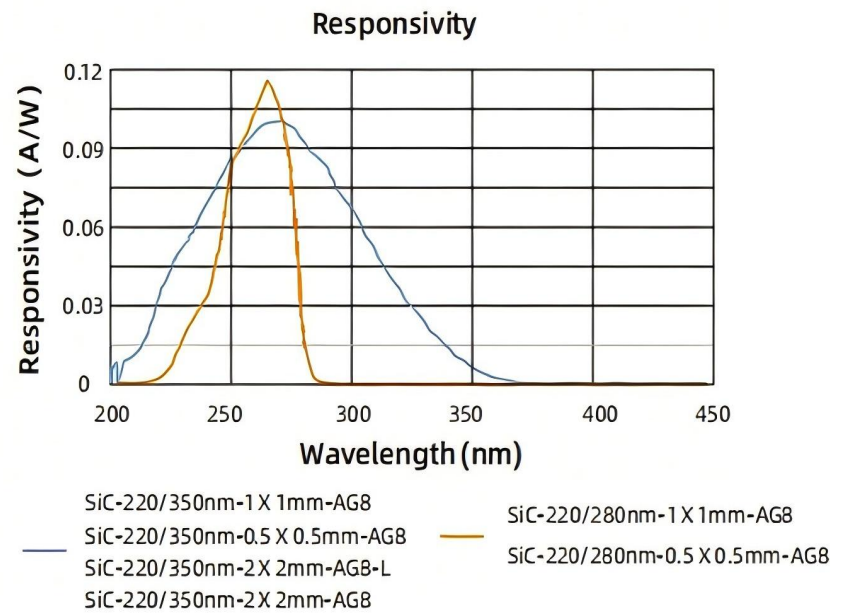
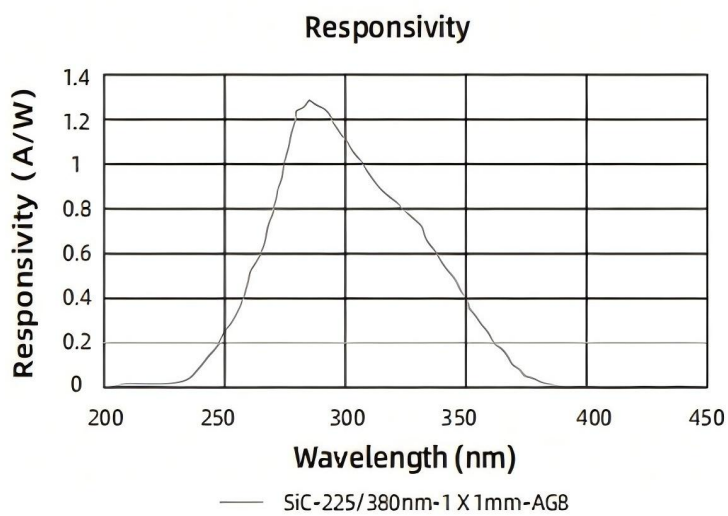
## Adjustable Gain Parameters

### Detailed Adjustable Gain Specifications Sheet

	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 )	$0.75 \times 10^3$ 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
	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 )	$0.75 \times 10^5$ 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
Signal Offset			$\pm 8$ mV(Typ.) , $\pm 12$ mV(Max)	

## Responsivity

### Responsivity Diagram of the SiC-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	Photosensitive size	Photosensitive range	Outline Dimensions	Net Weight of the Detector
SiC-220/350nm-1 X 1mm-AG8	φ1mm	220nm ~ 350nm	50mm X 38.9mm X 70mm	0.10kg
SiC-220/350nm-0.5x0.5mm-AG8	φ0.25mm	220nm ~ 350nm	50mm X 38.9mm X 70mm	0.10kg
SiC-220/350nm-2x2mm-AG8-L	φ4mm	220nm ~ 350nm	50mm X 38.9mm X 70mm	0.10kg
SiC-220/350nm-2x2mm-AG8	φ4mm	220nm ~ 350nm	50mm X 38.9mm X 70mm	0.10kg
SiC-225/380nm-1x1mm-AG8	φ1mm	225nm ~ 380nm	50mm X 38.9mm X 70mm	0.10kg
SiC-220/280nm-1x1mm-AG8	φ1mm	220nm ~ 280nm	50mm X 38.9mm X 70mm	0.10kg
SiC-220/280nm-0.5x0.5mm-AG8	φ1mm	220nm ~ 280nm	50mm X 38.9mm X 70mm	0.10kg

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

Let us help you move science forward—faster and smarter.

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