

M1189A-G40L-4

IR Acousto-Optic Modulator



0115

Small water cooled Germanium AO modulator ideal for compact IR laser applications or Q-switching of CO₂ lasers.

SPECIFICATIONS

A/R Spectral Range:	9.3µm or 10.6µm (specified)
Interaction Medium:	Single Crystal Germanium
Optical path length:	15mm
Acoustic Velocity:	5.5mm/µs
Centre Frequency (fc):	40MHz
RF Bandwidth (Δf):	10MHz
Input Impedance:	50Ω
Input VSWR:	< 1.7:1 at 40MHz
Optical Insertion Loss:	< 3.5%
Reflectivity:	< 0.5%/Surface
Laser Polarization:	Linear Horizontal, Parallel to Base
Active Aperture:	4 mmH x 10 mmL (alternatives available)
Water Cooling (minimum):	1litre/minute at < 20°C
Outline Dimensions:	(See reverse)

TYPICAL PERFORMANCE

<u>Input beam diameter:</u>	<u>3mm</u>	
Optical access time:	0.35us	
Diffraction Efficiency:	> 70% for 50W (9.23µm) > 60% for 50W (10.6µm)	
Optical Power:	200 Watts *	
Bragg Angle:	<u>9.3µm</u> 33.9 mrad	<u>10.6µm</u> 38.6 mrad
Separation Angle:	67.7 mrad	77.1 mrad

CAUTION when applying CW RF powers in excess of 50W

* For higher powers please contact Isomet

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

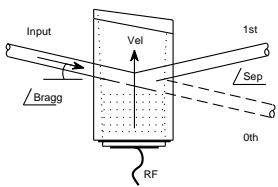
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Quality Assured.

**In-house: Crystal Growth,
Optical Polishing,
A/R coating, Vacuum Bonding**



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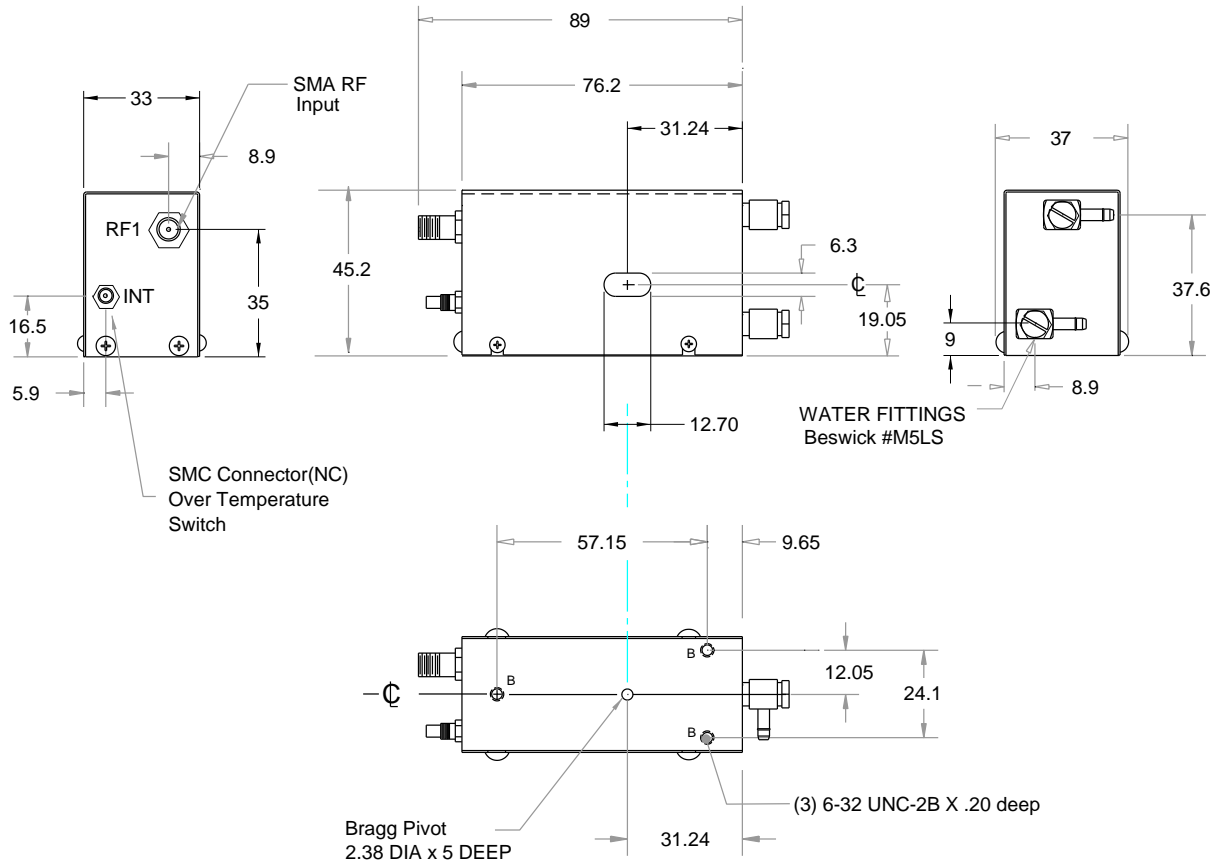
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OUTLINE DRAWING

Dimn: inches



Add -M for metric mounting threads

Refer application note AN0901 regarding Coolant Specification

Due to RF drive power dissipation, the M1189 requires water-cooling to prevent thermal runaway. (>1L/min at < 20degC). The integral NC thermal interlock switch opens at 32 degC.

The water cooled case parts are aluminium. It is strongly recommended that a corrosion inhibitor is added to the cooling system.

DRIVERS

Modulator Driver/Amplifier

RFA241

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