The Q1133-FSxxL series are longitudinal (compressional) mode Fused Silica, 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.

### Preliminary Specifications

- **Acoustic Frequency:** 40.68 or 80.0MHz
- **Interaction Material:** Fused Silica
- **Wavelength:** 1047nm to 1064nm
- **A/R Coating:** < 0.2% / surface
- **Active Aperture, H:** 1.0, 1.5 mm *
- **Clear Aperture:** 4.5mm
- **Acoustic Mode:** Longitudinal (compressional)
- **Rise/Fall time:** 109nsec / mm beam waist
- **Polarization:** Linear
- **Transmission:** > 99.5% (single pass)
- **Cavity Insertion Loss:** 10% max, <5% typical
- **Damage Threshold:** > 500MW/cm²
- **RF power**
  - H=1.0mm: 10W
  - H=1.5mm: 10W
- **Diffraction Efficiency:** >75% 60%
- **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>xx L H</td>
</tr>
<tr>
<td>40.68MHz</td>
<td>40 1.0 1.0mm</td>
</tr>
<tr>
<td>80.0MHz</td>
<td>80 1.5 1.5mm</td>
</tr>
</tbody>
</table>
Q1133-FSxxL-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 Waveform Generation  AQS1010-FC-x
RF Driver with Basic Modulation control  RFA910-FC-x

* Please contact Isomet for alternative apertures.