

# M1206-P110L-0.5, -1 (1550nm)



## Acousto-Optic Modulator

0419

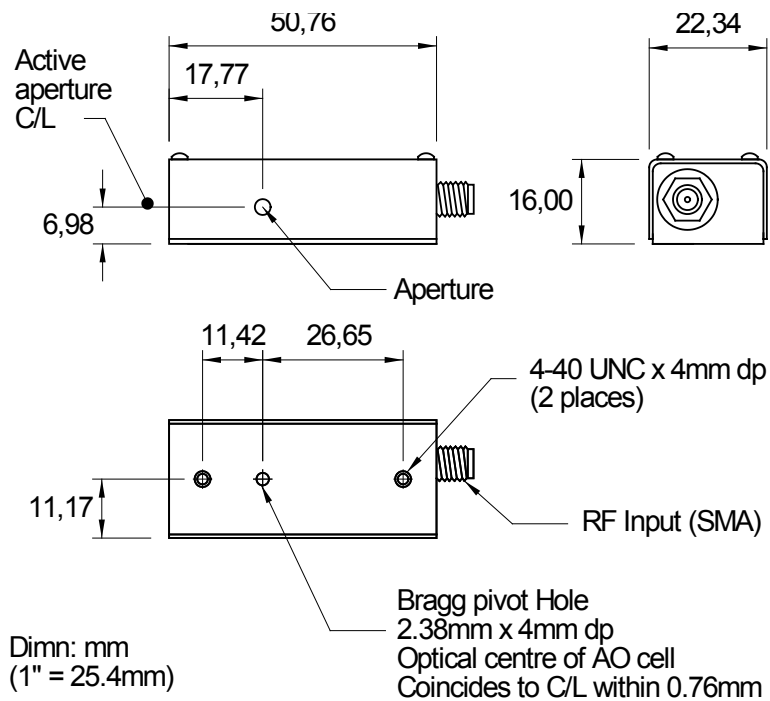
### APPLICATIONS

- Modulator
- Low Resolution Deflector
- Frequency Shifter

### RF DRIVERS

|                          |                       |
|--------------------------|-----------------------|
| Digital modulation       | 523C-2                |
| Analog modulation        | 533C-2                |
| Dual modulation          | 553F-2                |
| Tuneable with modulation | 630C-110 / iSPA-SF1-w |

### OUTLINE DRAWING



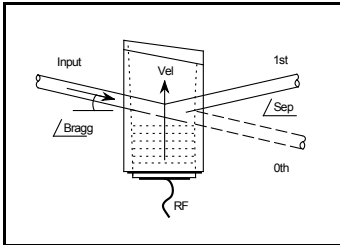
Option:

Metric fixing holes, M3-0.5 thread: add suffix -M

**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](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



# M1206-P110L-0.5, -1 (1550nm)

## Acousto-Optic Modulator



0419

### SPECIFICATIONS

|                            |   |
|----------------------------|---|
| A/R Operating Wavelengths: | 1550nm  |
| Interaction Medium:        | Lead Molybdate (PbMoO <sub>4</sub> )            |
| Acoustic Velocity:         | 3.63mm/μs                                       |
| <b>Model:</b>              | <b>M1206-P110L -0.5                      -1</b> |
| Active Aperture:           | 0.5mm                      1.0mm                |
| Centre Frequency (CF):     | 110MHz  |
| RF Bandwidth (minimum):    | 50MHz (+/- 25MHz)                               |
| Input Impedance:           | 50Ω Nominal                                     |
| VSWR:                      | <1.5:1 @ 110MHz                                 |
| DC Contrast Ratio:         | >1000:1 min (>2000:1 typical)                   |

### CHARACTERISTICS at 1550nm

|                                       |   |
|---------------------------------------|---|
| <b>Model:</b>                         | <b>M1206-P110L -0.5                      -1</b> |
| <b>Peak</b> RF Drive Power* :         | 4W                      8W                      |
| (Maximum average or CW power = 1.8W). |   |
| Bragg angle:                          | 23.5 mrad                                       |
| Beam Separation:                      | 47.0 mrad                                       |
| Static Insertion Loss:                | < 3%  |

### PERFORMANCE vs. BEAM DIAMETER at 1550nm

|                                    |                          |              |
|------------------------------------|--------------------------|--------------|
| Beam Diameter:                     | <b>0.5mm</b>             | <b>1.0mm</b> |
| Rise Time:                         | 92ns                     | 178ns        |
| Modulation Bandwidth @ MTF of 0.5: | 3.8 MHz                  | 2 MHz        |
| Typical Deflection Efficiency at:  | 25% of peak RF power:    | >40%         |
|                                    | * 50% of peak RF power:  | >65%         |
|                                    | * 75% of peak RF power:  | >80%         |
|                                    | * 100% of peak RF drive: | >85%         |

\*Duty cycled operation. Maximum average or CW power = 1.8W.

**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**