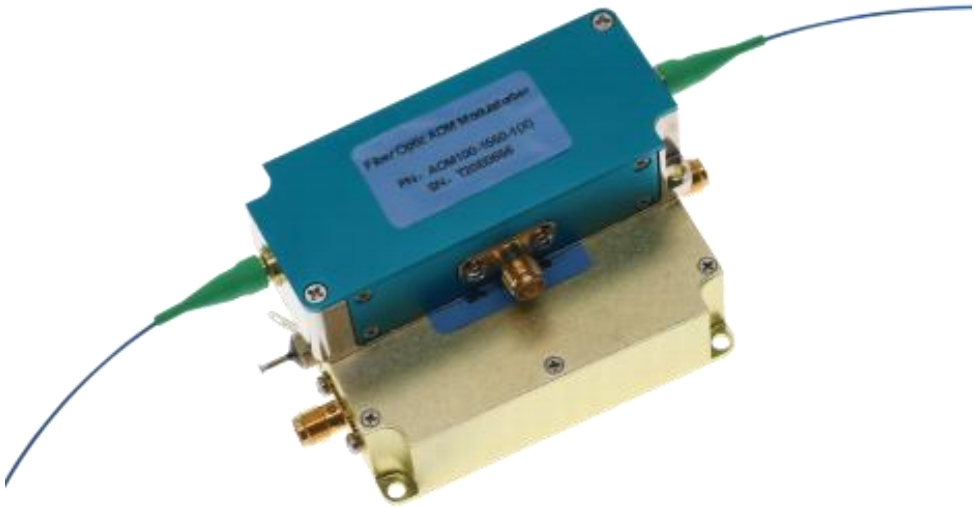
1310m polarization-maintaining acousto-optic modulator (operating frequency 200MHz)



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, with 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., and 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-1310-200M-PM-FA

Application area

Fiber optic sensing、 LiDAR、 BOTDA

Core parameters

Wavelength	Insertion loss	Power
1310nm	⩽3.0 dB	⩽0.5 W

Dimension Drawing

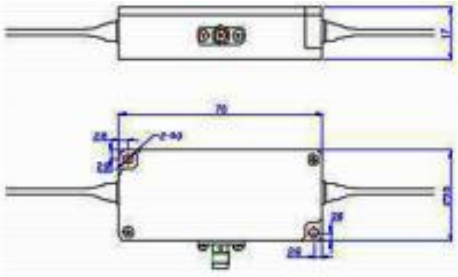


Figure A Modulator dimensions

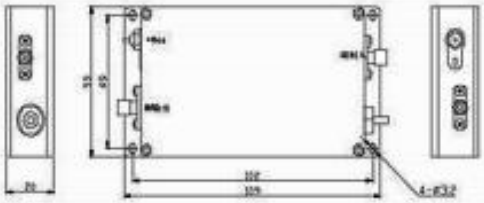


Figure B Driver dimensions

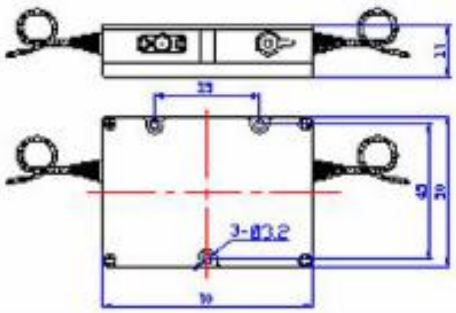


Figure C Integrated product dimensions

General Parameters

Parameter

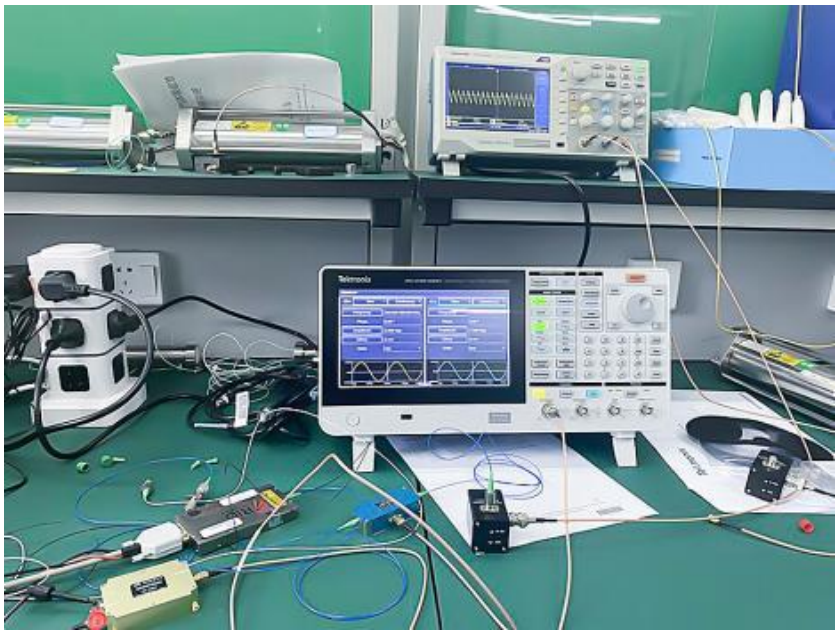
Parameter	Unit	PN#		
		MP-AOM-1310-100M-PM-FA	MP-AOM-1310-150M-PM-FA	MP-AOM-1310-200M-PM-FA
Material	-		Tellurium oxide	
Wavelength	nm		1310	
Laser power	W		⩽0.5	
Pulse laser peak power	KW		⩽1(5KW	

			custom)	
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	-		Single mode or polarization maintaining	
Fiber connector	-		FC/APC	
Appearance structure	-		Figure A	

Driver 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	

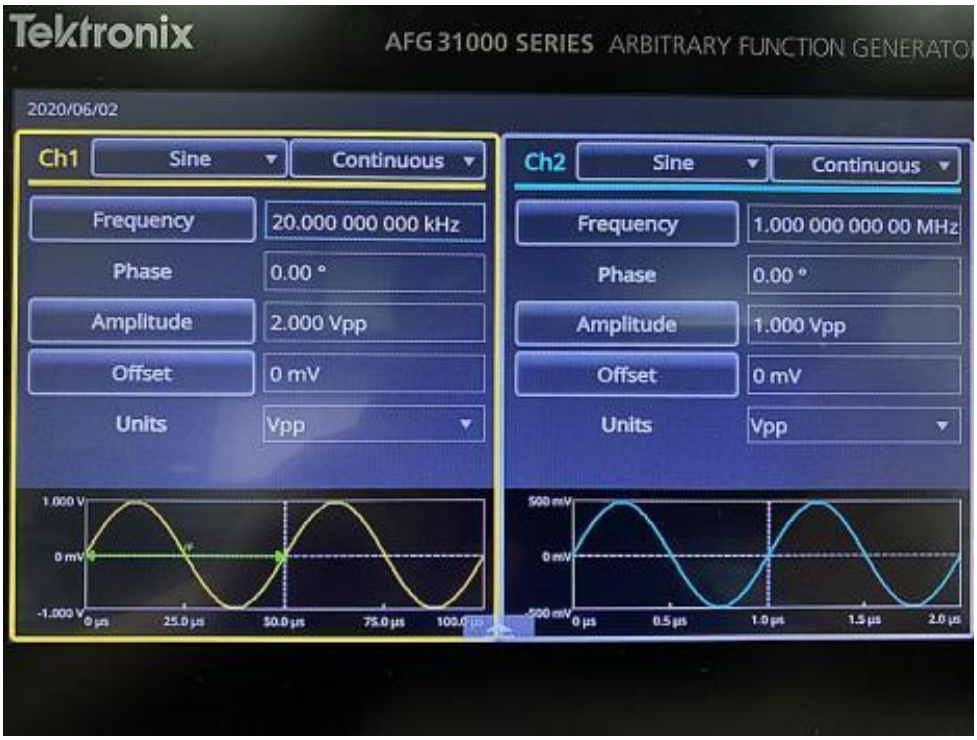
Test system diagram



RIO Narrow linewidth laser, 1310nm PM AOM, EOT 2.5G photoelectric detector.

Modulation Curve

1.The modulation signal applied to the AOM by the signal generator



2. The oscilloscope displays the voltage signal output by the detector