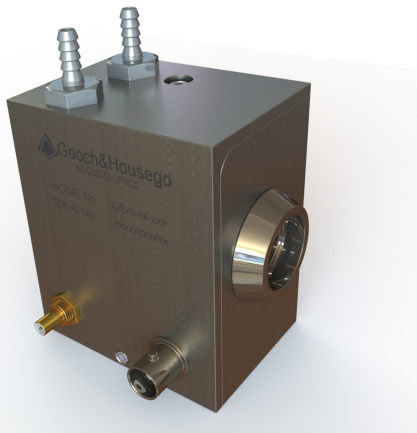


Gooch & Housego



‘Industry Standard’ Acousto-Optic Q-Switch

A water-cooled Acousto-Optic Q-Switch for use in high power lamp or diode pumped Nd:YAG lasers.

Combining top grade fused silica with high quality optical finishing and in-house anti-reflection coatings, this Q-Switch exhibits very low insertion loss and high damage threshold. It's design characteristics and repeatable manufacturing process enable RF powers of up to 100W (for shear mode options).

Standard options include a choice of RF frequency (24 to 68MHz), active apertures (1.6 – 8.0mm), acoustic modes (compressional for linear polarisation, shear for random polarisation). Custom options, including alternative mechanical designs & wavelengths are available upon request.

Our scientists and engineers are available to assist in selecting the most appropriate model of Q-Switch and also RF driver for your application.

Please contact our sales team for further information.

Key Features:

- Industry standard for Nd:YAG lasers
- High damage threshold
- Low insertion loss
- Up to 100W RF power handling
- Custom configurations available

Application examples:

- Material processing:
 - Marking
 - Engraving
 - Scribing
 - Surface treatment
- Medical (surgery)
- Scientific (PIV)



Contact: sales@goochandhousego.com

www.goochandhousego.com

As part of our policy of continuous product improvement we reserve the right to change specifications at any time

IWDS002 V1.0

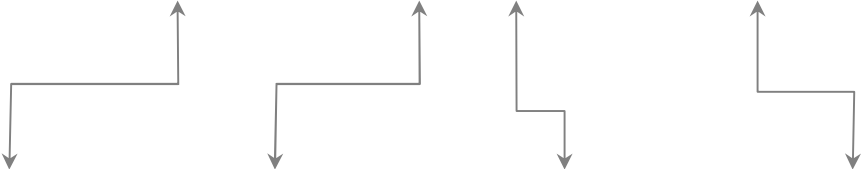
General Specifications

| | |
|---------------------------------|---|
| Interaction material: | Fused Silica |
| Wavelength: | 1064nm |
| AR coating reflectivity: | < 0.2% per surface |
| Damage threshold: | > 1GWcm ⁻² |
| Transmission (single pass): | > 99.6% |
| Static insertion loss: | ≤ 6% at 50W laser power |
| VSWR: | < 1.2:1 (<1.4:1 at 50W RF power) |
| RF power rating (maximum): | 50W cw for Compressional acoustic mode 100W cw for Shear acoustic mode |
| Water flow rate: | > 190cc / minute |
| Water-cooling channel material: | Aluminium (de-ionised water is strongly recommended) |
| Recommended water temperature: | +22°C to +32°C |
| Thermal switch cut-off: | +55°C +/- 5°C |
| Storage temperature: | 0 to +50degC |

Ordering Codes

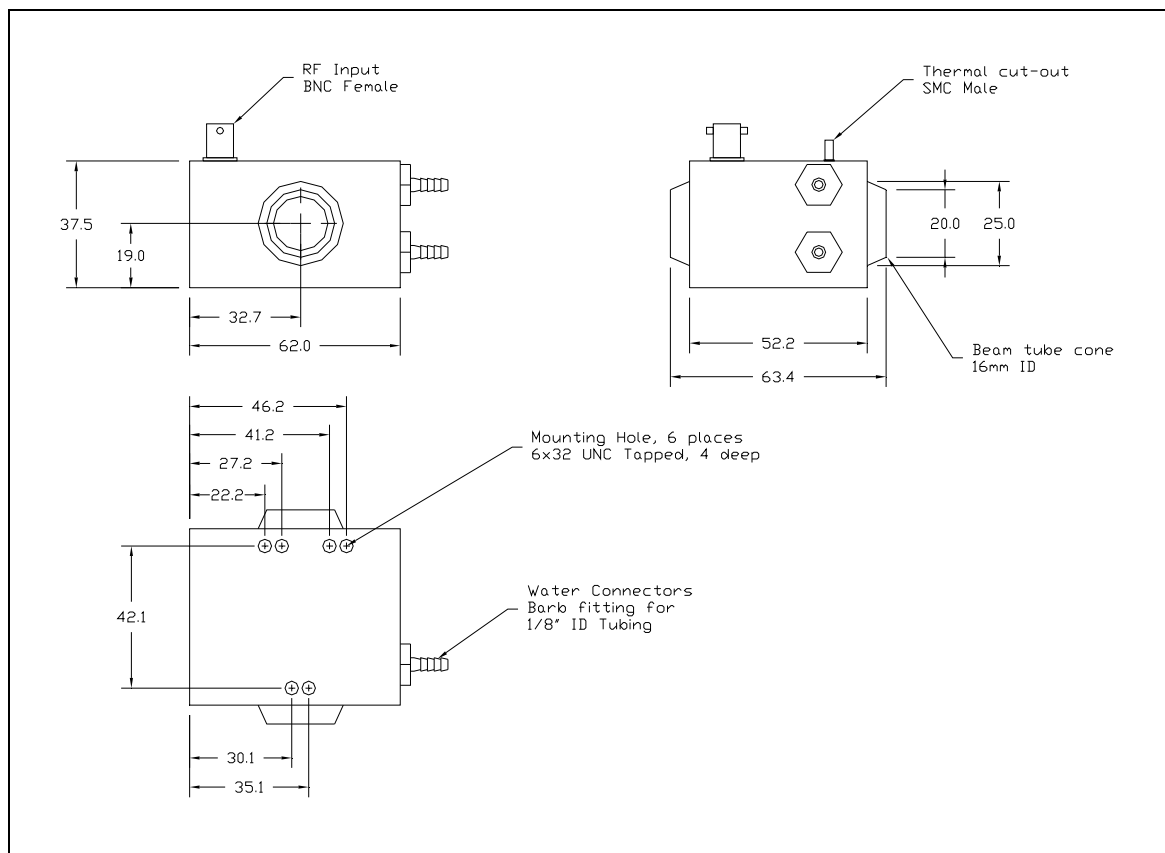
Example: I-QS027-4S4G-B5-AT1 (Q-Switch, 27.12MHz, 4mm active aperture, shear mode, fused silica, 1064nm, Barbed water-connectors, BNC, standard housing with M3 mounting holes) Note: As indicated, the -AT1 designation indicates M3 mounting holes, for imperial 6-32UNC mounting holes, no prefix is required.

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| Code | Frequency | Code | Active aperture | Code | Acoustic mode | Code | Water connector |
|------|-----------|------|-----------------|------|---------------|------|-------------------------|
| 024 | 24.00MHz | 1.6 | 1.6mm | C | Compressional | B | Barbed, push on |
| 027 | 27.12MHz | 2 | 2.0mm | S | Shear | S | Screw on (1/8" OD tube) |
| 041 | 40.68MHz | 3 | 3.0mm | | | | |
| 068 | 68.00MHz | 4 | 4.0mm | | | | |
| | | 5 | 5.0mm | | | | |
| | | 6.5 | 6.5mm | | | | |
| | | 8 | 8.0mm | | | | |

1. 40.68 & 68MHz options are only rated for use with 50W RF drive power
2. 40.68 & 68MHz options are only available in active apertures of up to 5.0mm



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