

M1002-T110L-2

Acousto-Optic Modulator



0419

The Model M1002-T110L is designed primarily for use in applications requiring very high output good beam quality and high beam pointing stability e.g. holographic mastering.

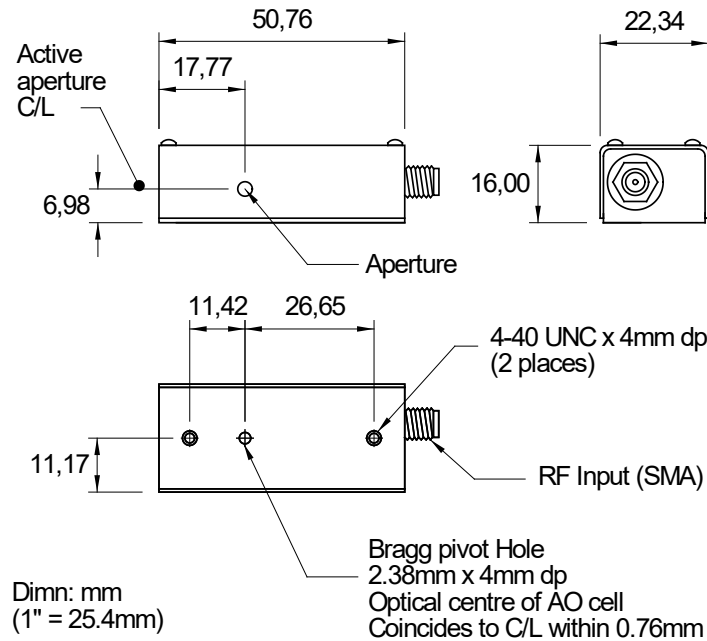
APPLICATIONS

- Intensity Modulator
- Moderate Resolution Deflector
- Frequency Shifter

RF Drive Electronics

| | |
|--------------------------|----------------------|
| Digital modulation | 523C-L / -2, 823C-L |
| Analog modulation | 533C-L / -2, 833C-L |
| Dual modulation | 553F-L / -2 |
| Tuneable with modulation | 630C-110, iSPA-SF1-w |

OUTLINE DRAWING

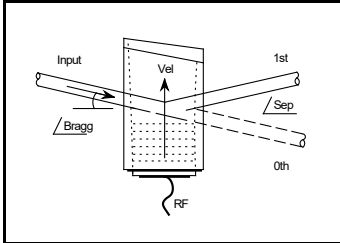


Option -M, metric mounting threads, M3

Note: Mount device to heat conducting surface

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE
 ISOMET CORP, 10342 Battlevue Parkway, Manassas, VA 20109, USA.
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Quality Assured.
 In-house: Crystal Growth,
 Optical Polishing,
 A/R coating, Vacuum Bonding



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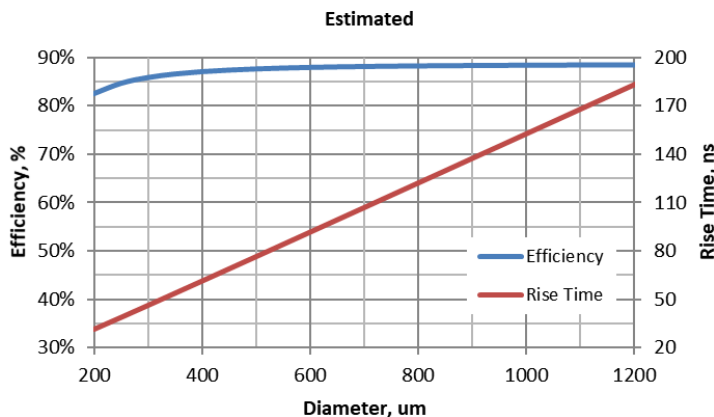
SPECIFICATIONS

| | |
|---------------------------------|--------------------------------------|
| Interaction Material: | TeO ₂ (Longitudinal Mode) |
| Standard Operating Wavelengths: | 360-420nm, 442-488nm, 488-650nm |
| Polarization: | Vertical preferred |
| Acoustic Velocity: | 4200 m/s |
| Active Aperture: | 2mmH x 9mmW |
| Centre Frequency: | 110 MHz |
| RF Bandwidth, dF: | 50 MHz |
| Input Impedance: | 50 ohms (Nominal) |
| VSWR: | < 1.5:1 @ 110 MHz |
| DC. Contrast Ratio: | > 1000:1 min (2000:1 typical) |

PERFORMANCE vs. WAVELENGTH

| Wavelength: | 360nm | 405nm | 442nm | 532nm |
|-----------------------------|---------|----------|----------|----------|
| Static Insertion Loss: | <7.0% | <5.0% | <3.0% | <3.0% |
| RF Power (typ'): | 0.35W | 0.4W | 0.5W | 0.75W |
| Bragg Angle @ 110MHz: | 4.7mrad | 5.3mrad | 5.8mrad | 7.0mrad |
| Separation Angle @ 110 MHz: | 9.4mrad | 10.6mrad | 11.6mrad | 13.9mrad |
| Scan Angle, dF = 50 MHz: | 4.3mrad | 4.8mrad | 5.3mrad | 6.3mrad |

PERFORMANCE vs. BEAM DIAMETER at 488nm



DEFLECTOR PERFORMANCE

| | | |
|-------------------|-----|-------|
| Beam width | 2mm | (9mm) |
| Resolvable spots* | 24 | 100 |

* >1000 non-resolvable points (driver dependent)

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