



# Gooch & Housego



## 'Super Q-Switch' Acousto-Optic Q-Switch

An innovative Q-Switch designed for use in very high power side pumped Nd:YAG lasers.

Dual-axis compressional mode transducers provide faster switching speed & improved pulse to pulse stability. Top grade Crystal Quartz, combined with our high quality optical finishing and AR coating provides excellent power handling and thermal stability.

In addition to the standard product shown, custom configurations are available for specialised applications. These include alternative housing options, wavelengths and RF frequencies.

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 the sales team for further information.

### Key Features:

- High loss modulation / hold-off
- High damage threshold
- Low insertion loss
- Maintains beam quality
- Extended temperature range
- Custom configurations available

### Application examples:

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

## General Specifications

Interaction material:	Crystal Quartz
Wavelength:	1064nm
AR coating reflectivity:	< 0.2% per surface
Damage threshold:	> 1GWcm <sup>-2</sup>
Transmission (single pass):	> 99.6%
VSWR:	< 1.3:1 (at 0dBm)
Acoustic mode:	Compressional (dual, orthogonal)
Rise-time / fall-time:	113ns/mm
RF power rating:	2 x 50W cw (max)
Water flow rate:	> 190cc / minute
Water-cooling channel material:	Aluminium ( <b>de-ionised water is strongly recommended</b> )
Thermal switch cut-off:	+65°C +/- 5°C
Storage temperature:	-20 to +70degC

## Ordering Codes

**Example: I-QS027-4D10G-B5** (Q-Switch, 27.12MHz, 4mm active aperture, Dual (orthogonal transducer), crystal quartz, 1064nm, Barbed water-connectors, BNC)

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Code	Frequency	Code	Active aperture	Code	Water connector
024	24.00MHz	1.6	1.6mm	B	Barbed, push on
027	27.12MHz	2	2.0mm	S	Screw on (1/8" OD tube)
		3	3.0mm		
		4	4.0mm		
		5	5.0mm		
		6.5	6.5mm		

