

FS1389-T80L-1



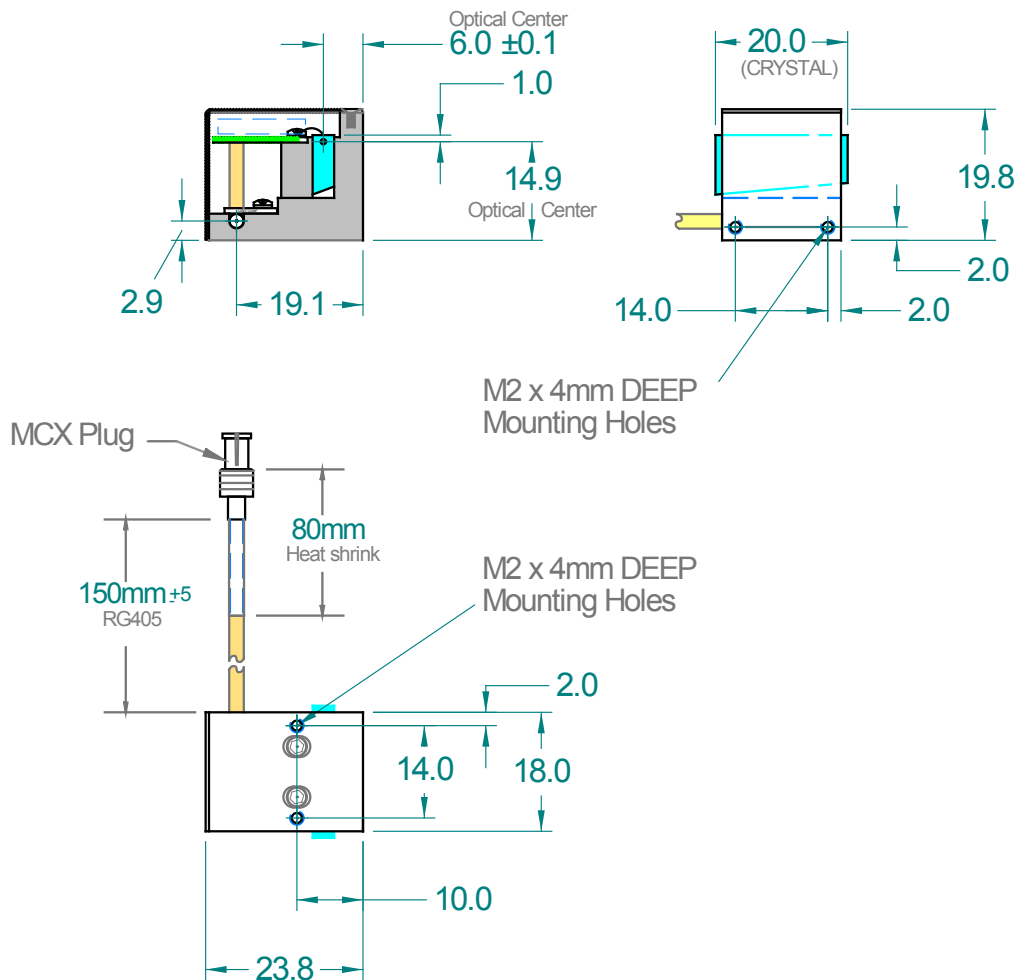
Acousto-Optic Frequency Shifter / Modulator

0820

APPLICATIONS

- Compact Modulator
- Frequency Shifter

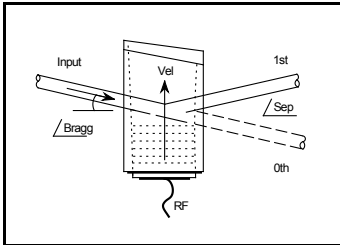
OUTLINE DRAWING



Note: Mount device to heat conducting surface

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE
 ISOMET CORP, 10342 Battlevue 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



FS1389-T80L-1



Acousto-Optic Frequency Shifter / Modulator

0820

SPECIFICATIONS

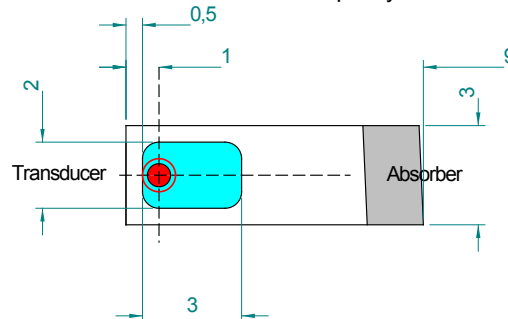
A/R Operating Wavelengths:	633-830nm
Interaction Medium:	Tellurium Dioxide (TeO ₂)
Input polarization:	Vertical w.r.t. diffraction axis, preferred
Acoustic Velocity:	4.2mm/μs
Active Aperture:	1.0mm
Clear Aperture **:	3.0mm
Static Insertion Loss	<3% at 633nm, 1.5% typical
Reflectivity/Surface:	< 0.5%

Centre Frequency (CF):	80MHz
RF Bandwidth (minimum):	20MHz (+/- 10MHz)
Input Impedance:	50Ω nominal
VSWR:	<1.2:1 @ 80MHz, typical 1.13:1
DC Contrast Ratio:	>1000:1 min, typical >2000:1

RF DRIVERS

Digital / Analog modulation, 60dB On:Off	552F-L / -2
Programmable Synthesizer with modulation	iSPA-SF1

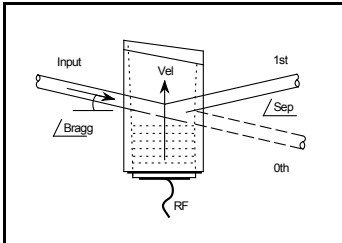
* Of which an area of 2 x 3mm has a surface quality better than 10-5 Scratch/Dig



Red dot indicates the input beam at the minimum recommended distance of 1mm from the transducer

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE
 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



FS1389-T80L-1



Acousto-Optic Frequency Shifter / Modulator

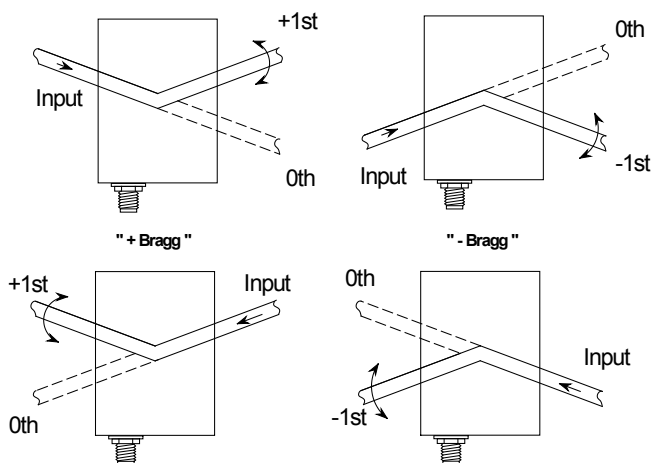
0820

PERFORMANCE vs. WAVELENGTH

AR Wavelength:	633nm	810nm
Max RF drive power	0.7W	1.0W
Typical RF Drive Power:	0.55W	0.9W
Bragg angle:	6.0 mrad	7.7mrad
Beam Separation:	12.0 mrad	15.4 mrad

PERFORMANCE vs. BEAM DIAMETER at 633nm, V-pol

Beam Diameter:	0.7mm	0.5mm
Rise Time:	107ns	77ns
Modulation Bandwidth @ MTF of 0.5:	3 MHz	4.5 MHz
Minimum saturation efficiency (at CF)	+1 st order: >83% -1 st order: >85%	>83% >85%



ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE
 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