

M13xx-G13-8

PRELIMINARY

MIR Acousto-Optic Modulator

(Metric)



0416

Raman-Nath High efficiency Zero Order Modulator

SPECIFICATIONS

A/R Spectral Range:	5 - 6 μ m
Interaction Medium:	Single Crystal Germanium
Acoustic Velocity:	5.5mm/ μ s
Centre Frequency (fc):	13.56MHz
RF Bandwidth (Δ f):	5MHz
Input Impedance:	50 Ω
Input VSWR:	< 1.5:1 at fc
Optical Insertion Loss:	< 4%
Reflectivity:	< 0.5%/Surface
Laser Polarization:	Linear Horizontal, Parallel to Base
Active Aperture:	8 mmH x 8 mmL
Water Cooling (minimum):	2 litre/minute at < 20 $^{\circ}$ C
Outline Dimensions:	(See reverse)

TYPICAL PERFORMANCE

<u>Input beam diameter:</u>	<u>4mm</u>	
Optical access time:	0.47 μ s	
Diffraction Efficiency estimate	>95% , 99% goal	
Optical Power:	300 Watts (CW) *	
<u>Wavelength:</u>	<u>5.0μm</u>	<u>6.0μm</u>
RF Drive Power:	< 34W	< 50W
Input Angle (mrad):	0 +/- TBD	0 +/- TBD
Separation Angle (mrad):	12.33	14.8
between orders		

* For higher powers please contact Isomet

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

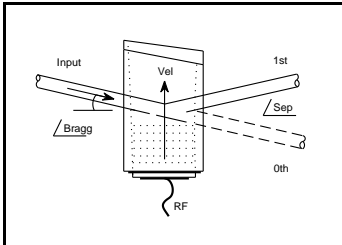
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Quality Assured.

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



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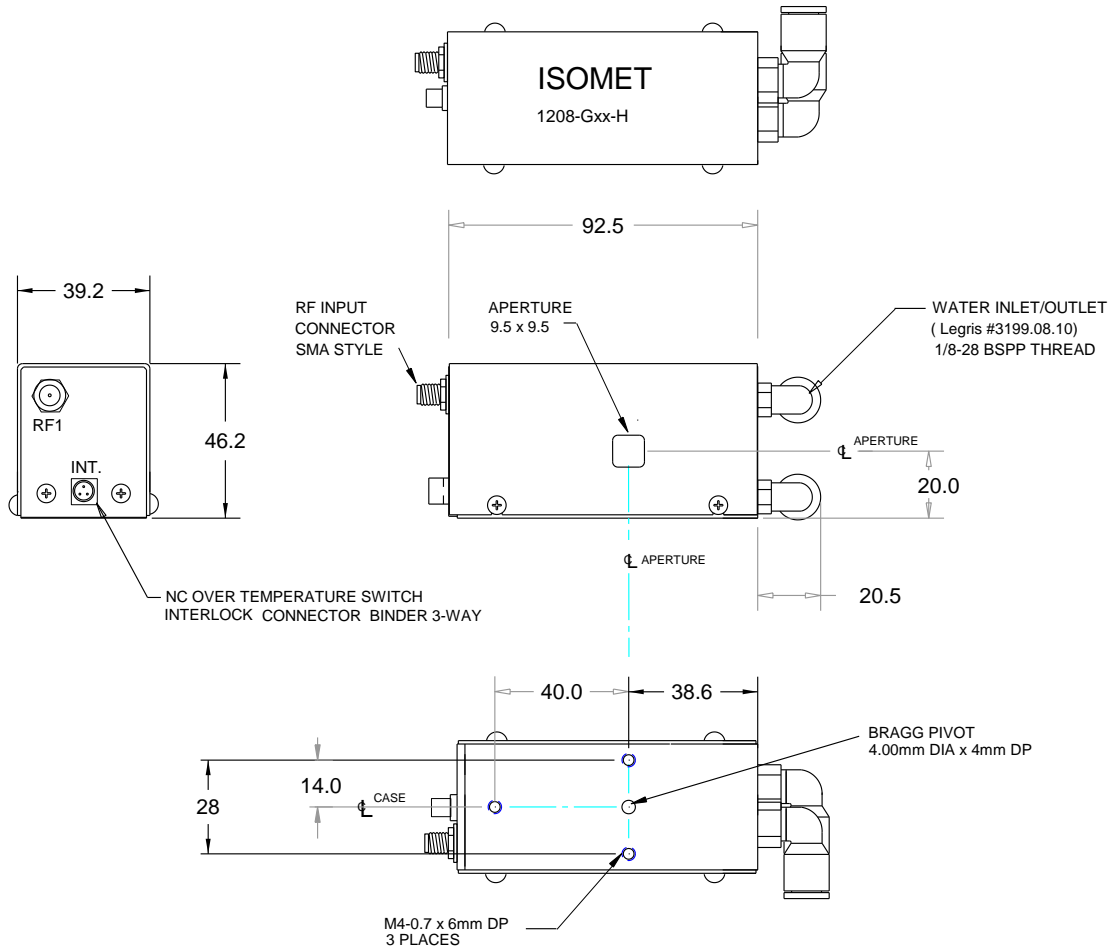
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OUTLINE DRAWING



Due to RF drive power dissipation, this device requires water-cooling to prevent thermal runaway (>2L/min at < 20degC). The integral NC thermal interlock switch opens at 32 degC.

Refer application note AN1206 regarding Coolant Specification

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

RFA213

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