The IMDD series provides the system designer with an acousto-optic modulator and associated drive electronics in a single compact package. The IMDD-T110L video input is designed for the On/Off control of laser beam intensity. A single 4 way connector provides connection to the modulation and DC inputs.

The RF drive power is adjusted by means of a 11 turn PWR ADJ potentiometer. The setting depends on the operating wavelength and desired peak efficiency.

**SPECIFICATIONS**

- **Standard Operating Wavelength:** 405-442nm *
- **Interaction Material:** Tellurium Dioxide (TeO₂)
- **Active Aperture:** 1.5mm
- **Centre Frequency (fc):** 110MHz
- **RF Bandwidth (Δf):** 30MHz
- **Frequency Accuracy:** ± 0.003%
- **Frequency Stability:** ± 0.003%
- **Digital Input:** TTL compatible
  > 2.7V = RF ON, < 0.8V = RF OFF
  (10mA input current)
- **Static Contrast Ratio:** >1500:1 min (>2500:1 typical)
- **DC Power Input:** +12Vdc or +15 Vdc at < 0.3A, diode protected
- **Connector:** JST ZH Series 4 way, 1.5mm Pitch
- **Mating Housing:** ZHR-4
- **Crimp Contacts:** BZH-003-PO.5
- **Recommended wire:** 28awg, 2 x twisted pairs

**PERFORMANCE vs. BEAM DIAMETER**

<table>
<thead>
<tr>
<th>Beam Diameter (mm)</th>
<th>1.0</th>
<th>0.34</th>
<th>0.20</th>
<th>0.14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rise Time (ns)</td>
<td>180</td>
<td>60</td>
<td>35</td>
<td>25</td>
</tr>
<tr>
<td>Modulation Bandwidth (MHz)</td>
<td>1.9</td>
<td>5.8</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Deflection Efficiency (%)</td>
<td>≥85</td>
<td>≥85</td>
<td>≥80</td>
<td>≥75</td>
</tr>
</tbody>
</table>

**PERFORMANCE vs. WAVELENGTH**

<table>
<thead>
<tr>
<th>Wavelength (nm)</th>
<th>405</th>
<th>442</th>
</tr>
</thead>
<tbody>
<tr>
<td>Static Insertion Loss</td>
<td>&lt;4.0</td>
<td>&lt;3.0</td>
</tr>
<tr>
<td>Bragg Angle (mrad)</td>
<td>5.3</td>
<td>5.8</td>
</tr>
<tr>
<td>Separation Angle (mrad)</td>
<td>10.6</td>
<td>11.6</td>
</tr>
</tbody>
</table>

* Other Anti-Reflection coatings available upon request.
** Options available
IMDD-T110L-1.5
Integrated AO Modulator & Driver

OUTLINE DRAWING

Mount device on a heat conducting surface.

Mount device on a heat conducting surface.