

# M1136-FS60S-2



## UV AO Modulator/Frequency Shifter

0421

The M1136-FSxxS-1 is a conduction cooled acousto-optic modulator / frequency shifter designed for use with deep blue – UV lasers. These devices exhibit low insertion loss and high damage threshold.

### SPECIFICATIONS

Interaction Medium:	Fused Silica (shear)
Acoustic Velocity:	3.760mm/μs
AR wavelength:	355-420 nm
Center Frequency, $f_c$ :	60 MHz nominal
Diffraction RF Bandwidth, $\Delta f$ :	+/- 10 MHz
Input Impedance:	50Ω
Input VSWR:	<1.5:1 @ $f_c$
Active Aperture (H):	2.0mm *
Optical Insertion Loss:	<3%
Reflectivity:	<0.5%/Surface
DC Contrast Ratio:	>1000:1 (>2000:1 typical)
Laser Polarization:	Any
Peak Optical Power Density:	250MW/cm <sup>2</sup>
Recommended CW or average RF drive power:	6W

<u>Performance at:</u>	<u>375nm</u>	<u>420nm</u>
Bragg Angle (mrad):	2.99	3.35
Separation Angle (mrad):	5.98	6.7
Peak RF power for max DE (W):	9	11

Diffraction Efficiency, 6W RF drive, 1.0mm beam:	>80%	>75%
---	------	------

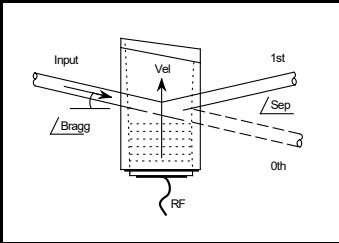
<u>Beam Diameter (mm):</u>	<u>1.0</u>	<u>1.5</u>
Rise Time (ns):	171	256

Cooling: Conduction

\* Please contact Isomet for alternative apertures.

**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](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**



# M1136-FS60S-2

## UV AO Modulator/Frequency Shifter



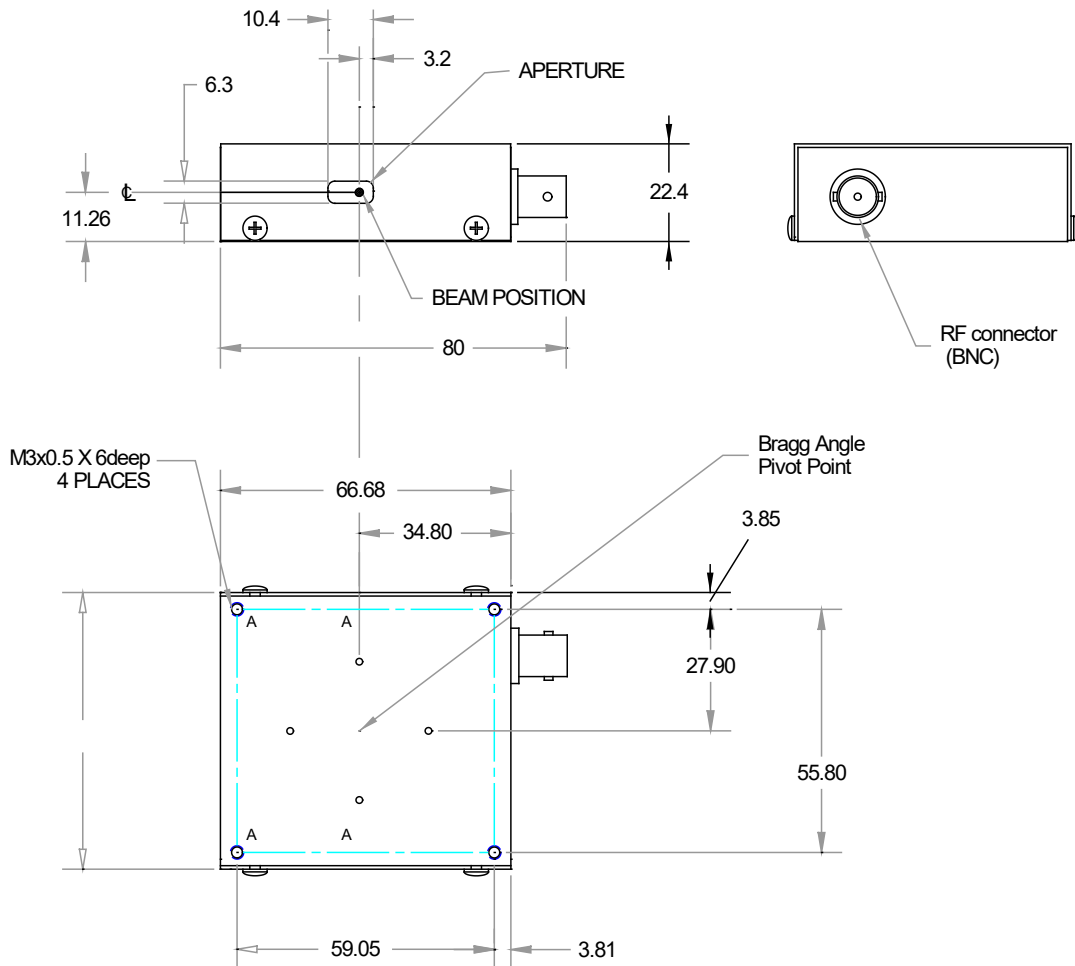
0421

### Suggested Drive Electronics

Frequency Source	Amplitude control	Model
Fixed frequency	Analog, Digital	551F-6- (60M)
VCO, tuneable	Analog	630A-6-(60M)
Programmable Synthesizer	Analog, Digital	iSPA-SF1-a

### OUTLINE DRAWING

Dim'n : mm



**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](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