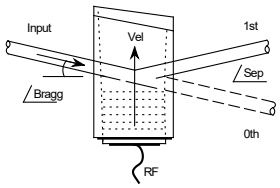

M1250-T250L-0.45

Acousto-Optic Modulator

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APPLICATION

- Wideband Modulator
- Frequency Shifter
- Low Resolution Deflector

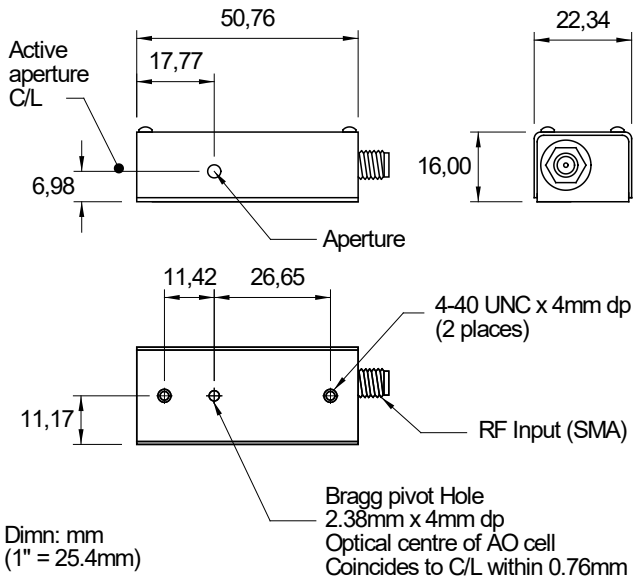
FEATURES

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

DRIVERS

Fixed frequency with Digital / Analog / Dual modulation:	526F-2 / 536F-2 / 556F-2
Tuneable with modulation:	630C-250 / iSK3-200T-1

OUTLINE DRAWING



Option:

Metric fixing holes, M3-0.5 thread: add suffix -M, (M1250M-…)

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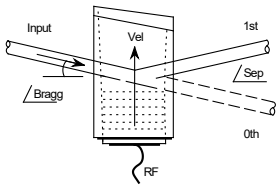
ISOMET CORP, 10342 Battleview Parkway, Manassas, VA 20109, USA.
Tel: (703) 321 8301 Fax: (703) 321 8546
E-mail: ISOMET@ ISOMET.COM ***Web Page: WWW.ISOMET.COM***

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



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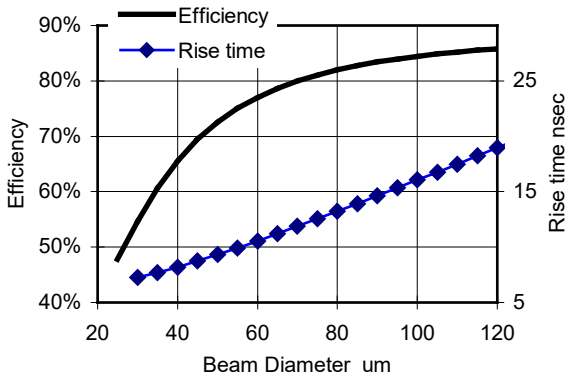
SPECIFICATIONS

Spectral Range:	.442-> 1.5μm*
Standard A/R Wavelengths:	360-420nm, 442-488nm
Interaction Medium:	Tellurium Dioxide (TeO_2)
Acoustic Velocity:	4.2mm/μs
Active Aperture:	0.45mm
Centre Frequency:	260MHz (250MHz)
RF Bandwidth:	100MHz
RF Input Impedance:	50Ω Nominal
DC Contrast Ratio:	>1000:1 min (2000:1 typical)

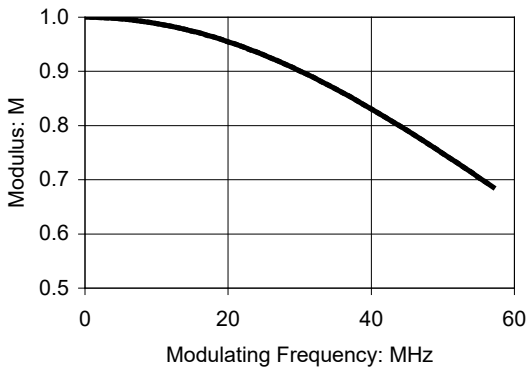
PERFORMANCE vs. BEAM DIA. at 488nm



PERFORMANCE vs. WAVELENGTH

Wavelength (nm)	375	405	442	488
RF Drive Power (W):	<0.45	<0.5	<0.55	<0.7
Diffraction efficiency (Beam dia'> 120um)	>85%	>85%	>85%	>85%
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 (31um)



DYNAMIC CONTRAST RATIO

Maximum modulation bandwidth (50MHz) dynamic contrast ratio (CR) is obtained with a focussed beam diameter of 31μm. 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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