

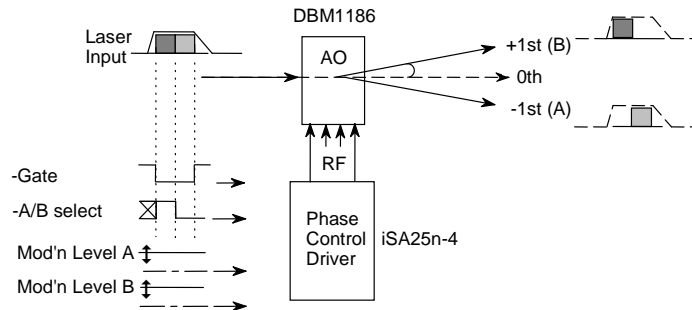
DBM1186-G54(51)-9C



Dual Beam IR Acousto-Optic Modulator

0115

The DBM1186 series Dual Beam Modulators incorporate 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. This model is optimized for pulsed laser applications.



SPECIFICATIONS

Spectral Range:	2.5 μ m - 11 μ m
Operating Wavelength:	9.3 or 10.6 μ m (specified)
Interaction Medium:	Single Crystal Germanium
Acoustic Velocity:	5.5mm/ μ s
Centre Frequency (fc):	54.0 MHz (9.4um nominal) 50.9 MHz (10.6um nominal)
RF Bandwidth (Δ f):	5MHz
Input Impedance:	50 Ω
Input VSWR:	< 1.7:1 at fc
Optical Insertion Loss:	< 4%
Reflectivity:	< 0.3%/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 $^{\circ}$ C

TYPICAL PERFORMANCE

Input beam diameter:	7mm
Optical access time:	0.83us
Diffraction Efficiency:	> 85% (88% typical)
Total RF Power:	180 Watts (nominal)
Input Angle:	0 mrad (+/- 10mrad)
Separation Angle (0 th to -1 st or +1 st):	+/- 98.1mrad (10.6um) +/- 92.3mrad (9.4um)

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

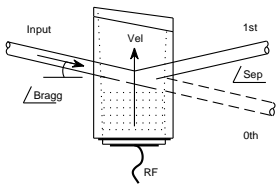
ISOMET CORP, 5263 Port Royal Rd, Springfield, VA 22151, USA.

Tel: (703) 321 8301 Fax: (703) 321 8546

E-mail: ISOMET@ISOMET.COM Web Page: WWW.ISOMET.COM

Quality Assured.

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



DBM1186-G54(51)-9C

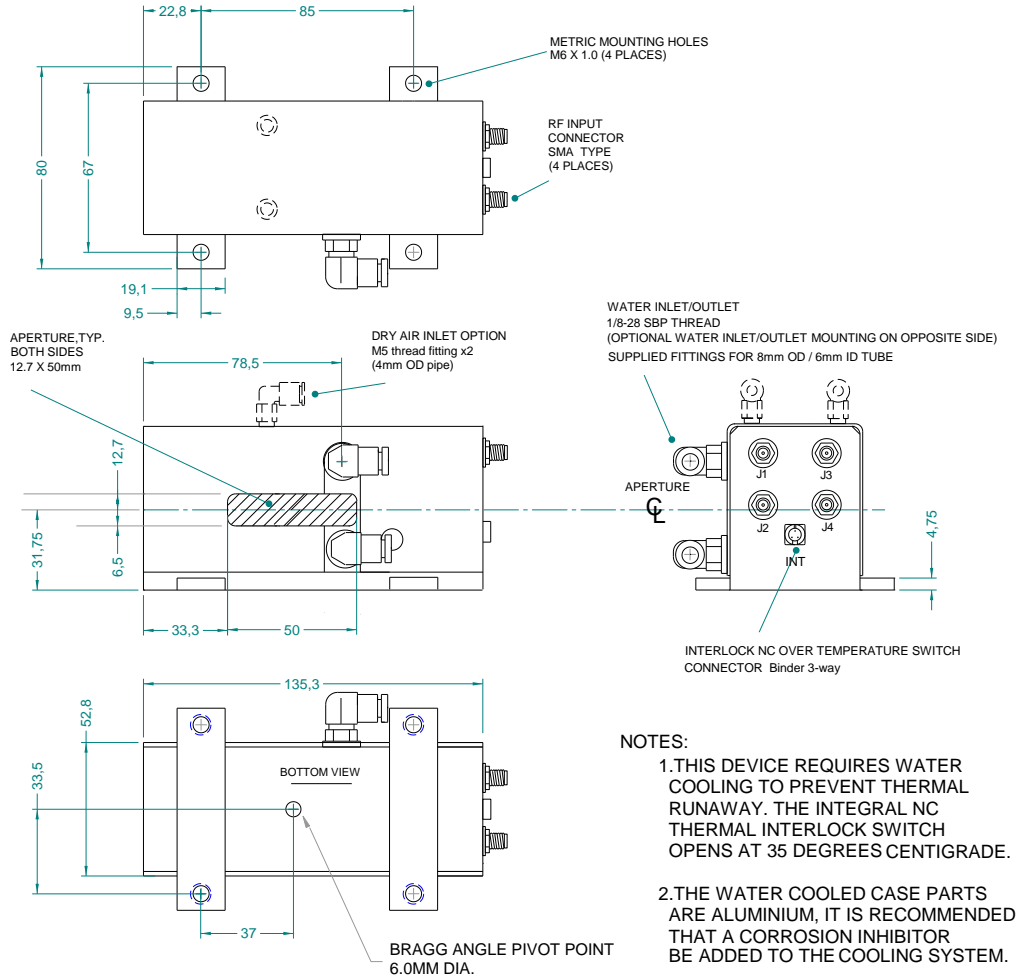


Dual Beam IR Acousto-Optic Modulator

0115

OUTLINE DRAWING

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



Dimensions: mm

Refer application note AN0901 regarding Coolant Specification

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

RF DRIVERS

Modulator Driver/Amplifier

iSA251-4 (50.9MHz / 9.4um)
iSA254-4 (54.0MHz / 10.6um)

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

ISOMET CORP, 5263 Port Royal Rd, Springfield, VA 22151, USA.

Tel: (703) 321 8301 Fax: (703) 321 8546

E-mail: ISOMET@ISOMET.COM Web Page: WWW.ISOMET.COM

Quality Assured.

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