The OAM1141-T40S series is a compact 40MHz AOM specifically designed for acousto-optic frequency shifting. These devices have a preferred orientation and input polarization. The diffracted output polarization is rotated.

**FEATURES**
- Small Size
- Low Drive Power

**DRIVERS**
- Model 521C-L (Digital)
- Model 531C-L (Analog)

**OUTLINE DRAWING**

Coax cable can be supplied terminated in SMA connector.
OAM1141-T40S-2
AO Frequency Shifter
(Off axis)

SPECIFICATIONS

Operating Wavelength: Please specify single wavelength within A/R range
A/R options 400-700nm, 633-830nm
Interaction Material: Slow Shear TeO₂
Acoustic velocity 0.664mm/μsec
Active Aperture: 2mm
Center Frequency (fc): 40MHz
Input Impedance: 50 Ohms (nominal)
VSWR: <1.5:1 @ fc
Diffraction Efficiency: >80%
Insertion Loss: <3%

PERFORMANCE vs. WAVELENGTH

<table>
<thead>
<tr>
<th>Wavelength (nm)</th>
<th>460nm</th>
<th>690nm</th>
<th>810nm</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF Drive Power</td>
<td>110mW</td>
<td>240mW</td>
<td>330mW</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Wavelength (nm)</th>
<th>460nm</th>
<th>690nm</th>
<th>810nm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input angle θᵢ</td>
<td>7.489 deg</td>
<td>5.211 deg</td>
<td>4.796 deg</td>
</tr>
<tr>
<td>Output angle θₒ</td>
<td>5.878 deg</td>
<td>2.809 deg</td>
<td>2.015 deg</td>
</tr>
<tr>
<td>Beam Separation δ</td>
<td>1.611 deg</td>
<td>2.402 deg</td>
<td>2.781 deg</td>
</tr>
</tbody>
</table>

Input polarization: Horizontal
Outputs, polarization:
Zero order Horizontal
First order Vertical