**M1212-aQ150-2**

Acousto-Optic Modulator/Frequency Shifter

for use with UV LASERS

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**SPECIFICATIONS**

- **Operating Wavelength:** 257nm, 355nm (other AR coatings available)
- **Material:** Quartz
- **Acoustic velocity:** 5.7mm/usec
- **Center Frequency:** 150 MHz
- **RF Bandwidth:** 40 MHz
- **Diffraction Efficiency:** > 85%
- **Input Impedance:** 50Ω (Nominal)
- **Input VSWR:** < 1.5:1 @ 150MHz
- **Active Aperture:** 2.0mm
- **Optical Insertion Loss:** < 5%
- **Reflectivity:** < 0.5%/Surface
- **DC Contrast Ratio:** >1000:1 min (2000:1 typical)
- **Laser Polarization:** Vertical, Perpendicular to Base
- **Outline Dimensions:** (See Reverse Side)

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**PERFORMANCE vs. WAVELENGTH**

<table>
<thead>
<tr>
<th>Wavelength (nm)</th>
<th>257</th>
<th>355</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF Drive Power (Watts)</td>
<td>2.6</td>
<td>5</td>
</tr>
<tr>
<td>Bragg Angle (mrad)</td>
<td>3.38</td>
<td>4.67</td>
</tr>
<tr>
<td>Separation Angle (mrad)</td>
<td>6.76</td>
<td>9.34</td>
</tr>
</tbody>
</table>

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**PERFORMANCE vs. BEAM DIAMETER at 257nm**

<table>
<thead>
<tr>
<th>Beam Diameter (mm)</th>
<th>1.0</th>
<th>0.25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risetime (nsec)</td>
<td>112</td>
<td>30</td>
</tr>
<tr>
<td>Video Bandwidth (MHz)</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>Diffraction efficiency (min %)</td>
<td>85</td>
<td>80</td>
</tr>
</tbody>
</table>

*for 2.4W RF driver power*

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**Suggested RF Drive Electronics:**

- Digital modulation: 524C-4
- Analog modulation: 534C-4
- Dual modulation: 554F-4
- Tuneable with modulation: 620A/630A-150
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OUTLINE DRAWING

Caution: Mount on heat conducting surface