

Avalanche Photodiode

Si-APD-AG AV Photodetector

Silicon-based amplifying adjustable gain photodetection equipment

- High-sensitivity weak light detection
- Wide gain adjustment range
- Multi-scenario adaptability
- High ease of use



One Platform Many Possibilities

Contact Us sales@venuslabtech.com

Get a Quote



Get Expert Advice
+658099 5547 (WhatsApp)

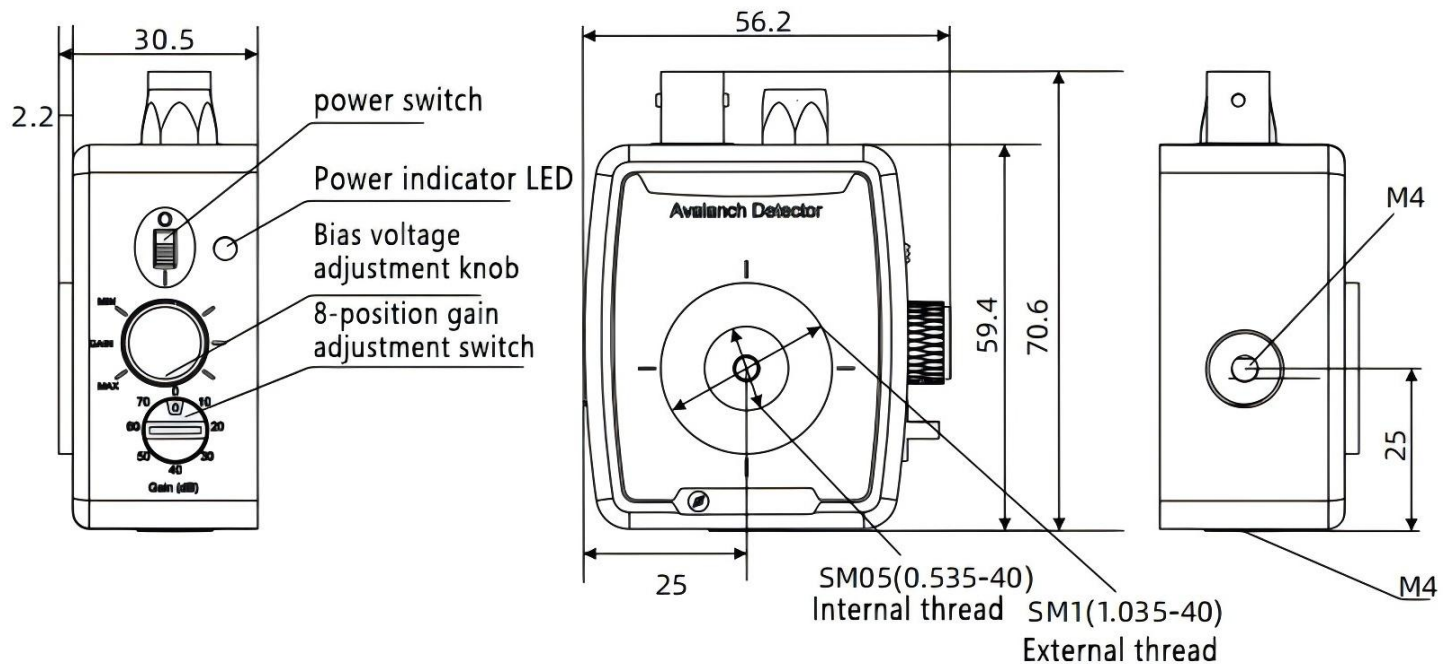


Visit Us
www.venuslabtech.com

Overview

Introduction to the Si-APD-AG AV PHOTODETECTOR product and the product's dimension drawing:

This product utilizes the APD avalanche effect to enhance photoelectric conversion gain. It uses silicon as the detection material, with a photosensitive range of 400nm to 1100nm. It is an amplifying detector with 8 adjustable gain levels, featuring a wide dynamic range, excellent performance, and high cost-effectiveness. It provides comprehensive technical support and non-standard customization services, and is suitable for various optoelectronic development scenarios such as visible light and near-infrared light measurement.



Specifications

Core Common Parameter Table of 400~1100nm Silicon - based Amplifying and Adjustable - gain APD:

Parameter Category	Parameter Content
Detector Material	Silicon (Si)
Product Type	Avalanche, amplifying, adjustable - gain photodetector
Spectral Response Range	400~1100nm, suitable for visible and near - infrared light measurement
Gain Adjustment	Supports 0~70dB, eight - step quantitative adjustable gain, 10dB per step
Electrical Parameters	APD bias voltage adjustment range 0~150V (some 0~400V); APD gain M value 0~50 (some 0~400); Signal amplitude 0~10V under Hi - Z load, 0~5V under 50 load
Environmental Parameters	Operating temperature 10~40 , storage temperature -20~70
Dimensions	2.78"x2.21"x1.20" (70.6mmx56.2mmx30.5mm), net weight 0.1kg
Interfaces	Power supply interface RSMV3 FEMALE LUMBERG; Signal interface BNC female connector; Mounting interface M4x2; Optical interfaces SM1x1, SM0.5x1
Standard Accessories	High - precision linear power supply, BNC - BNC signal cable

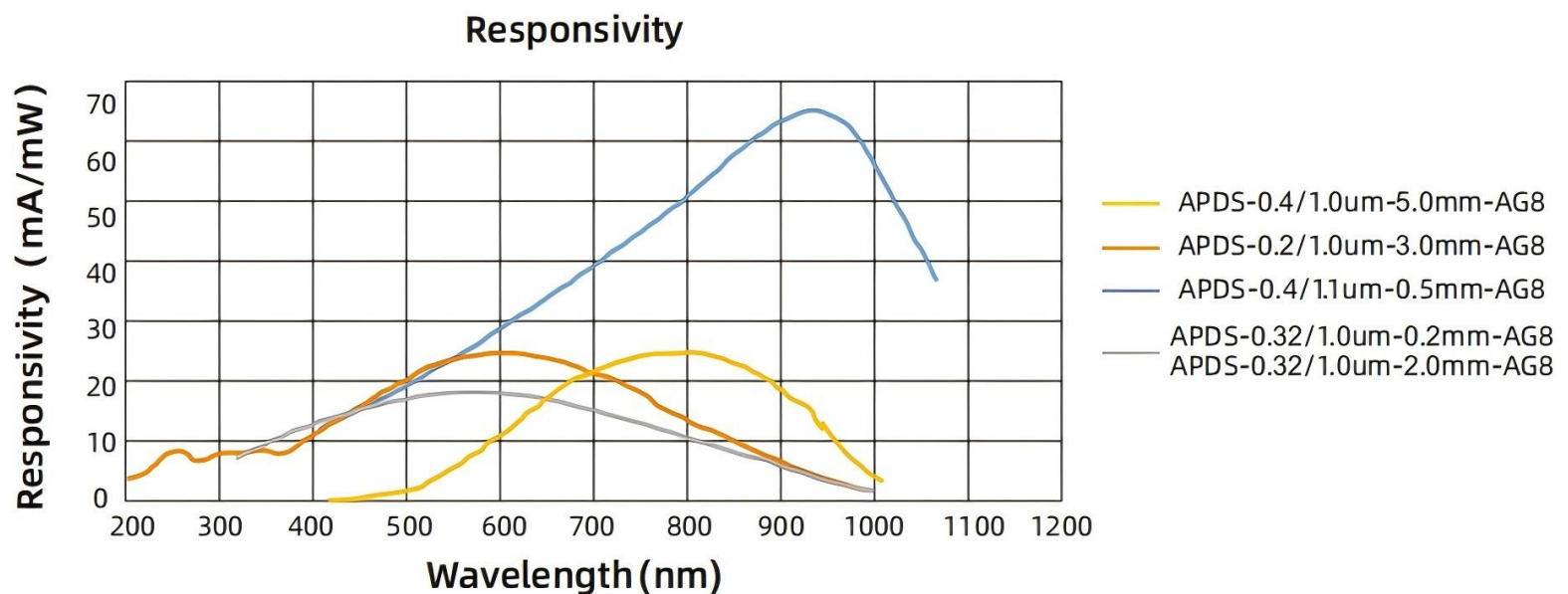
Adjustable Gain Parameters

Eight-speed quantitatively adjustable gain parameters:

	0dB	10dB	20dB	30dB
Gain (Hi-Z)	1.51×10^3 V/A	4.75×10^3 V/A	1.5×10^4 V/A	4.75×10^4 V/A
Gain (50)	0.75×10^3 V/A	2.38×10^3 V/A	0.75×10^4 V/A	2.38×10^4 V/A
Bandwidth (BW)	12MHz	1.6MHz	1MHz	260kHz
Noise (RMS)	258 μ V	192 μ V	207 μ V	211 μ V
	40dB	50dB	60dB	70dB
Gain (Hi-Z)	1.51×10^5 V/A	4.75×10^5 V/A	1.5×10^5 V/A	4.75×10^6 V/A
Gain (50)	0.75×10^5 V/A	2.38×10^5 V/A	0.75×10^6 V/A	2.38×10^6 V/A
Bandwidth (BW)	90kHz	28kHz	9kHz	3kHz
Noise (RMS)	214 μ V	234 μ V	277 μ V	388 μ V
Signal Offset		± 8 mV(Typ.) , ± 12 mV(Max)		

Responsivity

Responsivity Diagram of the Si-APD-AG AV 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	Response Time Constant	APD Bias Voltage Adjustment Range	Sensitive Area Size	Spectral Response Range
APDS-0.4/1.0um-5.0mm-AG8	8.75ns	0~150V	5.0mm	400~1000nm
APDS-0.2/1.0um-3.0mm-AG8	14ns	0~150V	3.0mm	200~1000nm
APDS-0.32/1.0um-2.0mm-AG8	1.25ns	0~400V	2.0mm	320~1000nm
APDS-0.4/1.1um-0.5mm-AG8	2.5ns	0~400V	0.5mm	400~1100nm
APDS-0.32/1.0um-0.2mm-AG8	0.5ns	0~400V	0.2mm	320~1000nm

 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.

[Get a Quote](#)



Get Expert Advice
+658099 5547 (WhatsApp)



Visit Us
www.venuslabtech.com