The Q1133-aQxxL series are longitudinal (compressional) mode, conduction cooled acousto-optic Q-switches designed for use with polarized DPSS Nd:YLF and Nd:YAG lasers. These devices exhibit very low insertion loss and high damage threshold. All Isomet AO Q-switches benefit from the company’s unparalleled experience in OEM manufacturing, with all key processes maintained in-house. These include optical fabrication, A/R coating and proven high power transducer bonding technology.

Specifications

Acoustic Frequency: 40.68, 68 or 80.0MHz
Interaction Material: Quartz
Wavelength: 1047nm to 1064nm
A/R Coating: < 0.3% / surface
Active Aperture, H: 1.0, 1.5, 2.0 mm *
Clear Aperture: 4.5mm
Acoustic Mode: Longitudinal
Rise/Fall time: 114nsec / mm beam waist
Polarization: Linear
Transmission: > 99.5% (single pass)
Cavity Insertion Loss: 10% max, <5% typical
Damage Threshold: > 500MW/cm²

RF power

<table>
<thead>
<tr>
<th>H=1.0mm</th>
<th>H=1.5mm</th>
<th>H=2.0mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>6W</td>
<td>9W</td>
<td>10W</td>
</tr>
</tbody>
</table>

Diffraction Efficiency:

<table>
<thead>
<tr>
<th></th>
<th>H=1.0mm</th>
<th>H=1.5mm</th>
<th>H=2.0mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;85%</td>
<td>&gt;80%</td>
<td>&gt;75%</td>
<td></td>
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</tbody>
</table>

Cooling: Conduction
Input Impedance: 50 Ohms
VSWR: < 1.2:1

Model Selection:

<table>
<thead>
<tr>
<th>Freq</th>
<th>Active Aperture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1133</td>
<td>aQxxLH</td>
</tr>
<tr>
<td>40.68MHz</td>
<td>40</td>
</tr>
<tr>
<td>68.0MHz</td>
<td>68</td>
</tr>
<tr>
<td>80.0MHz</td>
<td>80</td>
</tr>
</tbody>
</table>
Q1133-aQxxL-H
AO Q-SWITCH

Outline Drawing

Dimensions: mm
Ensure adequate heatsinking through mounting surface, especially at higher RF powers.

Recommended Drive Electronics

RF Driver with Modulation Control
AQS1010-FC-x

* Please contact Isomet for alternative apertures.