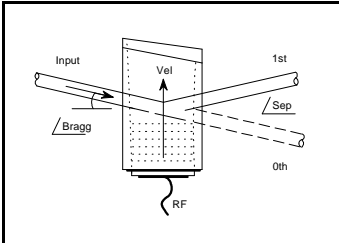


1250C-829A

Acousto-Optic Modulator

1106



APPLICATION

- Wideband Modulator
- Frequency Shifter
- Low Resolution Deflector

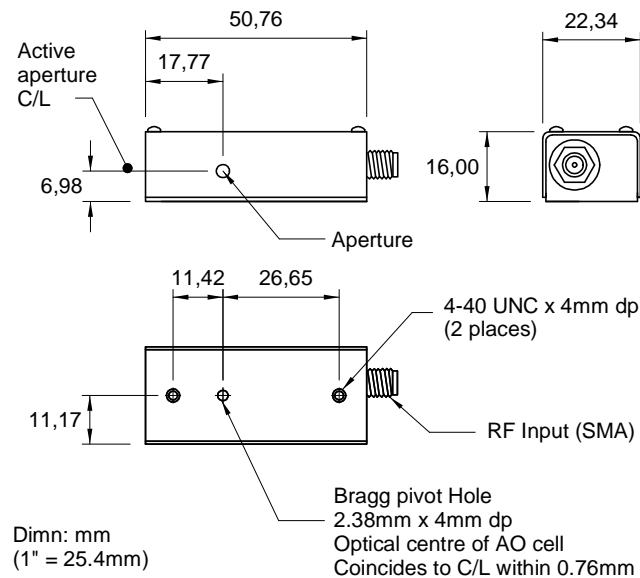
FEATURES

- Very High Video Bandwidth
- Low Drive Power
- Improved Beam Separation
- Good Temperature Stability

MODULATOR DRIVERS

526C (DIGITAL MODULATION)
536C (ANALOG MODULATION)

OUTLINE DRAWING



ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

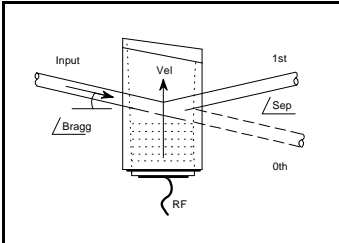
ISOMET CORP, 5263 Port Royal Rd, Springfield, VA 22151, USA.

Tel: (703) 321 8301 Fax: (703) 321 8546

E-mail: ISOMET@ISOMET.COM Web Page: WWW.ISOMET.COM

Quality Assured.

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



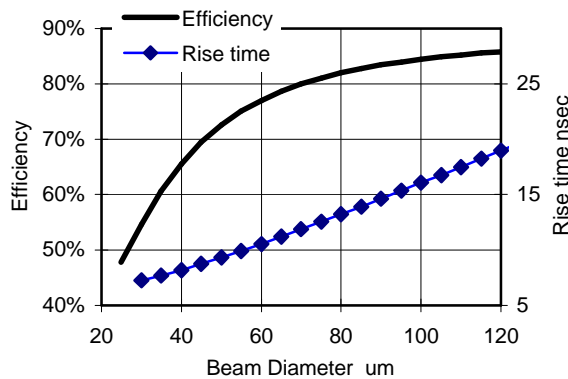
1250C-829A

Acousto-Optic Modulator

SPECIFICATIONS

Spectral Range:	.442-> 1.5 μ m*
Standard A/R Wavelengths:	360-420nm, 442-488nm
Interaction Medium:	Tellurium Dioxide (TeO ₂)
Acoustic Velocity:	4.2mm/ μ s
Active Aperture:	0.45mm
Centre Frequency:	260MHz
RF Bandwidth:	100MHz
RF Input Impedance:	50 Ω Nominal
DC Contrast Ratio:	>1000:1 min (2000:1 typical)

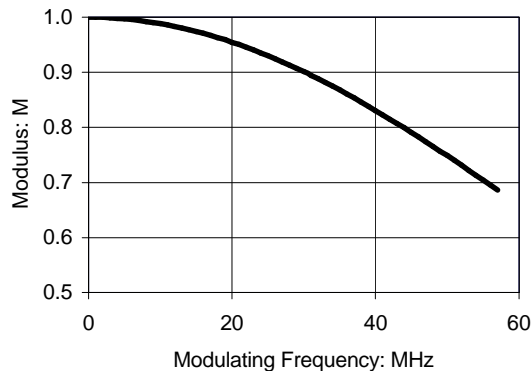
PERFORMANCE vs. BEAM DIA. at 488nm



PERFORMANCE vs. WAVELENGTH

Operating Wavelength (nm)	375	405	442	488
RF Drive Power (W):	<0.45	<0.5	<0.55	<0.7
Input Bragg Angle (mrad):	11.6	12.5	13.7	15.1
0 th -1 st Order Beam Separation (mrad):	23.2	25.1	27.4	30.2
Static Insertion Loss (%):	<7	<5	<5	<3

MTF (31 μ m)



DYNAMIC CONTRAST RATIO

Maximum modulation bandwidth (50MHz) dynamic contrast ratio (CR) is obtained with a focussed beam diameter of 31 μ m. The typical MTF (depth of modulation) curve for the 1250C is shown at left. For larger beam diameters, the abscissa scales linearly. The value of M from the curve may be used to determine the sine wave contrast ratio at a particular modulating frequency according to the relation:

$$CR = 1+M/1-M$$

For digital, on-off modulation, the CR will be greater than the value calculated from the above equation.

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