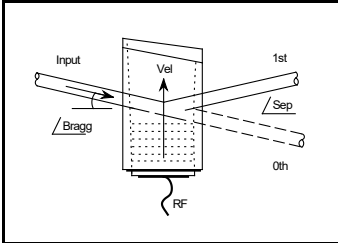


D1459-G70L-10

High Power AO Deflector

PRELIMINARY

2126



APPLICATIONS

- IR scanning
- Laser radar (ranging, tracking)
- Material processing

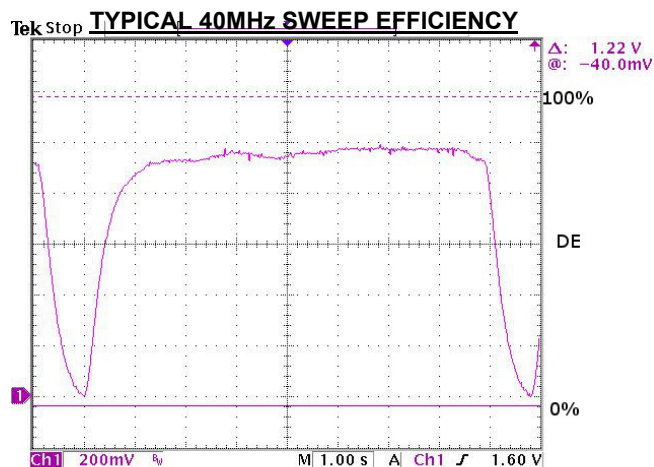
FEATURES

- High speed, high resolution
- High optical power capability
- Minimal intensity variation

The D1459 and associated RF drive electronics have been designed to maintain the Bragg relationship over the specified sweep bandwidth. This provides minimal variation of diffraction intensity across the scan angle. Diagnostics provide real time temperature measurement and RF power monitoring.

SPECIFICATIONS

Operating Wavelength*:	9.4 μ m (standard)	
Interaction Material:	Germanium	
Centre Frequency (fc):	70MHz	
FM Bandwidth:	40MHz	
Diffraction Efficiency:	> 80%	
D/E Variation vs. Freq.:	< 5% (with power and phase programming)	
RF Power for Max. D/E:	< 240 Watts total	
Static Insertion Loss:	< 4%	
Optical Power (max):	600 Watts (CW full aperture)	
Bragg Angle:	59.8 mrad.	
Separation Angle:	119.6 mrad. (@ fc)	
Scan Angle:	68.4 mrad.	
Active Aperture **:	10mmH x 45mmW	
Beam size:	10mm circular	10mmHx40mmW
Access Time:	1.8 μ sec	7.3 μ sec
Resolution - resolvable spots:	72	290
non-resolvable points:	>1000	
Laser Polarization:	Linear, Horizontal	
Water Cooling (Minimum):	2Liters/Min. @ < 20°C	
Drive Electronics ***:	iMSA4-70-4-90	



("Soft" corners in this DE sweep response are due to low detector bandwidth)

27 Apr 2014
11:05:17

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE
 ISOMET CORP, 10342 Battlevue Parkway, Manassas, VA 20109, USA.
 Tel: (703) 321 8301 Fax: (703) 321 8546
 E-mail: ISOMET@ISOMET.COM Web Page: WWW.ISOMET.COM

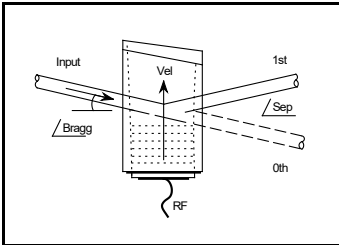
Quality Assured.
In-house: Crystal Growth,
Optical Polishing,
A/R coating, Vacuum Bonding

D1459-G70L-10

High Power AO Deflector

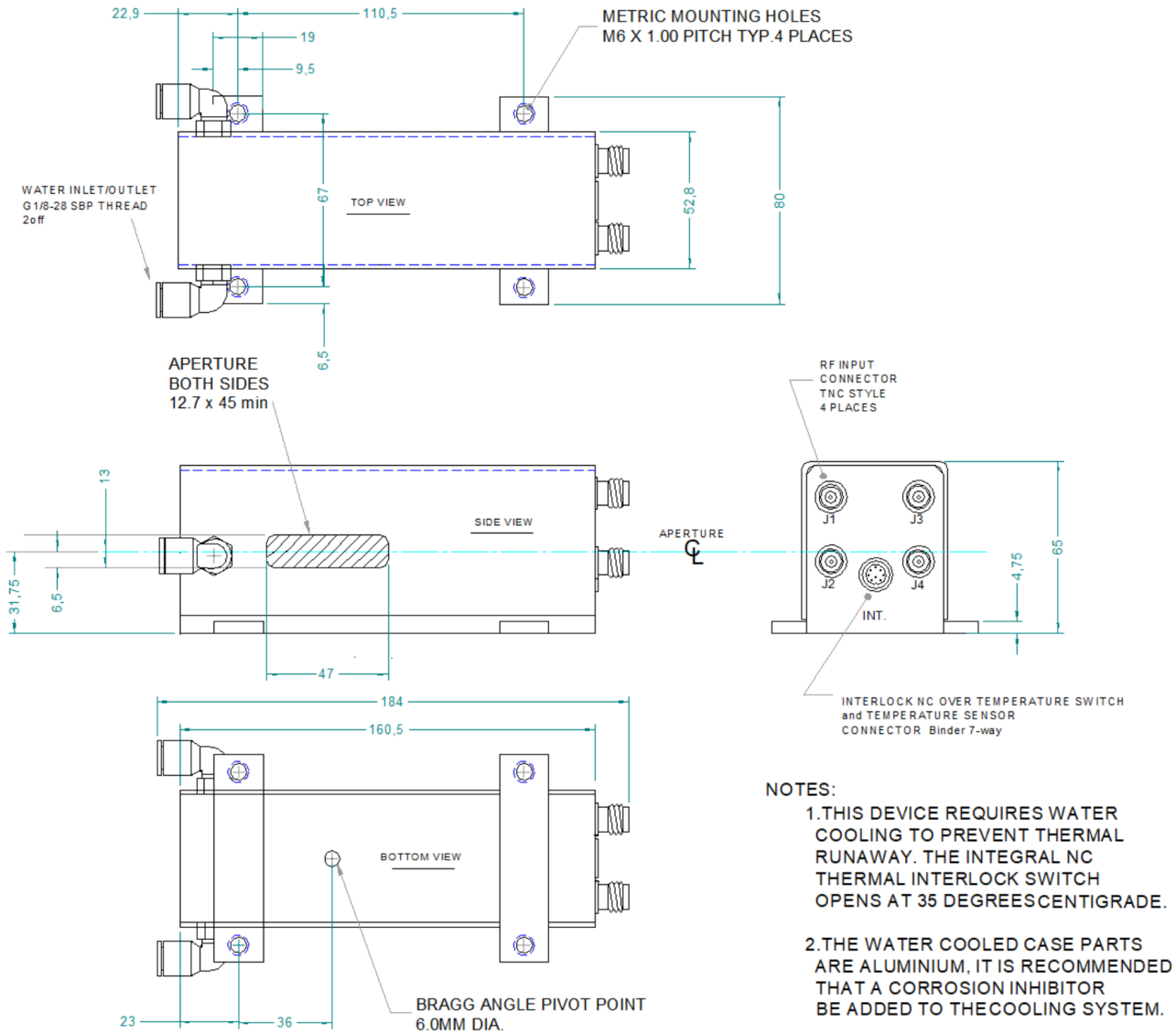
PRELIMINARY

2126



OUTLINE DRAWING

Dimensions: mm



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.

- * Optional designs are available for other wavelengths in the 2.5 μ m - 12 μ m range.
- ** Custom aperture sizes up to 10mmH x 75mmW are available.
- *** The iMSA4-70-4-90 can provide progressive phase shifting across the four RF channels. (Active compensation for Bragg angle error and variation in efficiency across the scan).

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