

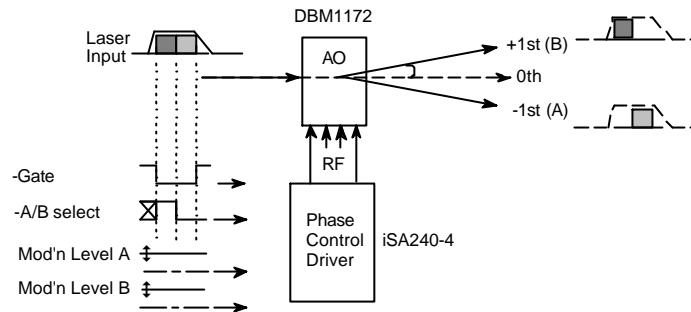
DBM1172-G41-9



Dual Beam IR Acousto-Optic Modulator

0312

The Dual Beam Modulator incorporates a novel acoustic beam steering technique to allow the user to switch between the +1 and -1 Bragg orientations. Under electronic control, the user can generate two sequential output beams from a single laser input. Independent modulation levels can be applied to the A and B first order outputs.



SPECIFICATIONS

Spectral Range:	2.5 μ m - 11 μ m
Operating Wavelength:	9.4 or 10.6 μ m (specified)
Interaction Medium:	Single Crystal Germanium
Acoustic Velocity:	5.5mm/ μ s
Centre Frequency (fc):	38.45MHz (10.6 μ m) 40.84MHz (9.4 μ m)
RF Bandwidth (Δ f):	5MHz
Input Impedance:	50 Ω
Input VSWR:	< 1.7:1 at fc
Optical Insertion Loss:	< 7%
Reflectivity:	< 0.5%/Surface
Laser Polarization:	Linear Horizontal, Parallel to Base
Optical Power :	300 Watts CW
Active Aperture:	9 mmH x 20 mmL
Water Cooling (minimum):	>2L/minute at < 20°C

TYPICAL PERFORMANCE

Input beam diameter:	7mm
Optical access time:	0.83 μ s
Diffraction Efficiency:	> 85%
Total RF Power:	120 Watts (nominal)
Input Angle:	0 mrad (+/- 10mrad)
Separation Angle (0 th to -1 st or +1 st):	+/- 74.1mrad (10.6 μ m) +/- 69.80mrad (9.4 μ m)

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

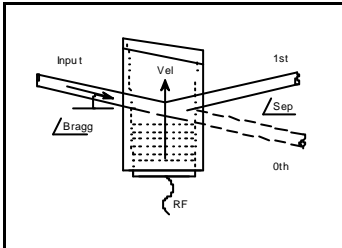
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Quality Assured.

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



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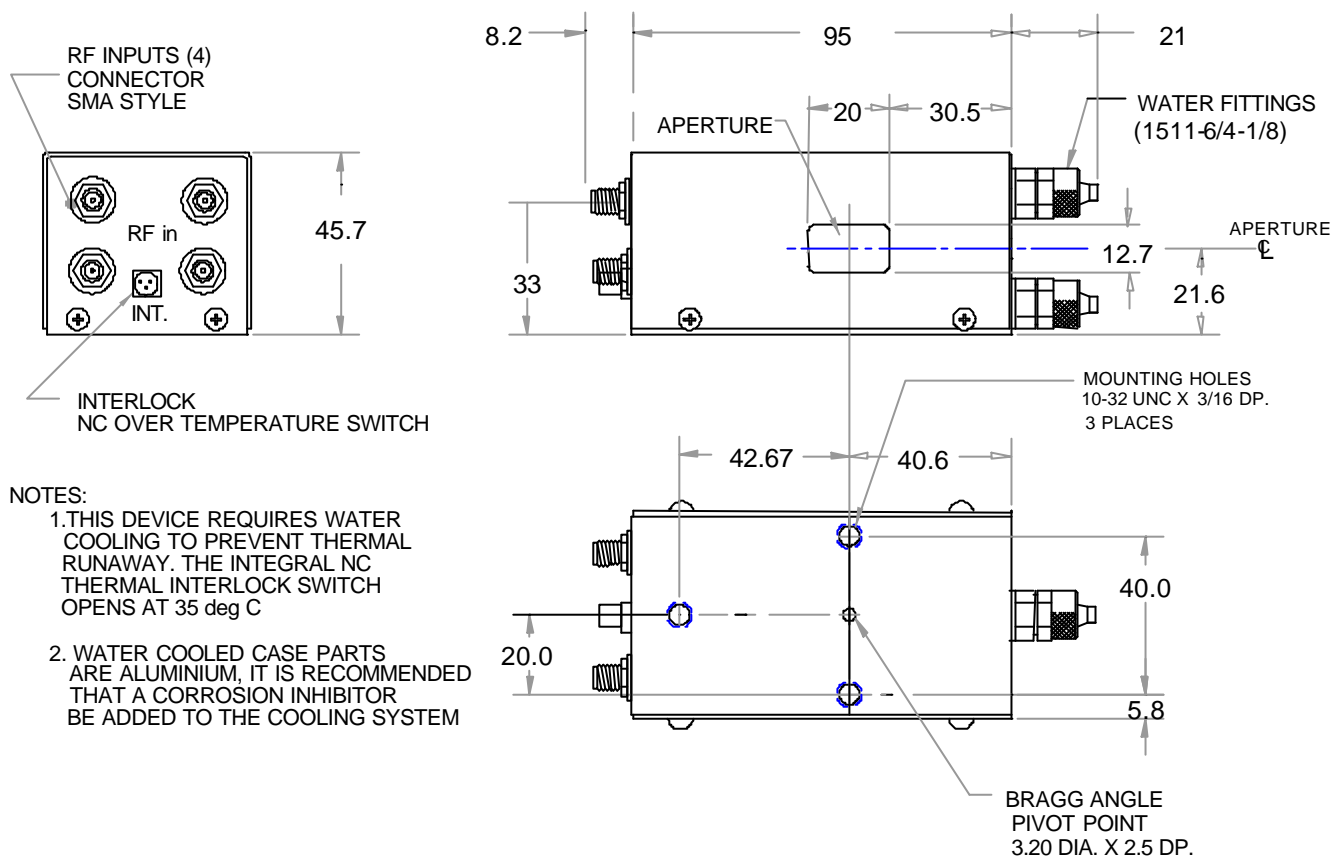


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OUTLINE DRAWING

All case parts in contact with coolant are fabricated in Nickel plated Aluminium



NOTES:

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

- Options:
- BR : Case parts in contact with coolant fabricated in Nickel plated Brass
 - M : Metric M5 mounting hole threads

DRIVERS

Modulator Driver/Amplifier

iSA241-4 (40.84MHz / 9.4um)
iSA238-4 (38.45MHz / 10.6um)

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