**M1208-G80-3**  
**IR Acousto-Optic Modulator**  
(Metric)

**SPECIFICATIONS**

- **Standard A/R Spectral Range:** 9.4µm or 10.6µm "V" coat  
  (9 -11µm option available)
- **Interaction Medium:** Single Crystal Germanium
- **Acoustic Velocity:** 5.5mm/µs
- **Centre Frequency (fc):** 80MHz
- **RF Bandwidth (∆f):** 5MHz
- **Input Impedance:** 50Ω
- **Input VSWR:** < 1.5:1 at 80MHz
- **Optical Insertion Loss:** < 5%
- **Reflectivity (average across range):** < 1%/surface
- **Laser Polarization:** Linear Horizontal, Parallel to Base
- **Optical Power (Maximum):** 50 Watts (full aperture)
- **Active Aperture:** 3 mmH x 8 mmL
- **Water Cooling (minimum):** 2 litre/minute at < 20ºC
- **Outline Dimensions:** (See reverse)

**TYPICAL PERFORMANCE**

- **Input beam diameter:** 3mm
- **Optical access time:** 0.35µs
- **Diffraction Efficiency:** > 80%
- **Optical Power:** 50 Watts *

<table>
<thead>
<tr>
<th><strong>Wavelength:</strong></th>
<th>9.4µm</th>
<th>10.6µm</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RF Drive Power:</strong></td>
<td>&lt; 55W</td>
<td>&lt; 65W</td>
</tr>
<tr>
<td><strong>Bragg Angle (mrad):</strong></td>
<td>34.1</td>
<td>38.5</td>
</tr>
<tr>
<td><strong>Separation Angle (mrad):</strong></td>
<td>68.2</td>
<td>77.1</td>
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</table>

* For higher powers please contact Isomet

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**ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE**

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Quality Assured.  
In-house: Crystal Growth, Optical Polishing, A/R coating, Vacuum Bonding
Due to RF drive power dissipation, the M1208 requires water-cooling to prevent thermal runaway (>2L/min at < 20degC). The integral NC thermal interlock switch opens at 32 deg C.

The water cooled case parts are aluminium. It is strongly recommended that a corrosion inhibitor is added to the cooling system.

**DRIVERS**

**Modulator Driver/Amplifier**

**RFA281**