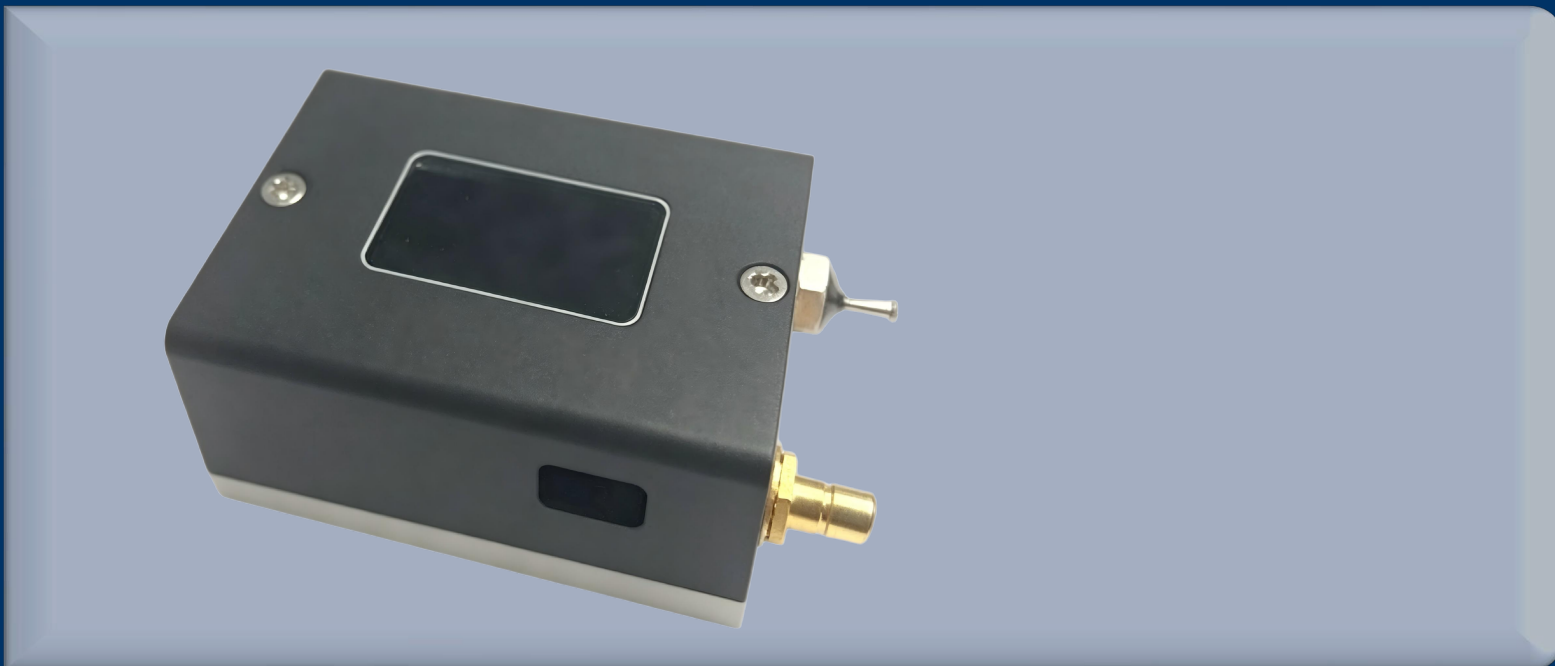


Acousto-Optic Modulator

Multi-Channel & Integrated Acousto-Optic Modulator

The Ultimate Solution for Parallel Processing & Compact Integration

- Parallel Processing
- Integrated Design
- UV Optimization
- Precision Shift



One Platform Many Possibilities

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Overview

Specialized Control: From Multi-Beam Lithography to All-in-One Sensing

This series includes two unique sub-categories:

1. 355nm UV Multi-Channel Series: Utilizing high-transmission Quartz crystals, supporting 6, 10, or 20 independent channels. Operating at 220MHz with precise channel pitch (900 μ m or 450 μ m) and global crosstalk <1%, it ensures independent and precise modulation for every spot—a core component for PCB manufacturing and microelectronics packaging.
2. 633nm Integrated Series: Designed for 633nm lasers with built-in 40MHz or 60MHz driver circuits. Users only need to provide DC power (12V/24V) to achieve frequency shifting or modulation. Its compact package (TC type) greatly simplifies the opto-mechanical design of interferometers and Doppler velocimetry systems.

Key Applications

- **Laser Direct Imaging** : Multi-channel AOMs enable high-speed, parallel patterning of PCBs and displays.
- **Laser Lithography** : Precision UV modulation for semiconductor and micro-optics fabrication.
- **Laser Doppler Vibrometry** : Integrated AOMs provide a compact reference frequency shift for portable vibration measurement.
- **Interferometric Sensing** : All-in-one solution for heterodyne detection systems.

Qualification

General Technical Specifications

Technical Parameter	Specification Data
Interaction Material	Fused Silica (UV Multi-channel) / TeO ₂ (Integrated)
Static Transmission	95%
Extinction Ratio	> 1000:1
Input Impedance	50 (Nominal)
RF/Power Connector	SMA-Female (RF) / Feedthrough Capacitor (Power)
Cooling Method	Conduction (Standard) or Water Cooling (High Power Multi-channel)

Selection Chart

Series A: 355nm UV Multi-Channel Modulators

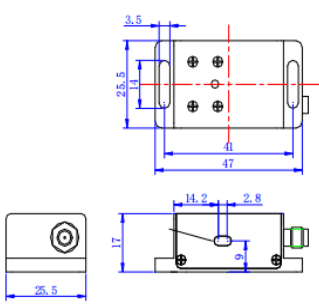
Model	Channels	Freq (MHz)	Pitch (μ m)	Crosstalk	Rise Time (ns)	Aperture (mm)	Power/Ch (W)	Package
VL-MCAOM-220-355-C6	6	220	900	<1%	<40	0.24	<2	T6
VL-MCAOM-220-355-C10	10	220	-	-	-	0.24	<2	T10
VL-MCAOM-220-355-C20	20	220	450	-	<25	0.15	<2	T20

Series B: 633nm Integrated Modulators/Shifters

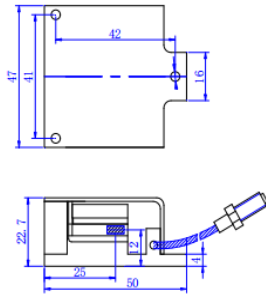
Model	Wave (nm)	Freq (MHz)	Aperture (mm)	Voltage (V)	Current (A)	Feature	Size (mm)
VL-IAOM-40-633	633	40	2.0	12	0.1	Integrated Driver	50x47x22.7
VL-IAOM-60-633	633	60	1.0	24	0.1	Integrated Driver	50x47x22.7

Dimensions Diagram

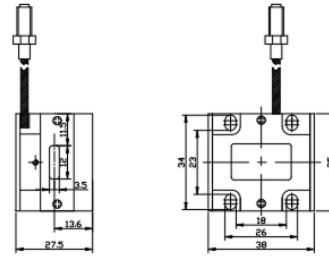
Schematic diagram of the shape and structure of the spatial acousto-optic modulator



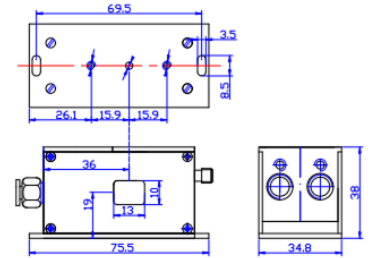
TA



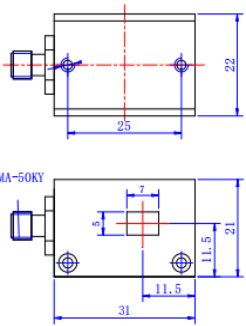
QP1



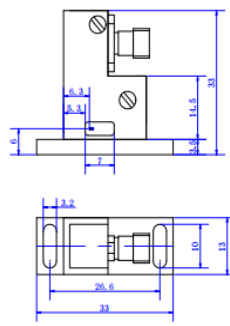
QC



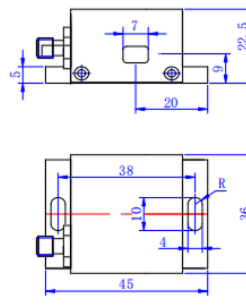
TI



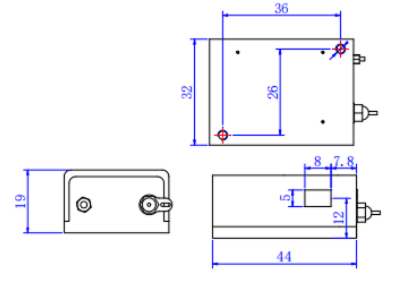
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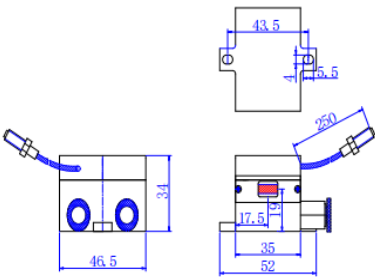
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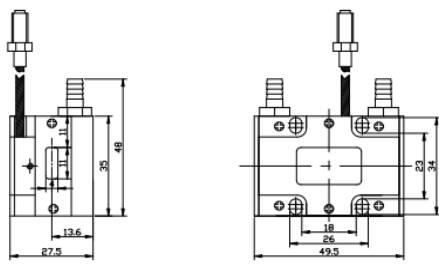
TH



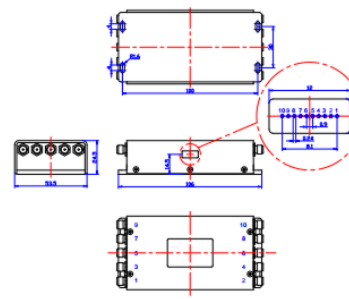
TC



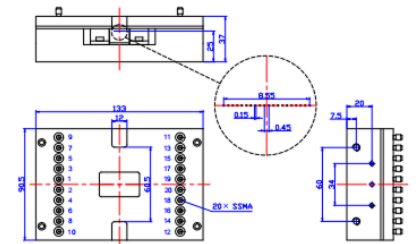
QP2



QB



T10



T20

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	Freq (MHz)	Wave (nm)	Aperture (mm)
VL-MCAOM-220-355-C20	220	355	0.15
VL-IAOM-40-633	40	633	2.0

 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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