

# 1209-7-1064M



## 250W IR Acousto-Optic Modulator

0115

The 1209-7-1064M is a direct replacement for the popular 1209-7-993M and features improved coolant flow.

### SPECIFICATIONS

Spectral Range:	2.5 $\mu$ m - 11 $\mu$ m
Operating Wavelength:	10.6 $\mu$ m (others on request)
Interaction Medium:	Single Crystal Germanium
Acoustic Velocity:	5.5mm/ $\mu$ s
Centre Frequency (fc):	40MHz
RF Bandwidth ( $\Delta$ f):	20MHz
Input Impedance:	50 $\Omega$
Input VSWR:	< 1.7:1 at 40MHz
Optical Insertion Loss:	< 7%
Reflectivity:	< 0.5%/Surface
Laser Polarization:	Linear Horizontal, Parallel to Base
Optical Power (Maximum):	250 Watts
Active Aperture:	7 mmH x 14 mmL
Water Cooling (minimum):	1L/minute at < 20 $^{\circ}$ C
Outline Dimensions:	(See reverse)

### TYPICAL PERFORMANCE

Input beam diameter:	3mm	7mm
Optical access time:	0.35us	0.83us
Diffraction Efficiency:	> 85%	> 85%
Optical Power *	100 Watts	250 Watts
Bragg Angle:	<u>9.3um</u> 33.9 mrad	<u>10.6um</u> 38.6 mrad
Separation Angle:	67.7 mrad	77.1 mrad
RF Power (typ):	55 W	75 W

\* For higher powers please contact Isomet

**ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE**

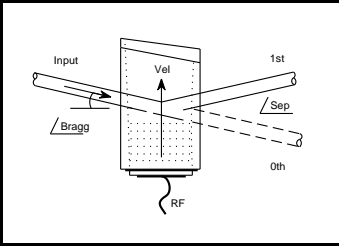
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**Quality Assured.**

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



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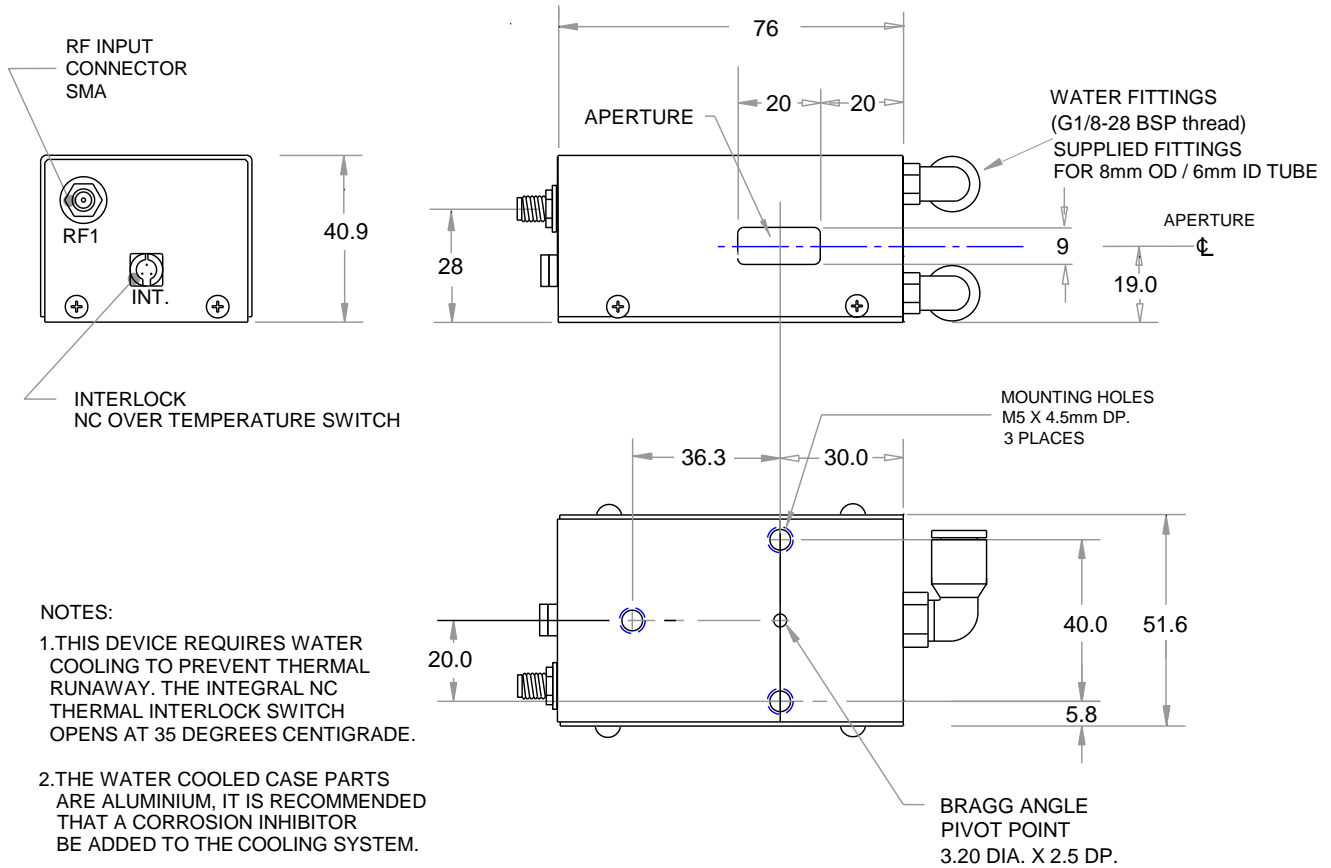
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**OUTLINE DRAWING**

Dimensions: mm

All case parts in contact with coolant are fabricated in Anodized Aluminium



**NOTES:**

1. THIS DEVICE REQUIRES WATER COOLING TO PREVENT THERMAL RUNAWAY. THE INTEGRAL NC THERMAL INTERLOCK SWITCH OPENS AT 35 DEGREES CENTIGRADE.
2. THE WATER COOLED CASE PARTS ARE ALUMINIUM, IT IS RECOMMENDED THAT A CORROSION INHIBITOR BE ADDED TO THE COOLING SYSTEM.

Refer application note AN0901 regarding Coolant Specification

**DRIVERS**

**Modulator Driver/Amplifier**  
**Deflector Driver/Amplifier**

**RFA241**  
**RFA321**

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