

# M1136B-FS80L-H

## UV Acousto-Optic Modulator



1114

The M1136B-FS80L-H is optimised for operation with UV lasers in the 330-399nm wavelength range. This model is available with 1.0, 2.0mm or 3.0mm active aperture heights, exhibits high efficiency and is convection cooled.

### SPECIFICATIONS

Interaction Medium:	Fused Silica
Acoustic Velocity:	5.960mm/ $\mu$ s
Operating Wavelength:	325-399 nm (as specified by A/R)
Center Frequency, $f_c$ :	80 MHz
RF Bandwidth, $\Delta f$ :	> 10 MHz
Diffraction Efficiency:	> 80%
Input Impedance:	50 $\Omega$ (Nominal)
Input VSWR:	<1.5:1 @ 80MHz
Active Aperture H:	Specify H=1 for 1.0mm, H=2 for 2.0mm, H=3 for 3.0mm
Optical Insertion Loss:	<3%
Reflectivity:	<0.5%/Surface
DC Contrast Ratio:	>1000:1 (>2000:1 Typical)
Laser Polarization:	Vertical, Perpendicular to Base
Peak Optical Power Density:	250MW/cm <sup>2</sup>

### PERFORMANCE vs. WAVELENGTH

Wavelength (nm):	325	355	363	399
RF Drive Power (Watts) **:	3.0	3.5	3.8	4.3
Bragg Angle (mrad):	2.18	2.38	2.44	2.68
Separation Angle at $f_c$ (mrad):	4.36	4.77	4.89	5.36

### ESTIMATED PERFORMANCE vs. BEAM DIAMETER at 355nm

Beam Diameter (mm):	3.0	1.0	0.5
Risetime (nsec):	320	108	55
Video Bandwidth (MHz):	1	3	6
Diffraction efficiency (Typical):	86%	85%	83%

\*\* RF power listed for 3mm active aperture.  
For the 2mm version, scale by 2/3  
For the 1mm version, scale by 1/3

#### ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

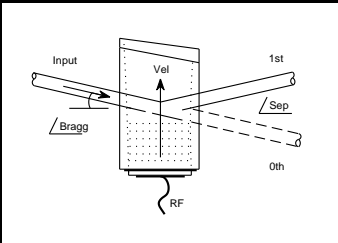
ISOMET CORP, 5263 Port Royal Rd, Springfield, VA 22151, USA.

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



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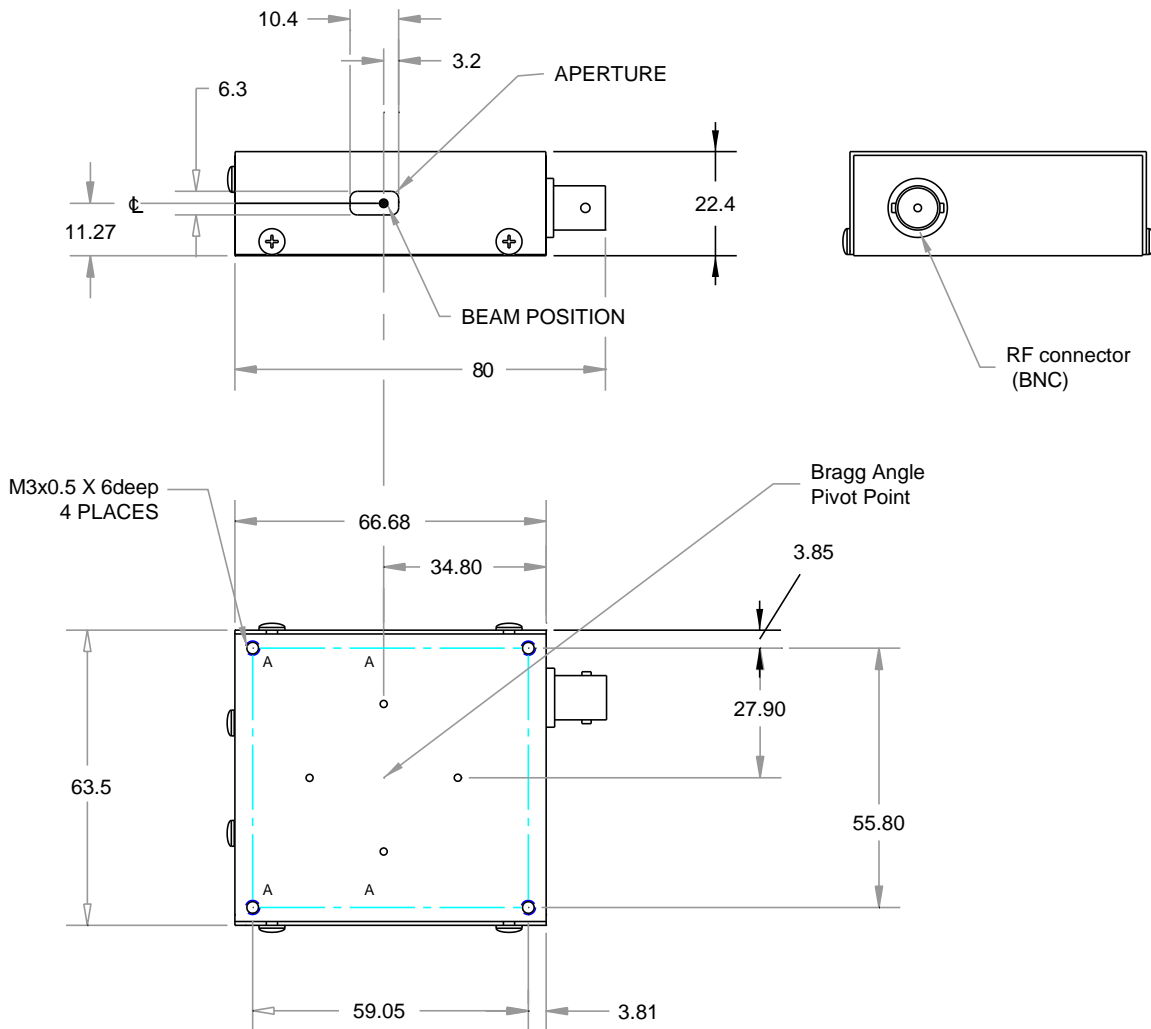
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### Suggested Drive Electronics

<u>Freq' Source</u>	<u>Amplitude control</u>	<u>Digital (On:Off)</u>	<u>Analog (Proportional)</u>
Fixed frequency		522C-4	532C-4
VCO, tuneable		620A-4-80	630A-4-80
Programmable Synthesizer			iSPA-SF1-a

### OUTLINE DRAWING

Dim'n : mm



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