The Q1062-FSxxS series are shear mode acousto-optic Q-switches designed for use with high power unpolarized 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:** 24.0MHz, 27.12MHz or 40.68MHz
- **Interaction Material:** Fused Silica
- **Wavelength:** 1047nm to 1064nm
- **A/R Coating:** < 0.2% / surface
- **Active Aperture, H:** 3.0, 4.0, 5.0 and 6.0 mm *
- **Clear Aperture:** 9.0mm
- **Acoustic Mode:** Shear
- **Rise/Fall time:** 173nsec / mm beam waist
- **Polarization:** Random
- **Transmission:** > 99.5% (single pass)
- **Cavity Insertion Loss:** 10% max, <5% typical
- **Damage Threshold:** > 500MW/cm²
- **RF power:** Up to 70W (aperture dependent)
- **Cooling:** Water, 22+/−5 °C, >380ml/min
- **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>Q1083-24FSxxS</td>
<td>24 3 3mm</td>
</tr>
<tr>
<td>40.68MHz</td>
<td>41 5 5mm</td>
</tr>
<tr>
<td>5</td>
<td>6 6mm</td>
</tr>
</tbody>
</table>

* Please contact Isomet for alternative apertures.*
Outline Drawing

Note: Coolant in contact with aluminium case parts

Operational Conditions
1. Operating Circumference Temperature: 5 - 40 degC
2. Operating Circumference Humidity: Less than 80% RH
   No Condensation.
3. Cooling Water: Pure Water
4. Cooling Water Temperature: 22 degC ± 5 degC
5. Cooling Water Flux: More than 0.38L/min.
6. Cooling Water Pressure: Rating 1kg/cm²
   Max 5kg/cm²

Recommended Drive Electronics
RF Driver with Modulation Control
AQS1080-FC-x