

# 1250C-974(M)

## OEM Acousto-Optic Modulator



1106

### APPLICATION

- Wideband Modulator
- Frequency Shifter
- Optimised for visible wavelengths

### FEATURES

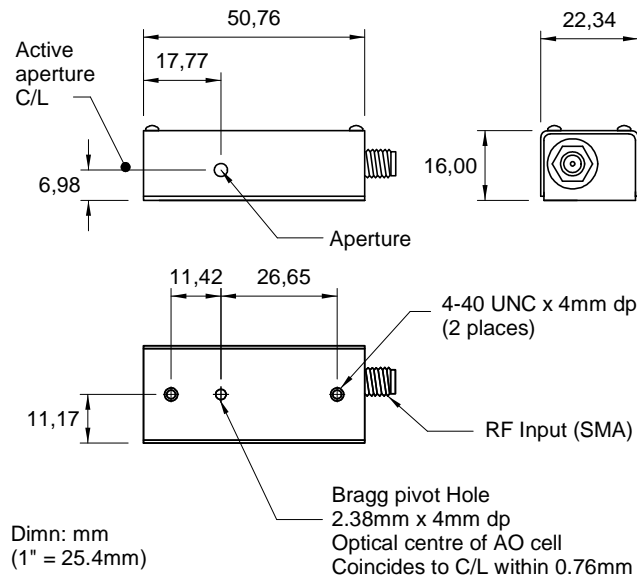
- Very High Video Bandwidth
- Low Drive Power
- Improved Dynamic Contrast Ratio
- Good Temperature Stability

### DRIVERS

525C-L (DIGITAL MODULATION)  
535C-L (ANALOG MODULATION)

620C-200 (VARIABLE FREQUENCY & DIGITAL MOD'N)  
630C-200 (VARIABLE FREQUENCY & ANALOG MOD'N)

### OUTLINE DRAWING



(For M3 metric screws fixings add suffix M)

**ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE**

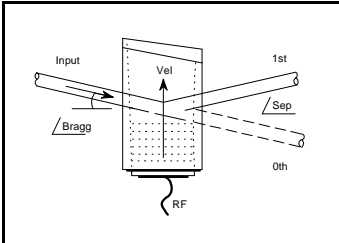
ISOMET CORP, 5263 Port Royal Rd, Springfield, VA 22151, USA.

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**Quality Assured.**

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



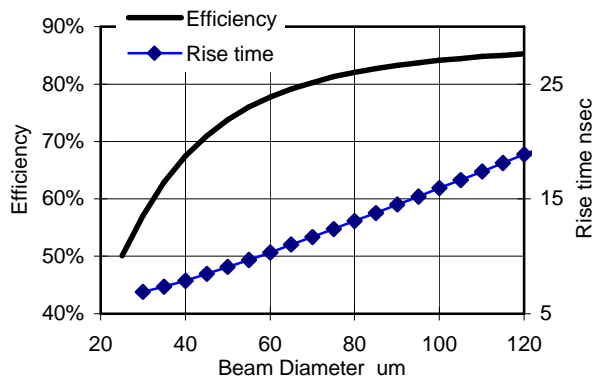
# 1250C-974(M)

## OEM Acousto-Optic Modulator

### SPECIFICATIONS

Spectral Range:	.442-> 1.5 $\mu$ m
Standard A/R Wavelengths:	488-633nm
Interaction Medium:	Tellurium Dioxide (TeO <sub>2</sub> )
Acoustic Velocity:	4.2mm/ $\mu$ s
Active Aperture:	0.5mm
Centre Frequency:	200MHz
RF Bandwidth:	100MHz
RF Input Impedance:	50 $\Omega$ Nominal
DC Contrast Ratio:	>1000:1 min (2000:1 typical)

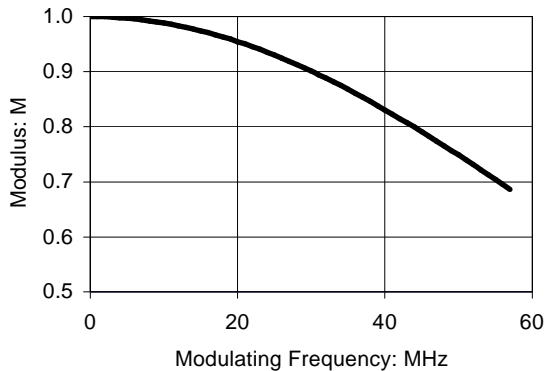
### PERFORMANCE vs. BEAM DIA. at 532nm



### PERFORMANCE vs. WAVELENGTH

Operating Wavelength (nm)	532
RF Drive Power (W):	<0.9
Input Bragg Angle (mrad):	12.7
0 <sup>th</sup> -1 <sup>st</sup> Order Beam Separation (mrad):	25.3
Static Insertion Loss (%):	<3

### MTF (31 $\mu$ m)



### DYNAMIC CONTRAST RATIO

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