

# M1135-T80L

## Acousto-Optic Modulator



0109

Compact AO Modulator designed for High Power NIR Fibre and DPSS laser applications

### SPECIFICATIONS

|                           |   |
|---------------------------|---|
| Spectral Range:           | 0.36 > 1.5 $\mu$ m  |
| Standard A/R Wavelengths: | 1.03 -1.1 $\mu$ m   |
| Interaction Medium:       | Tellurium Dioxide (TeO <sub>2</sub> )   |
| Acoustic Velocity:        | 4.2mm/ $\mu$ s  |
| Centre Frequency (Fc):    | 80MHz   |
| RF Bandwidth:             | 30MHz   |
| Input Impedance:          | 50 $\Omega$ Nominal   |
| VSWR:                     | <1.5:1 @ Fc   |
| Clear Aperture:           | 6.5mm   |
| Active Aperture Height:   | 3mm   |
| Static Insertion Loss     | <3% at 1.1 $\mu$ m  |
| Reflectivity:             | < 0.5%/Surface  |
| Laser Polarization:       | Any   |
| DC Contrast Ratio:        | >1000:1 min (>2000:1 typical)   |
| Cooling:                  | Water cooled base plate<br>Corrosion inhibitor strongly recommended<br>Thermal interlock switch opens at 40degC |

### TYPICAL PERFORMANCE at 1.1 $\mu$ m

|   |                 |     |                                    |
|---|-----------------|-----|------------------------------------|
| Optical Power:                          | 100 Watts CW ** |     |                                    |
| Beam Diameter (mm):                     | 2.8             | 1.6 |                                    |
| Optical Rise Time (ns):                 | 430             | 245 |                                    |
| Modulation Bandwidth (MHz) @ MTF = 0.5: | 0.8             | 1.4 |                                    |
| Deflection Efficiency (% @ CF) * :      | >85             | >85 | Polarization Perpendicular to Base |
|   | >80             | >80 | Polarization Horizontal to Base    |
| RF Power:                               | 6 Watts nominal |     |                                    |
| Bragg Angle:                            | 10.5 mrad       |     |                                    |
| Separation Angle at fc :                | 21.0 mrad       |     |                                    |

\* Single mode input

\*\* For higher powers please contact Isomet

**ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE**

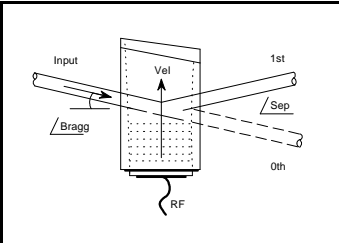
ISOMET CORP, 5263 Port Royal Rd, Springfield, VA 22151, USA.

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**



# M1135-T80L

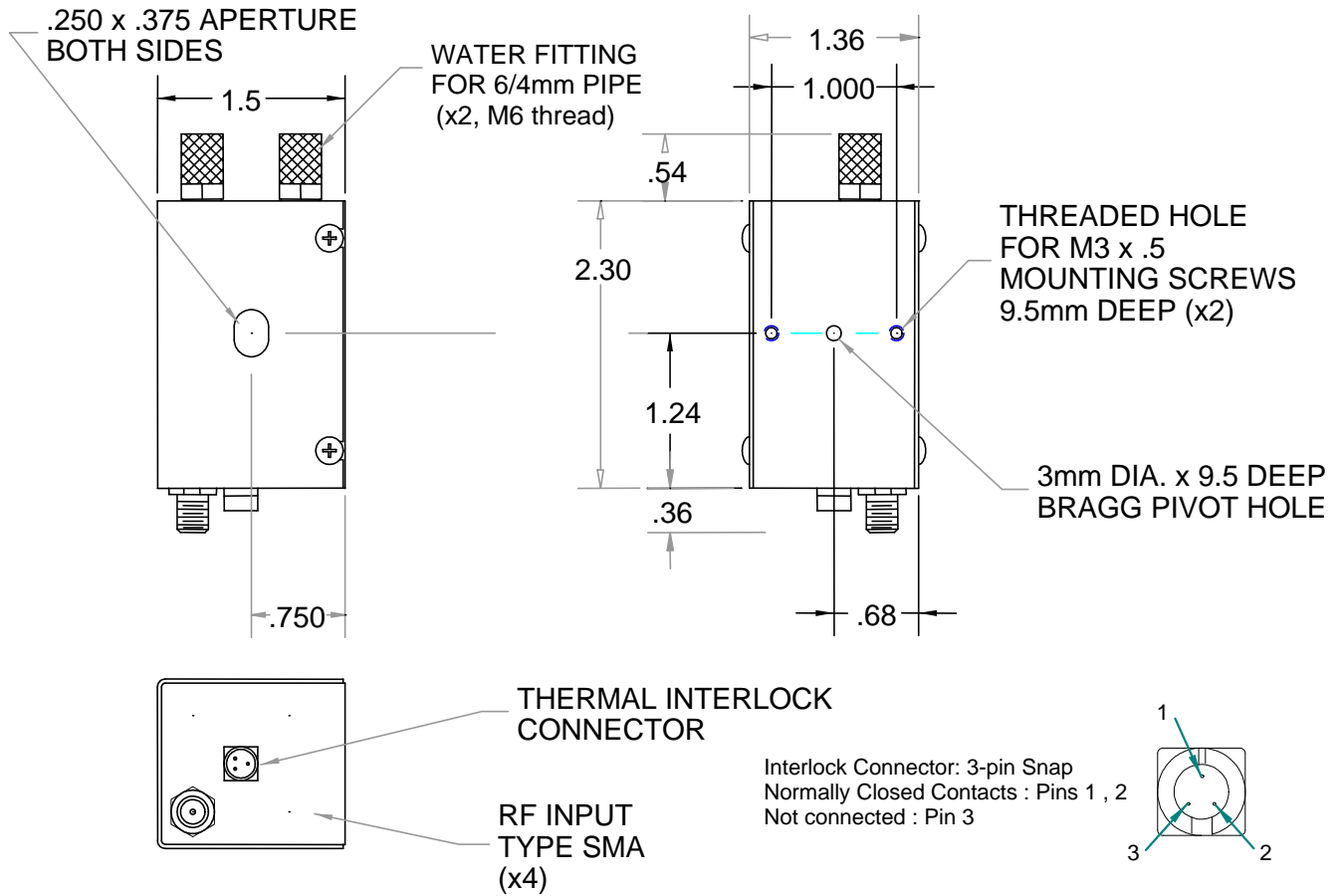
## Acousto-Optic Modulator



0109

### OUTLINE DRAWING

Dimensions: Inches



### Recommended Driver

Model 522c-7 (Digital Modulation)

Model 532c-7 (Analog Modulation)

**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