

# Fiber-Coupled Acousto-Optic Modulators

## High-performance, compact, fiber-coupled acousto-optic modulators

The Fiber-coupled acousto-optic modulators (FAOM) are based on the principle of bulk wave acousto-optic interaction, and have the ability to modulate both the amplitude of optical pulses and the frequency shift of light. The speed of FAOM is reflected by the rise time of the output optical pulses, and the modulation speed determines the response speed and available bandwidth of the system. FAOM adopts fiber coupling, which has the advantages of convenient operation, easy integration, and high reliability compared to free-space acousto-optic devices. It is widely used in fiber sensing systems, fiber lasers and other fields.

We have designed and developed a series of fiber-coupled (polarization-maintaining and non-polarization-maintaining) AOMs, with a maximum frequency of 300 MHz and a rise time as low as 6 ns. CASTECH can customize FAOMs with corresponding parameter indicators according to customer requirements, and the fiber end can also be equipped with FC/APC and other connectors as needed.



### Applications

- Industrial laser
- Sensor communication
- Scientific research
- Quantum technology

CASTECH's products are produced independently throughout the entire process and can be customized according to customer needs. Refer to the following list for standard products.

### Model Number: CAFA-f-p-mxb-w-c-h

Center Frequency (f)	RF power (p)	Material(m) Aperture (a)	Fiber Type (x)	Fiber Termina(b)	Wavelength (w)	RF Connector (c)	Housing (h)
080 (80MHz) ...	020 (2W)	CQ TE	1(HI 1060) ...	B (Bare Fiber) F (FC/APC)	633(633nm) ...	AF (SMA-F) ...	A88 ...

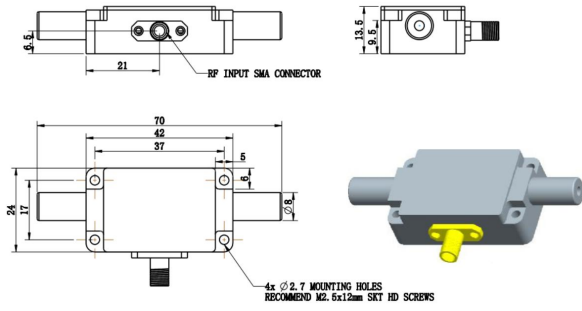
### Typical Specifications

Wavelength	Operation Frequency	Insertion Loss	Extinction Ratio	Rise/Fall Time	Fiber Type
1064 nm	100, 120 MHz	≤1.2 dB	>45 dB	≤45 ns	10/125
1064 nm	200 MHz	≤2.2 dB	>45 dB	<10 ns	PM980-XP
1064 nm	200 MHz	≤2.5dB	>45 dB	≤15 ns	PM10/125
1064 nm	250 MHz	≤2.5 dB	>45 dB	≤8 ns	PM980-XP
1064 nm	300 MHz	≤3 dB	>45 dB	≤6 ns	PM980-XP
1550 nm	80 MHz	≤3 dB	>55 dB	≤40 ns	PM1550-XP
1550 nm	200 MHz	≤3 dB	>55 dB	<10 ns	PM1550-XP

# Fiber-Coupled Acousto-Optic Modulators

## Housing dimensions(mm):

A88



B55

