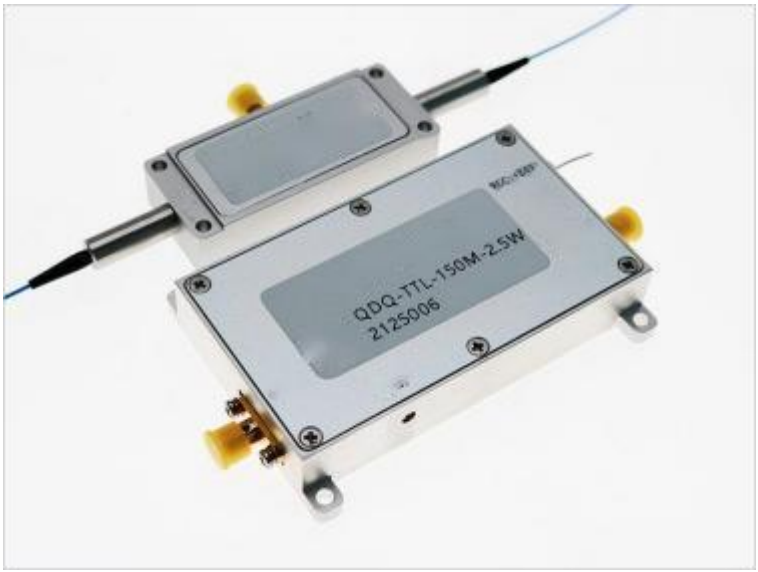
1650nm Polarization Maintaining AOM 150MHz



Product Description

Idealphotonics' acousto-optic modulators are widely used in the field of fiber optic sensing due to their high modulation extinction ratio and high power handling. This product is specially developed for the application needs of fiber optic sensing. It has the advantages of small size, low power consumption (<1W), fast rise time (12ns), good modulation pulse shape (small overshoot), good pulse repeatability (small repetition period jitter), etc. In addition, the modulator and driver can be packaged in an integrated manner, which is convenient for system integration. It can be widely used in

various fiber optic sensing systems that require pulse modulation, such as ϕ-OTDR, BOTDR, OFDR, etc.

Product features

Small size、 Low power consumption (<500mW)、 Fast rise time (12ns)、 Good modulated pulse shape (small overshoot)、 Good pulse repeatability (small repetition period jitter)

Part Number

MP-AOM-1650-150M-PM-FA

Application area

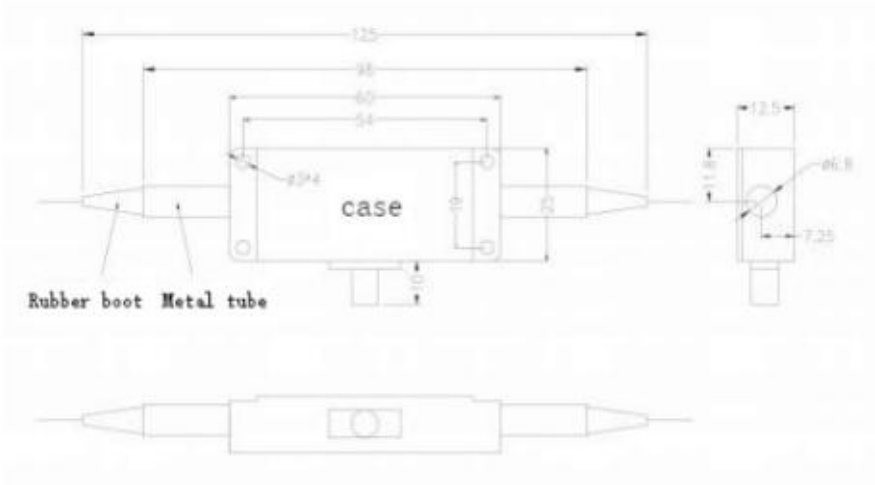
Fiber optic sensing、 LiDAR、 BOTDA

Core parameters

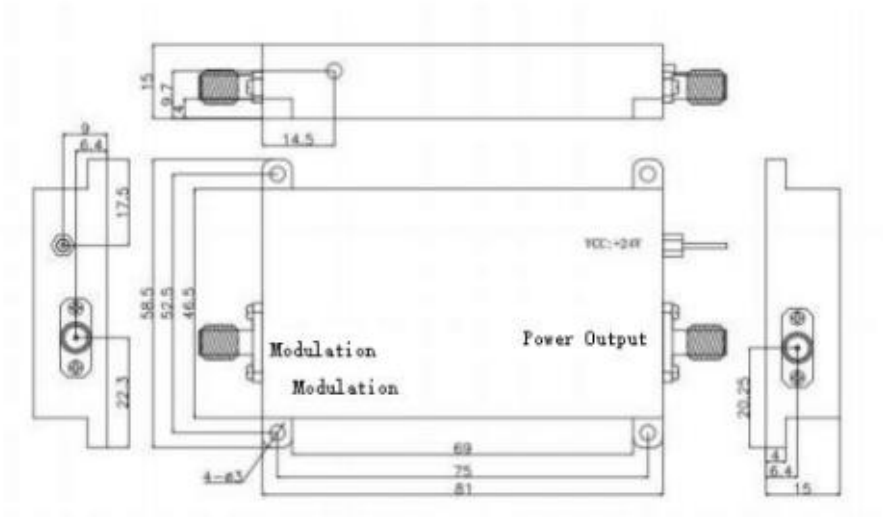
Wavelength	Operating Frequency
1650nm	150MHz

- **Dimension Drawing**

A: AOM dimensions



B: Driver dimensions



General Parameters

Parameters

Parameter	Unit	PN#		
		MP-AOM-1650-100M	MP-AOM-1650-150M	MP-AOM-1650-200M
Material		Tellurium oxide		
Wavelength	nm	1650		
Withstand laser power	W	⩽0.5		
Withstand pulse laser peak power	KW	⩽1 (5KW customize)		
Insertion loss	dB	⩽3	⩽4	⩽5
Extinction ratio	dB	⩽50		
Polarization extinction ratio (applicable to polarization-maintaining devices)	dB	⩾20		
Voltage standing wave ratio	1	⩽1.2:1		
Light pulse rise time	ns	40	20	12
Operating frequency	MHz	100	150	200

Fiber type		SM or PM
Fiber connector		FC/APC
Appearance structure		Figure A

Drive

Parameter	Unit	PN#		
		MP-D100-02-M-1D	MP-D150-02-M-1D	MP-D200-02-M-1D
Operating frequency	MHz	100	150	200
Drive power	W	⩽2.5	⩽3	⩽3
Electric pulse rise time	ns	⩽20	⩽15	⩽7.5
Power switching ratio	dB	⩾55		
Power supply voltage（DC）	V	24		
Harmonic suppression	dBc	⩾25		
Modulation mode	-	TTL		
Output impedance	Ω	50		
Appearance structure	-	Figure B		

Electrical signal configuration

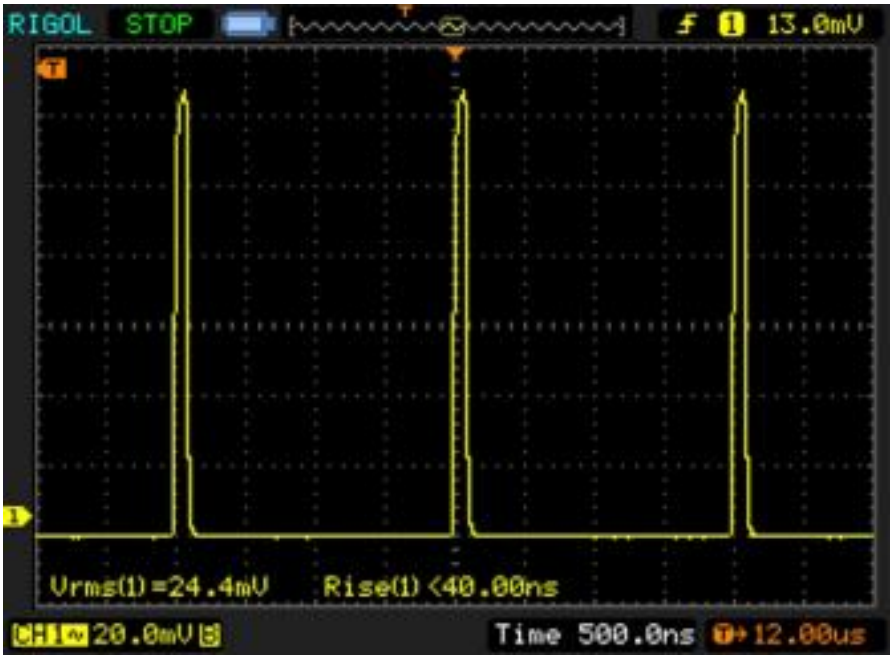
Modulation signal: pulse signal

Modulation frequency: 500 kHz

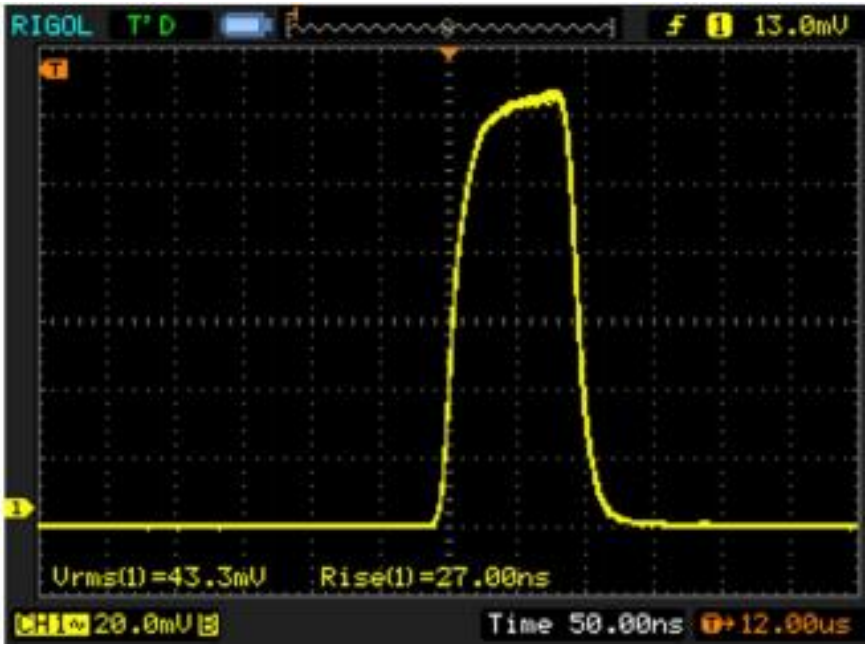
Modulation amplitude: 0V (low level), 2.5V (high level)

Pulse width: 100 ns

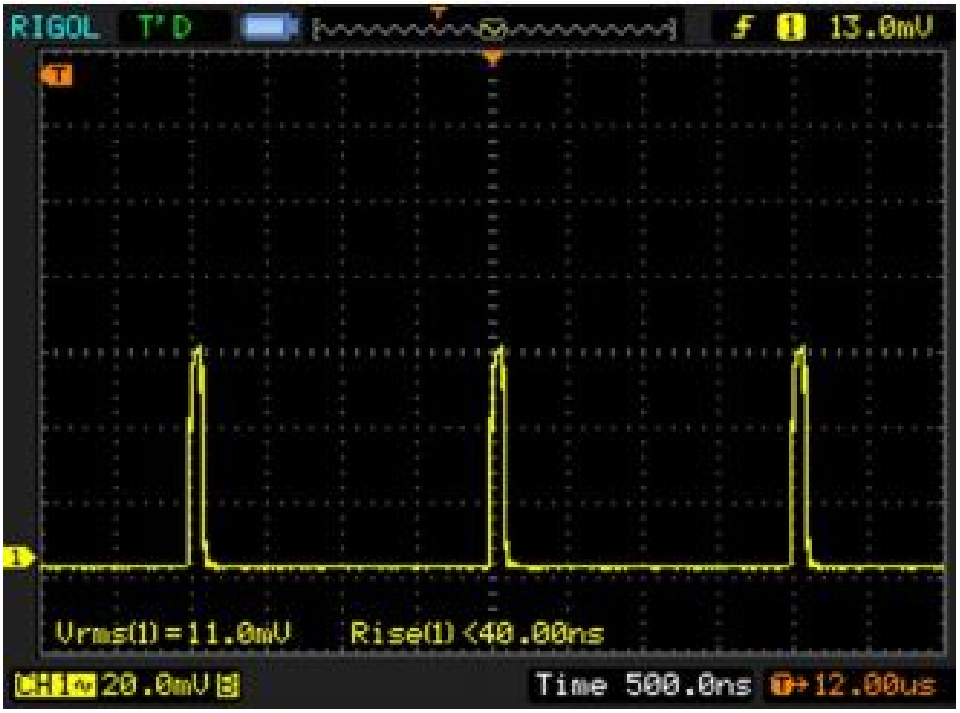
Test result graph



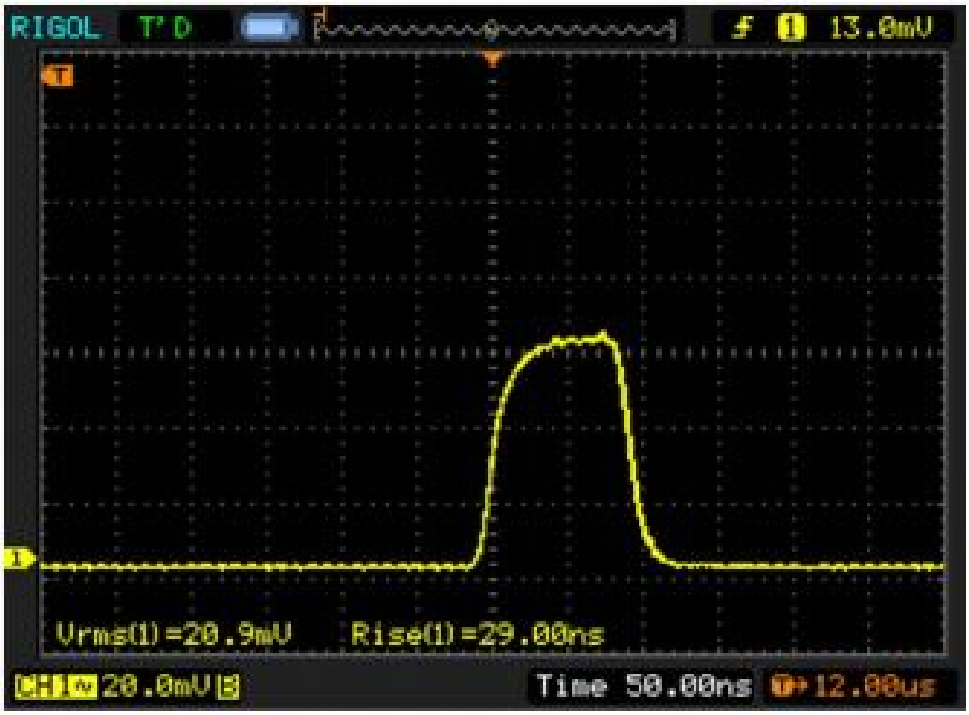
1600nm laser pulse time domain graph



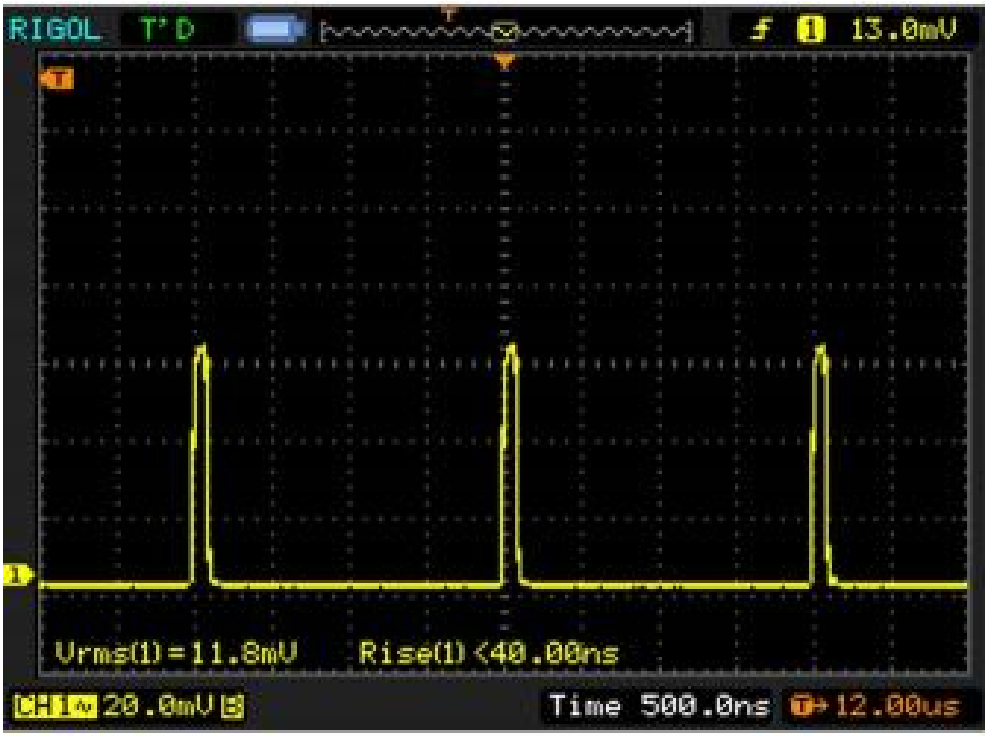
1600nm laser pulse rise time test



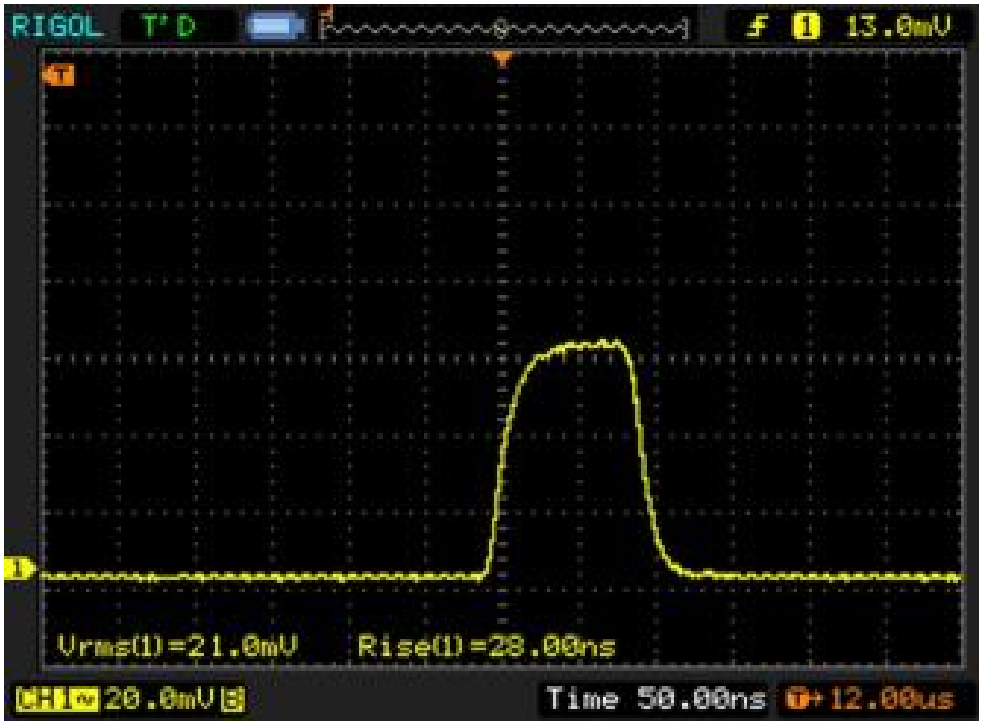
1625nm laser pulse time domain graph



1625nm laser pulse rise time test



1650nm laser pulse time domain graph



1650nm laser pulse rise time test

General parameters

Modulation curve