

# M1142-SF80L-0.5

## Acousto-Optic Modulator



1108

The M1142 is low dispersion Glass AOM designed primarily for Ti:Sapphire laser applications. This model offers a good compromise between diffraction efficiency and pulse stretching characteristics.

### SPECIFICATIONS

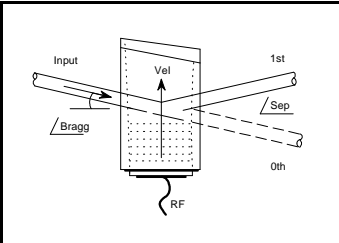
Interaction Material:	SF57
Optical path length:	11mm
Refractive Index:	1.8
Standard Operating Wavelengths:	700nm - 1064nm
Polarization:	Vertical preferred
Acoustic Velocity:	3411 m/s
Active Aperture:	0.5 mm
Centre Frequency:	80 MHz
RF Bandwidth:	30 MHz
Input Impedance:	50 ohms (Nominal)
VSWR:	< 1.5:1 @ 80 MHz
DC. Contrast Ratio:	> 1000:1 min (2000:1 typical)
Static Insertion Loss:	≤ 3.0%

### DRIVERS

522C-2 (DIGITAL MODULATION)  
532C-2 (ANALOG MODULATION)

**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](mailto:ISOMET@ISOMET.COM) Web Page: [WWW.ISOMET.COM](http://WWW.ISOMET.COM)

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



# M1142-SF80L-0.5

## Acousto-Optic Modulator



1108

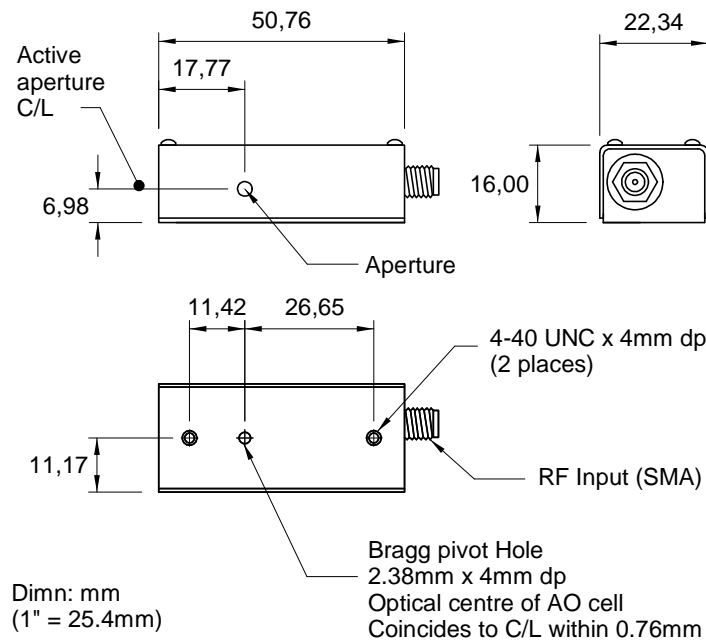
### PERFORMANCE vs. WAVELENGTH

Wavelength:	780nm	830nm	1064nm
Saturation RF Power:	≤ 3.0W	≤ 3.4W	≤ 5.6W
Separation Angle @ 80 MHz:	18.3mrad	19.5mrad	25.0mrad
Bragg Angle @ 80MHz:	9.1mrad	9.7mrad	12.5mrad

(RF Drive 2.5W, Beam diameter 200um)

Diffraction Efficiency:	>80%	>75%	>60%
Rise Time:	40ns	40ns	42ns

### 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](mailto:ISOMET@ISOMET.COM) Web Page: [WWW.ISOMET.COM](http://WWW.ISOMET.COM)

**Quality Assured.**

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