The M1142 is low dispersion Glass AOM designed primarily for Ti:Sapphire laser applications. This model offers a good compromise between diffraction efficiency and pulse stretching characteristics.

**SPECIFICATIONS**

- Interaction Material: SF57
- Optical path length: 11mm
- Refractive Index: 1.8
- Standard Operating Wavelengths: 700nm - 1064nm
- Polarization: Vertical preferred
- Acoustic Velocity: 3411 m/s
- Active Aperture: 0.5 mm
- Centre Frequency: 80 MHz
- RF Bandwidth: 30 MHz
- Input Impedance: 50 ohms (Nominal)
- VSWR: < 1.5:1 @ 80 MHz
- DC. Contrast Ratio: > 1000:1 min (2000:1 typical)
- Static Insertion Loss: ≤ 3.0%

**DRIVERS**

- 522C-2 (DIGITAL MODULATION)
- 532C-2 (ANALOG MODULATION)
M1142-SF80L-0.5
Acousto-Optic Modulator

**PERFORMANCE vs. WAVELENGTH**

<table>
<thead>
<tr>
<th>Wavelength:</th>
<th>780nm</th>
<th>830nm</th>
<th>1064nm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saturation RF Power:</td>
<td>≤ 3.0W</td>
<td>≤ 3.4W</td>
<td>≤ 5.6W</td>
</tr>
<tr>
<td>Separation Angle @ 80 MHz:</td>
<td>18.3mrad</td>
<td>19.5mrad</td>
<td>25.0mrad</td>
</tr>
<tr>
<td>Bragg Angle @ 80MHz:</td>
<td>9.1mrad</td>
<td>9.7mrad</td>
<td>12.5mrad</td>
</tr>
</tbody>
</table>

*(RF Drive 2.5W, Beam diameter 200um)*

<table>
<thead>
<tr>
<th>Diffraction Efficiency:</th>
<th>&gt;80%</th>
<th>&gt;75%</th>
<th>&gt;60%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rise Time:</td>
<td>40ns</td>
<td>40ns</td>
<td>42ns</td>
</tr>
</tbody>
</table>

**OUTLINE DRAWING**

Dimn: mm
(1" = 25.4mm)