

(532 to 2300nm, 0.7 to 2mm aperture, 100, 120, 200 MHz driving)







These series of fiberoptic acoustic modulators are designed for laser systems. The device can be used in several configurations in which the common one is normally opaque and becomes transparent when the acoustic brag diffraction condition is met. In addition to beam diffraction, it inevitably produces a wavelength frequency shift. We produce devices with three resonance frequencies of 100MHz, 120MHz, and 200MHz with different rise/fall response times.

Features

- Low Loss
- Low Cost
- Stable

Applications

- Fiber Lasers
- Pulse Picker
- Sensor

Specifications

| Parameter | | Min | Typical | Max | Unit | |
|-------------------------------------|----------|-----|---------|------|------|--|
| Center Wavelength | | 523 | | 2300 | nm | |
| Wavelength Bandwidth | | | ±30 | | nm | |
| Optical Aperture | | 0.7 | | 2 | mm | |
| Acoustic Frequency | | 100 | 120 | 200 | MHz | |
| Modulation Bandwidth ^[1] | | DC | 15 | 50 | MHz | |
| | (100MHz) | | ±100 | | | |
| Wavelength Shift | (120MHz) | | ±120 | | MHz | |
| | (200MHz) | | ±200 | | | |
| | (100MHz) | | 25 | | | |
| Deflection Angle | (120MHz) | | 30 | | mrad | |
| | (200MHz) | | 50 | | | |
| Diffraction Efficiency | | 75 | | 85 | % | |
| Rise/Fall Time ^[2] | | 60 | 100 | 400 | ns | |
| Return Loss | | 40 | | | dB | |
| Average Optical Power | | | 1 | 20 | w | |
| Peak Pulse Optical Power | | | | 30 | kW | |
| Input Impedance | | | 5 | | Ω | |
| RF Power | | | 2.5 | 4.5 | w | |
| Electrical Interface | | | SMA | | | |
| Ultrasonic Velocity | | | 4200 | | m/s | |
| Operating Temperature | | -30 | | 65 | °C | |
| Storage Temperature | | -45 | | 85 | °C | |

Note:

[1]. It is approximately proportional to the driving frequency and inversely to the aperture size.

[2]. It is approximately proportional to the aperture size and inversely to the driving frequency.

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|---------------------------|-------------------|------------------------------|------------------|--|
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Mechanical Dimensions (mm)



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

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Laser Beam Passthrough Arrangement



Typical AOM Aperture Geometry- Rectangle



Possible laser beam input and output arrangements

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Electrical Connection

Connect the device to the driver via the SMA connections

Ordering Information

| | | | | | | 1 | 1 | 1 |
|--------|---------------------------|--|--|--|-------------------|---|---|---|
| Prefix | Туре | Wavelength * | Aperture | Frequency | Driver | | | |
| AOMS- | TeO2 = 11 Special = 00 | 1060 nm =1 1550 nm = 5 1310 nm = 3 980 nm = 9 630 nm = 6 750 nm = 7 530 nm = 5 450 nm = 4 2000 nm = 2 Special = 0 | 0.7mm = 1 1.0mm = 2 1.5mm = 3 Special = 0 | 100MHz = 1 120MHz = 3 200MHz = 2 | Yes = 1 No = 2 | | | |

Red means special order

Operation Manual

- Connect the driver to +24V using the provided cable but do not turn the power on.
 Note: Applying the wrong polarity will burn the driver.
 Note: Powering the driver without the lead will demage the driver.
- **Note**: Powering the driver without the load will damage the driver.
- 2. Connect the driver OUTPUT to the accustom-optic device via the two SMAs.
- 3. Turn on the +24V power
- 4. Input TTL control signal to the Modulation connection port

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