The Q1083-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: 2.0, 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 80W (aperture dependent)  
Cooling: Water, 27°+/-5 °C, >250ml/min  
Input Impedance: 50 Ohms  
VSWR: < 1.2:1

**Model Selection:**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Active Aperture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1083-FS</td>
<td>xx S H</td>
</tr>
<tr>
<td>24.0MHz</td>
<td>24 2mm</td>
</tr>
<tr>
<td>27.12MHz</td>
<td>27 4mm</td>
</tr>
<tr>
<td>40.68MHz</td>
<td>40 5mm</td>
</tr>
</tbody>
</table>

* Please contact Isomet for alternative apertures.
Q1083-FSxxS-H
AO Q-SWITCH

Outline Drawing

Note: Coolant in contact with aluminium case parts

Recommended Drive Electronics

RF Driver with Modulation Control   AQS1080-FC-x