

Avalanche Photodiode

InGaAs-APDI-AG AV Photodetector

High-sensitivity photoelectric detection equipment for near-infrared light detection

- High-sensitivity weak light detection
- Wide gain adjustment range
- Multiple models to adapt to different needs
- Stable and reliable performance



One Platform Many Possibilities

Contact Us sales@venuslabtech.com

Get a Quote



Get Expert Advice
+658099 5547 (WhatsApp)

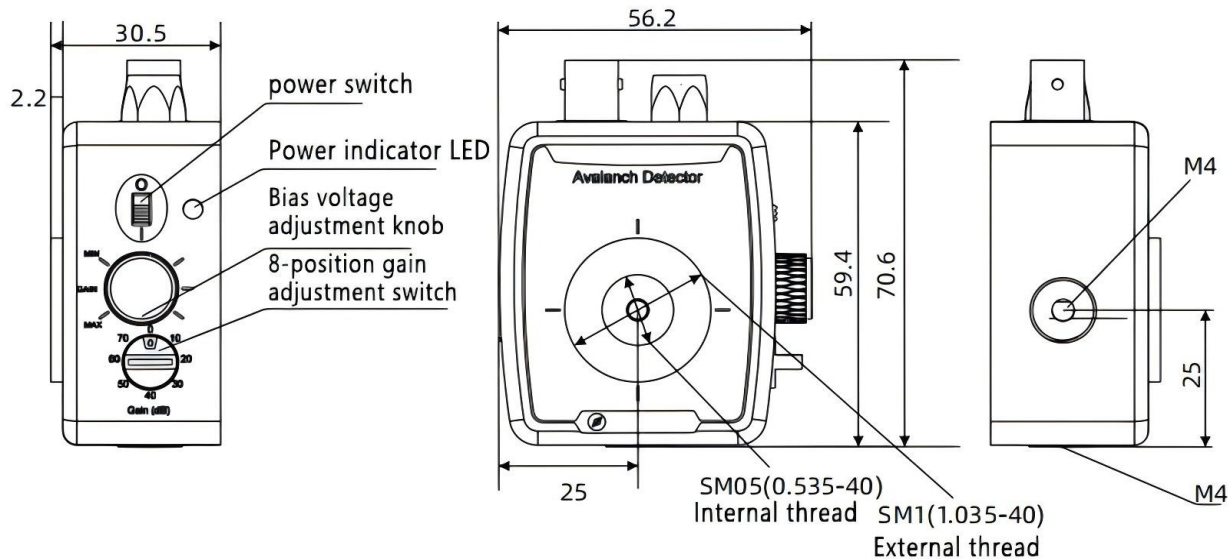


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Overview

Detailed introduction and product dimension diagram :

This product is an indium gallium arsenide APD detector based on the avalanche effect, with a photosensitive range of 800nm to 1700nm. It is of the amplifying type and has 8 adjustable gain levels, capable of quantitative photoelectric conversion, 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 photoelectric development scenarios such as weak light and near-infrared light detection.



Specifications

Core identical parameters :

Parameter Name	Parameter Details
Spectral Response Range	800 - 1700nm
Detector Material	Indium Gallium Arsenide (InGaAs)
Detector Type	Amplified, Adjustable Gain Avalanche Photodetector
Gain Adjustment Method	1. Rotary gear adjustment: 0 - 70dB, one step per 10dB, 8 steps in total 2. Single - turn potentiometer to adjust the APD's own gain; The bandwidth is inversely proportional to the gain
Signal Amplitude	Hi - Z load: 0 - 10V; 50 load: 0 - 5V
Detector Net Weight	0.1kg
Operating Temperature	10 - 40
Storage Temperature	-20 - 70
Power Supply Interface	Power Switch: Slide switch with LED indicator Signal Interface: BNC female connector Gain Adjustment: Single - turn potentiometer, 8 - position knob Support Rod Interface: M4 X 2 Optical Interface: SM1 X 1, SM0.5 X 1
Appearance Size	2.78" X 2.21" X 1.20" (70.6 mm X 56.2 mm X 30.5 mm)

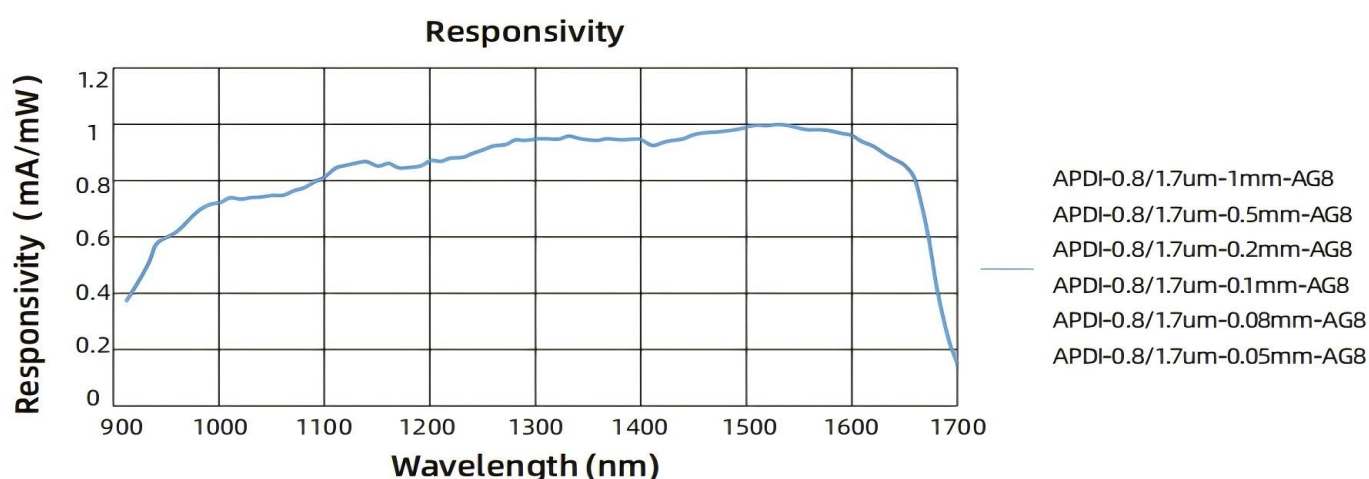
Adjustable Gain Parameters

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 Ω)	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 Ω)	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 InGaAs-APDI-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	APD bias voltage adjustment range	Sensitive Area Size	Spectral Response Range	APD gain M
APDI-0.8/1.7um-1mm-AG8	0 ~ 55 V	1.0mm	800~1700nm	0 ~ 30
APDI-0.8/1.7um-0.5mm-AG8	0 ~ 55 V	0.5mm	800~1700nm	0 ~ 30
APDI-0.8/1.7um-0.2mm-AG8	0 ~ 55 V	0.2mm	800~1700nm	0 ~ 30
APDI-0.8/1.7um-0.1mm-AG8	0 ~ 55 V	0.1mm	800~1700nm	200 ps
APDI-0.8/1.7um-0.08mm-AG8	0 ~ 55 V	0.08mm	800~1700nm	0 ~ 30
APDI-0.8/1.7um-0.05mm-AG8	0 ~ 55 V	0.05mm	800~1700nm	0 ~ 30

 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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