

# M1136A-FS40S-1



## UV AO Modulator/Frequency Shifter

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The M1136A-FSxxS-1 is a conduction cooled acousto-optic modulator and/or frequency shifter designed for use with deep blue – UV lasers. These devices exhibit very low insertion loss and high damage threshold.

### SPECIFICATIONS

Interaction Medium:	Fused Silica (shear)
Acoustic Velocity:	3.760mm/μs
Operating Wavelength:	399 nm
Center Frequency, $f_c$ :	40 MHz
RF Bandwidth, $\Delta f$ :	> 10 MHz
Input Impedance:	50Ω (Nominal)
Input VSWR:	<1.5:1 @ $f_c$
Active Aperture (H):	1.0mm *
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>

<u>Performance at:</u>	<u>399nm</u>	<u>405nm</u>
Bragg Angle (mrad):	2.12	2.15
Separation Angle (mrad):	4.24	4.3
RF power for max DE (W):	6	6.5

Diffraction Efficiency, 6W RF drive, 1.0mm beam:	>80%	>80%
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<u>Beam Diameter (mm):</u>	<u>0.25</u>	<u>0.5</u>
Rise Time (ns):	47	86
Deflection Efficiency, 399nm	75%	80%

Cooling:	Conduction
Input Impedance:	50 Ohms
VSWR:	< 1.2:1

\* Please contact Isomet for alternative apertures.

#### ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

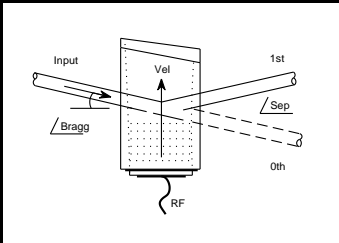
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#### Quality Assured.

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



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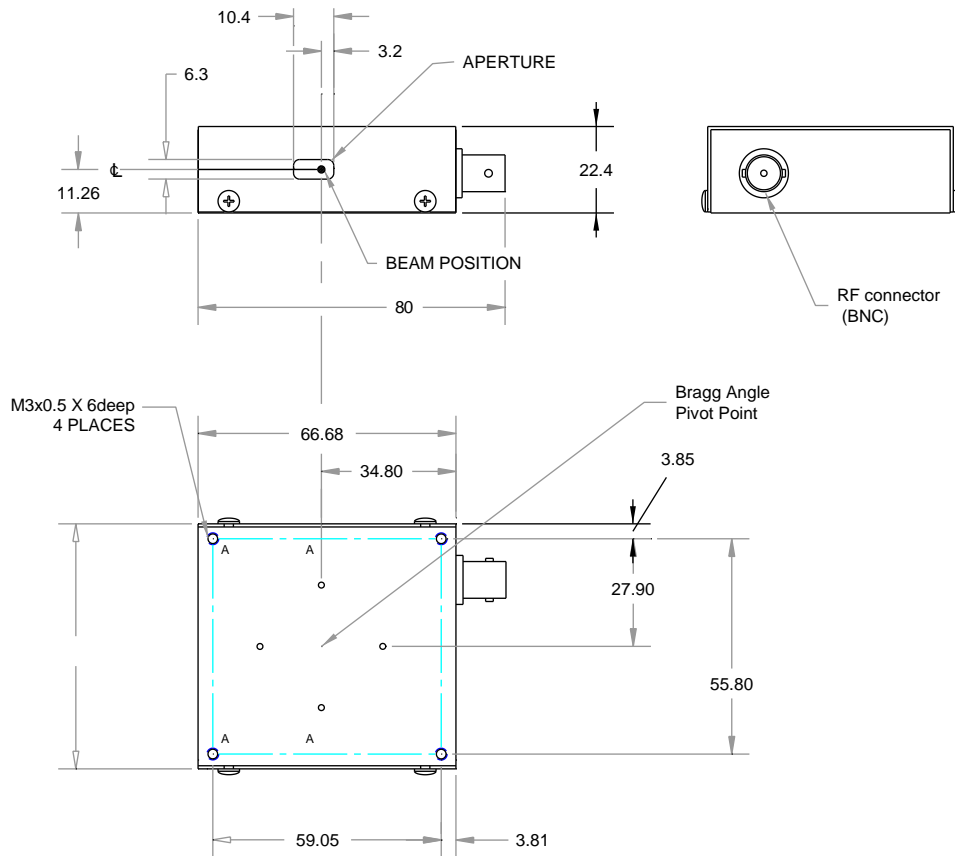
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### Suggested Drive Electronics

<u>Freq' Source</u>	<u>Amplitude control</u>	<u>Digital (On:Off)</u>	<u>Analog (Proportional)</u>
Fixed frequency		521C-7	531C-7
VCO, tuneable		620A-6-40	630A-6-40
Programmable Synthesizer			iSPA-SF1-a

### OUTLINE DRAWING

Dim'n : mm



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