The Q1058C-SFxxL series are conduction cooled, high efficiency acousto-optic Q-switches designed for use with polarized DPSS Nd:YLF and Nd:YAG lasers. These devices exhibit 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: 24.00 or 27.12 MHz
Interaction Material: Dense Flint
Wavelength: 1047 nm to 1064 nm
A/R Coating: < 0.5% / surface
Active Aperture, H: 1.0, 1.5 mm *
Clear Aperture: 3 mm
Acoustic Mode: Longitudinal (compressional)
Rise/Fall time: 190 nsec / mm beam waist
Polarization: Linear
Transmission: > 99.5% (single pass)
Cavity Insertion Loss: 10% max, <5% typical
Damage Threshold: > 300 MW/cm²
RF power: Up to 5 W
Diffraction Efficiency: H=1 mm, H=1.5 mm
RF = 3 W
>70% >60%
RF = 4 W
>80% >75%
RF = 5 W
>85% >80%
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>Q1058C-SFxxL-H</td>
<td>xx L H</td>
</tr>
<tr>
<td>24 MHz</td>
<td>24 1.0 1.0mm</td>
</tr>
<tr>
<td>27.12 MHz</td>
<td>27 1.5 1.5mm</td>
</tr>
</tbody>
</table>

* Please contact Isomet for alternative apertures.
Ensure adequate heaksinking 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  531C-6-27