

# 1550nm single-mode acousto-optic modulator

## 80MHz



### ● 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 modulated 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  $\phi$ -OTDR, BOTDR, OFDR, etc.

## ● Product features

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

## ● Part Number

MP-AOM-1550-80M-SM-FA

## ● Application area

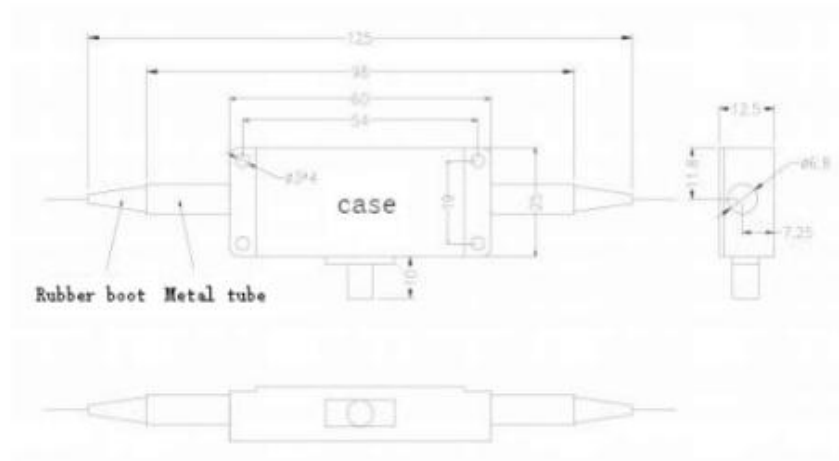
Fiber optic sensing、 LiDAR、 BOTDA

## ● Core parameters

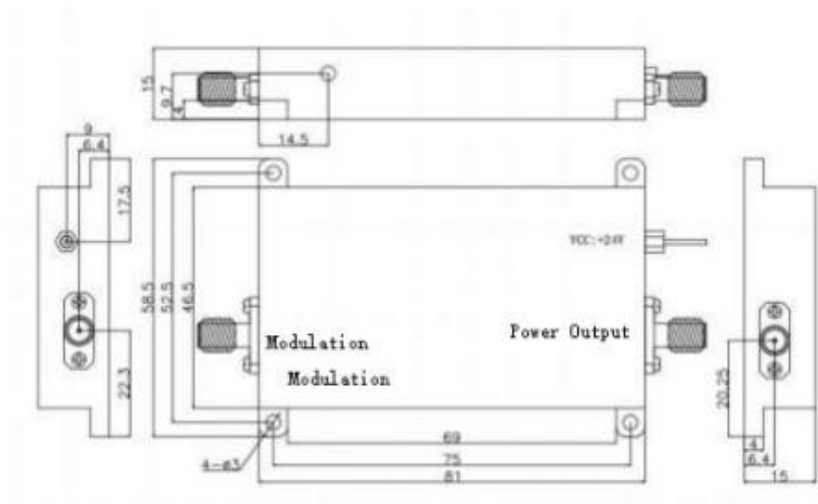
Wavelength	Operating Frequency
1550nm	80MHz

## ● Dimension Drawing

### A: AOM dimensions



### B: Driver dimensions



## ● General Parameters

### Specification

#### General performance parameters

Parameters	Unit	Min.	Max.	convention	Note
Material				TeO2	
Wavelength	nm	1520	1580	1550	
Average optical power (CW)	W		0.5		
Ultrasonic sound velocity	m/s			4200	
Insertion loss	dB		2.5		
Polarization extinction ratio-	dB	18			
Extinction ratio	dB	50			
Return loss	dB	40			
Rise time	ns		45		
Frequency	MHz			80	
Frequency shift	MHz			+80	
Frequency stability				0.1%	
RF power	W			2.5	
VSWR				1.2:1	
Input impedance	$\Omega$			50	
Device interface				SMA	
Fiber type		SM or PM			
Fiber length	m			1	
Fiber interface				FC/APC	
Operating temperature	$^{\circ}\text{C}$			-20~60	
Storage temperature	$^{\circ}\text{C}$			-30~70	



## Driver

Parameter	Unit	PN#		
		MP-D100-0 2-M-1D	MP-D15 0-02-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 method	-	TTL		
Output impedance	Ω	50		
Appearance structure	-	Figure B		

# General parameters

## Modulation curve

