

# M1201E-SF40-1.7

## Acousto-Optic Modulator



1014

### APPLICATIONS

- Intensity Modulator
- Frequency Shifter

### FEATURES

- 7MHz Video Bandwidth
- Good Temperature Stability

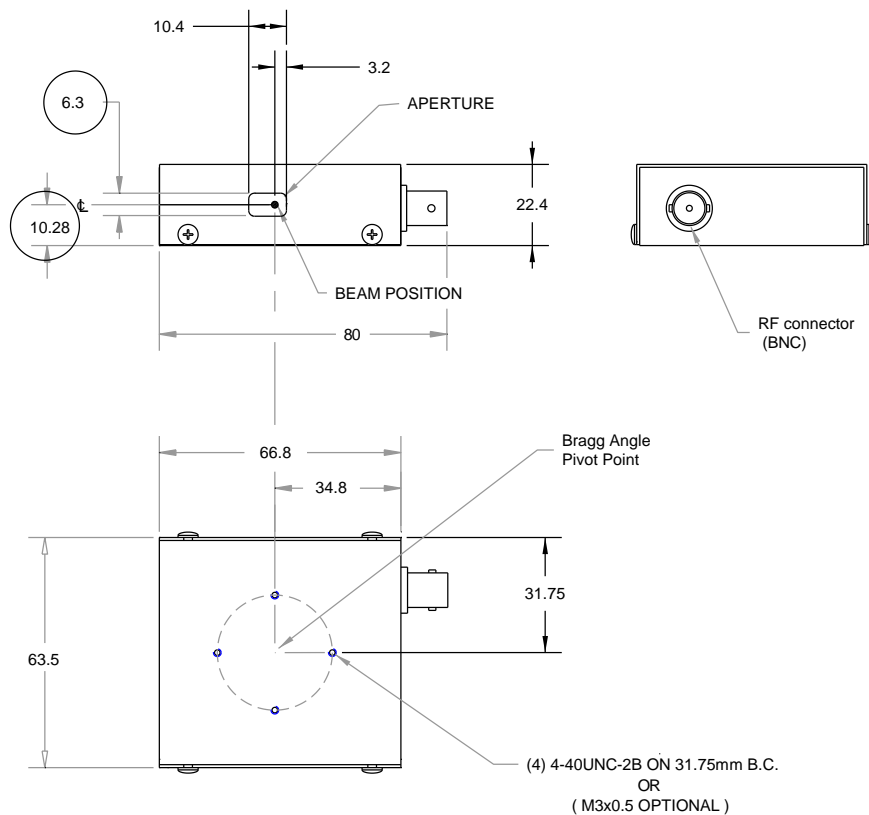
### MODEL NUMBER

M1201E-SF40-1.7V  
M1201E-SF40-1.7N

### OPERATING WAVELENGTH

440nm- 633nm  
NIR/1.06 $\mu$ m

### OUTLINE DRAWING



ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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

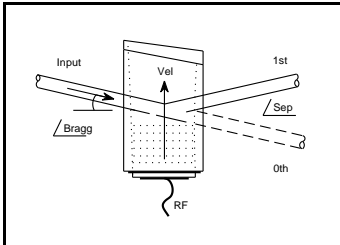
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Quality Assured.

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



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## Acousto-Optic Modulator



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### SPECIFICATIONS

|                        |                                    |
|------------------------|------------------------------------|
| A/R Spectral Range:    | 440-633nm, or 1.06 $\mu$ m         |
| Interaction Medium:    | Dense Flint Glass                  |
| Acoustic Velocity:     | 3.509mm/ $\mu$ s                   |
| Active Aperture:       | 1.7mm                              |
| Centre Frequency (CF): | 40MHz                              |
| Input Impedance:       | 50 $\Omega$                        |
| Input VSWR:            | <1.5:1 @ 40MHz                     |
| Optical Power Density: | 80KW/cm <sup>2</sup> Gaussian Beam |
| DC Contrast Ratio:     | >1000:1 min (2000:1 typical)       |

### PERFORMANCE vs. WAVELENGTH

|                             |     |     |     |      |
|-----------------------------|-----|-----|-----|------|
| Wavelength (nm):            | 442 | 515 | 633 | 1060 |
| Drive Power (W):            | 0.8 | 1.1 | 1.6 | 6.0  |
| Bragg Angle (mr):           | 2.5 | 3.0 | 3.6 | 6.0  |
| Beam Separation (mr)        | 5.0 | 5.9 | 7.2 | 12.0 |
| Static Insertion Loss (%)*: | 15  | 6   | 6   | 5    |

### PERFORMANCE vs. BEAM DIAMETER

|                                   |     |     |     |                  |
|-----------------------------------|-----|-----|-----|------------------|
|                                   |     |     |     | (440-633nm only) |
| Beam Diameter (mm):               | 1.7 | 1.0 | 0.5 | 0.25             |
| Rise Time*:                       | 315 | 185 | 93  | 46               |
| Video Bandwidth (MHz):            | 1.2 | 1.9 | 3.8 | 7                |
| Deflection Efficiency (% @ C.F.): | 90  | 90  | 90  | 70               |

### DRIVERS:

|                         | <u>DIGITAL MODULATION</u> | <u>ANALOG MODULATION</u> |
|-------------------------|---------------------------|--------------------------|
| <b>M1201E-SF40-1.7V</b> | 521C                      | 531C                     |
| <b>M1201E-SF40-1.7N</b> | 521C-6                    | 531C-6                   |

\*TEM<sub>00</sub> Gaussian Beam profile

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