

1206C-833

Acousto-Optic Modulator



1106

APPLICATIONS

- Modulator
- Low Resolution Deflector
- Frequency Shifter

FEATURES

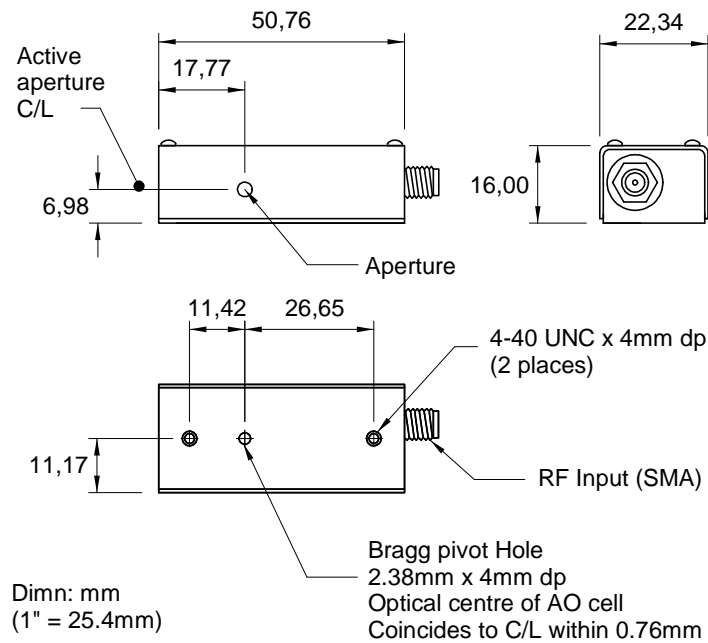
- Low Drive Power
- Small Size
- Good Temperature Stability

DRIVERS

523C-L, or -2 (Digital Modulation)
533C-L or -2 (Analog modulation)

620C-100 (Variable frequency & Digital Modulation)
630C-100 (Variable frequency & Analog Modulation)

OUTLINE DRAWING



ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

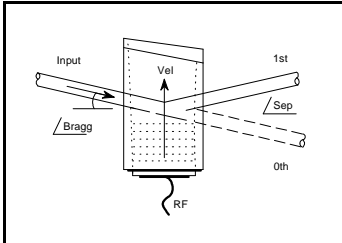
ISOMET CORP, 5263 Port Royal Rd, Springfield, VA 22151, USA.

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Quality Assured.

In-house: Crystal Growth,
Optical Polishing,
A/R coating, Vacuum Bonding



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SPECIFICATIONS

| | |
|---------------------------|---------------------------------------|
| Spectral Range: | 0.36 > 1.5 μ m |
| Standard A/R Wavelengths: | 360-420nm, 442-488nm, 488-650nm |
| Interaction Medium: | Tellurium Dioxide (TeO ₂) |
| Acoustic Velocity: | 4.2mm/ μ s |
| Active Aperture: | 1mm |
| Centre Frequency (CF): | 110MHz |
| RF Bandwidth: | 40MHz |
| Input Impedance: | 50 Ω Nominal |
| VSWR: | <1.5:1 @ 110MHz |
| DC Contrast Ratio: | >1000:1 min (>2000:1 typical) |

PERFORMANCE vs. WAVELENGTH

| Wavelength (nm): | 360 | 405 | 488 | 515 | 633 |
|----------------------------|------|------|------|------|------|
| RF Drive Power (W): | <0.2 | <0.3 | <0.4 | <0.4 | <0.6 |
| Bragg angle (mrad): | 4.7 | 5.3 | 6.4 | 6.7 | 8.3 |
| Beam Separation (mrad): | 9.4 | 10.6 | 12.8 | 13.5 | 16.6 |
| Static Insertion Loss (%): | <7 | <5 | <5 | <3 | <3 |

PERFORMANCE vs. BEAM DIAMETER

| | | | | |
|---|-----|------|-----|------|
| Beam Diameter (mm): | 1.0 | 0.34 | 0.2 | 0.14 |
| Rise Time (ns): | 152 | 53 | 32 | 24 |
| Modulation Bandwidth (MHz) @ MTF = 0.5: | 2.0 | 7.0 | 11 | 15 |
| Deflection Efficiency (% @ CF): | 85 | 85 | 80 | 75 |

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