M1099-T80L-3
Acousto-Optic Modulator

Compact AO Modulator designed for High Power NIR Fibre and DPSS laser applications. AOM is supplied with a removable water cooled base plate.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spectral Range:</td>
<td>0.36 &gt; 1.5µm</td>
</tr>
<tr>
<td>Standard A/R Wavelengths:</td>
<td>1.1µm</td>
</tr>
<tr>
<td>Interaction Medium:</td>
<td>Tellurium Dioxide (TeO2)</td>
</tr>
<tr>
<td>Acoustic Velocity:</td>
<td>4.2mm/µs</td>
</tr>
<tr>
<td>Centre Frequency (Fc):</td>
<td>80MHz</td>
</tr>
<tr>
<td>RF Bandwidth:</td>
<td>30MHz</td>
</tr>
<tr>
<td>Input Impedance:</td>
<td>50Ω Nominal</td>
</tr>
<tr>
<td>VSWR:</td>
<td>&lt;1.5:1 @ Fc</td>
</tr>
<tr>
<td>Clear Aperture:</td>
<td>6.5mm</td>
</tr>
<tr>
<td>Active Aperture Height:</td>
<td>3mm</td>
</tr>
<tr>
<td>Static Insertion Loss:</td>
<td>&lt;3% at 1.1µm</td>
</tr>
<tr>
<td>Reflectivity:</td>
<td>&lt; 0.5%/Surface</td>
</tr>
<tr>
<td>Laser Polarization:</td>
<td>Any</td>
</tr>
<tr>
<td>DC Contrast Ratio:</td>
<td>&gt;1000:1 min (&gt;2000:1 typical)</td>
</tr>
<tr>
<td>Cooling:</td>
<td>Conduction to water cooled base plate</td>
</tr>
<tr>
<td></td>
<td>(Can be substituted)</td>
</tr>
</tbody>
</table>

**TYPICAL PERFORMANCE at 1.1µm**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optical Power:</td>
<td>100 Watts CW **</td>
</tr>
<tr>
<td>Beam Diameter (mm):</td>
<td>2.8</td>
</tr>
<tr>
<td></td>
<td>1.6</td>
</tr>
<tr>
<td>Optical Rise Time (ns):</td>
<td>430</td>
</tr>
<tr>
<td></td>
<td>245</td>
</tr>
<tr>
<td>Modulation Bandwidth (MHz) @ MTF = 0.5:</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>1.4</td>
</tr>
<tr>
<td>Deflection Efficiency (% @ CF)</td>
<td>&gt;85</td>
</tr>
<tr>
<td></td>
<td>&gt;85</td>
</tr>
<tr>
<td></td>
<td>&gt;80</td>
</tr>
<tr>
<td></td>
<td>&gt;80</td>
</tr>
<tr>
<td>Polarization Perpendicular to Base</td>
<td>&gt;80</td>
</tr>
<tr>
<td></td>
<td>Polarization Horizontal to Base</td>
</tr>
<tr>
<td>RF Power:</td>
<td>4 Watts nominal</td>
</tr>
<tr>
<td>Bragg Angle:</td>
<td>10.5 mrad</td>
</tr>
<tr>
<td>Separation Angle at fc :</td>
<td>21.0 mrad</td>
</tr>
</tbody>
</table>

* Single mode input

** For higher powers please contact Isomet
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OUTLINE DRAWING
Dimensions: mm

RF INPUT SMA
WATER FITTING FOR 6/4mm PIPE
6.3 x 9.5 APERTURE

Water Cooled Base Plate removed
Holes A: Fixing Screws (2)
4/40 UNC x 3mm Deep

M3 x 0.5 THREADED HOLE
x 9.5mm DEEP, 2 PLACES
3mm DIA. PIVOT HOLE
9.5mm DEEP.

Recommended Drivers
Model 522c-4 (Digital Modulation)
Model 532c-4 (Analog Modulation)

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE
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Quality Assured.
In-house: Crystal Growth,
Optical Polishing,
A/R coating, Vacuum Bonding