



Gooch & Housego



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

A new compressional mode, water-cooled, AO Q-Switch designed to work with high power unpolarised Nd:YAG lasers, giving faster switching & improved pulse to pulse stability.

Enhance your systems performance with greater punch and increased power.

This Q-Switch uses a dual channel driver to operate two orthogonal compressional mode transducers bonded to a single monolithic optical cell and mounted in one convenient housing. Gooch and Housego's proprietary bonding techniques and power handling technology allows this device to operate up to 50W RF power per channel giving an efficient, compact, single device for the next generation of high power, high gain, solid state lasers.

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

Key Features:

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

Applications:

Material processing:

- Laser marking
- Laser engraving
- Laser cutting
- Laser drilling

Medical (surgery)
Lithography

General Specifications

Interaction material:	Fused Silica
Wavelength:	1064nm
AR coating reflectivity:	< 0.2% per surface
Damage threshold:	> 1GWcm ⁻²
Transmission (single pass):	> 99.6%
VSWR:	< 1.2:1 (<1.4:1 at 50W RF power)
Acoustic mode:	Compressional (orthogonal)
Rise-time / fall-time:	109ns/mm
RF power rating:	2 x 50W cw (max)
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



光技術をサポートする

株式会社オプトサイエンス

<http://www.optoscience.com>

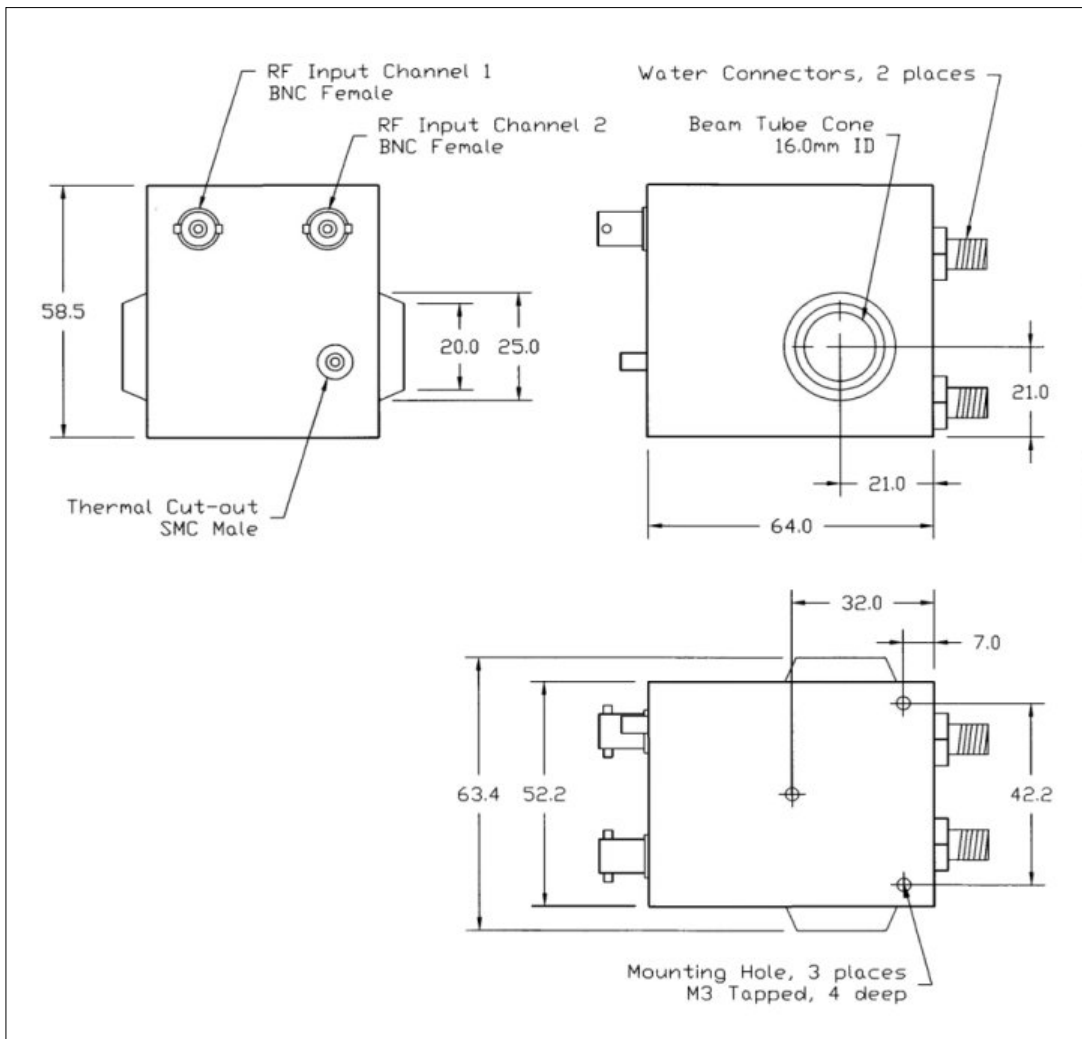
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Ordering Codes

Example: I-QS027-4D4G-B5 (Q-Switch, 27.12MHz, 4mm active aperture, Dual (orthogonal transducer), fused silica, 1064nm, Barbed water-connectors, BNC)

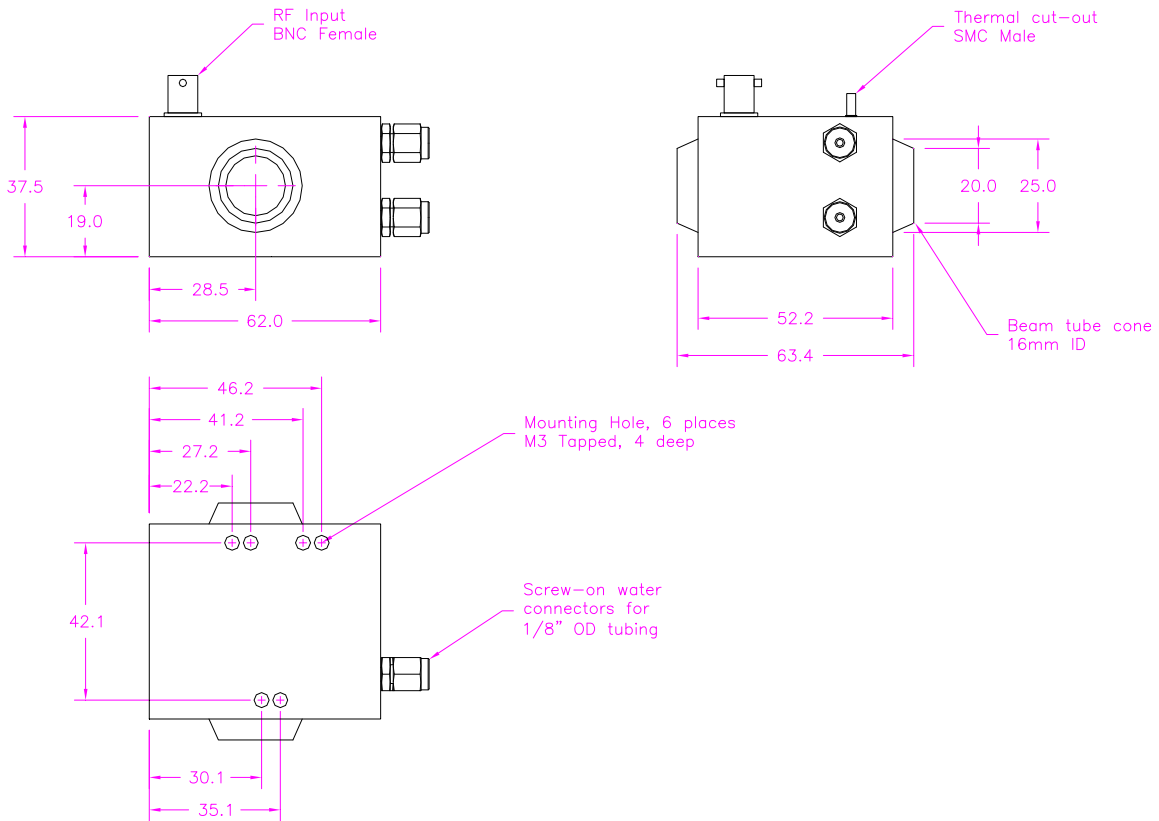
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Code	Frequency	Code	Active aperture	Code	Water connector
024	24.00MHz	1.6	1.6mm	B	Barbed, push on
027	27.12MHz	2	2.0mm	S	Screw on (1/8" OD tube)
		3	3.0mm		
		4	4.0mm		
		5	5.0mm		
		6.5	6.5mm		



I-QS027-6.5C10G-S5-GH43 Specification:

Model No:	I-QS027-6.5C10G-S5-GH43
Device:	AO Q-Switch
Interaction material:	Crystal Quartz
Wavelength:	1064nm
Damage threshold:	> 1GW/cm ²
AR coating reflectivity:	< 0.2% per surface
Transmission:	> 99.6%
Frequency:	27.12MHz
Acoustic mode:	Compressional
Polarisation:	Linear, vertical to base
Active aperture:	6.5mm
Interaction length:	46.0mm
Rise-time (10-90%):	113ns/mm
Loss modulation:	> 75%
Maximum RF power:	50W
Cooling:	Water (de-ionised)
Housing:	Refer to drawing



Revision No: 1.0
Date: 14/11/11



Certificate No. FM 28257

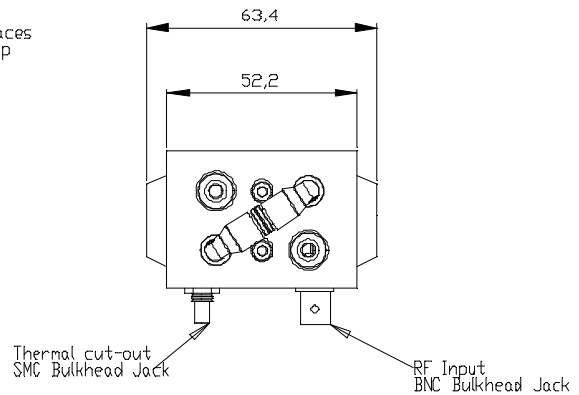
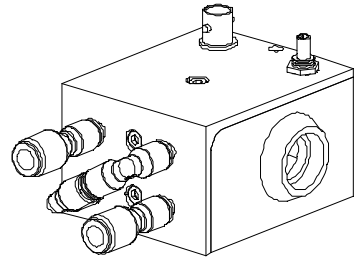
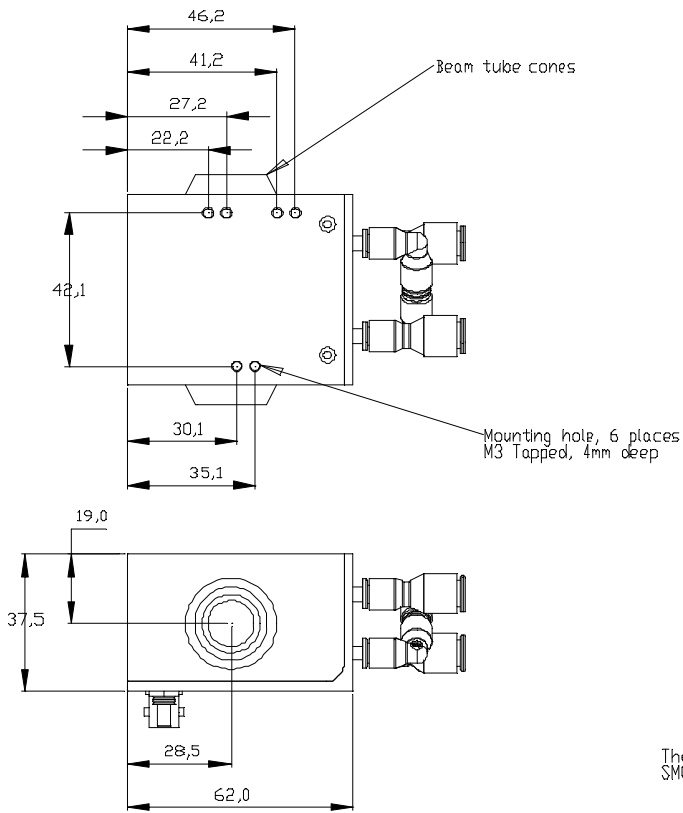
Enabling Optical Technologies

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I-QS027-6.5C10G-x5-ST3 Specification:

Model No:	I-QS027-6.5C10G-x5-ST3
Device:	AO Q-Switch
Interaction material:	Crystal Quartz
Wavelength:	1064nm
Damage threshold:	> 1GW/cm ²
AR coating reflectivity:	< 0.2% per surface
Transmission:	> 99.6%
Frequency:	27.12MHz
Optical polarisation:	Linear, vertical to base
Active aperture:	6.5mm
Acoustic mode:	Compressional
Loss modulation:	> 75%
Maximum RF power:	50W
Water flow rate:	> 0.2l / minute
Recommended water temperature:	22°C to 32°C
Thermal switch cut-off:	65°C ± 5%
Housing:	Stallion, St/St 316 water channels
Water connectors:	To be specified ¹



¹ Choice of 4mm or 6mm OD / straight or right angle push-in type, 6mm OD straight push-in type illustrated.

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