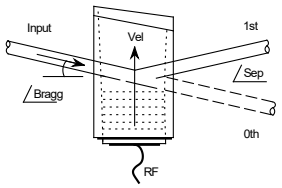

M600-G50-7,8,9

High Power AO Modulator/Deflector

0421

APPLICATIONS
- Material Processing
- Via Hole Drilling
- Surface texturing

FEATURES
- Low loss
- High Optical Power
- All Solid-State

The M600 series have been designed to minimize thermal lensing and reduce beam degradation at high optical powers. This device can be used as a high power dual beam modulator and/or medium resolution high power AO deflector.

SPECIFICATIONS (TYPICAL)

Operating Wavelength:		9.4um or 10.6μm (as specified)*	
Interaction Material:		Germanium	
Active Aperture:	H=7	7mmH x 30mmW	
	H=8	8mmH x 30mmW	
	H=9	9mmH x 30mmW	
Centre Frequency:		50 MHz	
Diffraction Bandwidth:		20 MHz	
Diffraction Efficiency at fc:		> 85%, 90% typical	
RF Power for max' D/E:		< 140 Watts total (H=8)	
Static Insertion Loss:		< 5%	
Maximum Optical Power:		600 Watts, 7mm dia. Gaussian beam	
		9.3um	10.6um
		50.0 MHz	50.0 MHz
Bragg Angle:		42.4 mrad	48.3 mrad
Separation Angle:		84.8 mrad	96.5 mrad
Scan Angle (20MHz sweep):		33.8 mrad	38.5 mrad
Laser Polarization:		Linear, Horizontal	
Water Cooling (Minimum):		> 2 Liter/Min. @ < 20ºC	
Modulator performance:			
Optical Rise Time		0.12usec / mm beam diameter	
Diffraction Efficiency		> 85%	
Modulator Drive Electronics:		RFA-250-2-x (50MHz)	
Deflector Performance:		for 7mm (H) x 30mm (W) beam	
Diffraction Efficiency		> 80% across 20MHz scan	
Access Time:		5.5μsec	
Resolution:		100	
Deflector Drive Electronics: **		iMS4-L, RFA200-2 for scanning applications RFA4060-2K for dual spot modulation	

* Optional designs are available for other wavelengths in the 2.5μm - 11.2μm range.

** The iMS4-L /RFA200-2 exhibits progressive phase shifting across two RF channels. This feature compensates for the variation in efficiency across the scan.

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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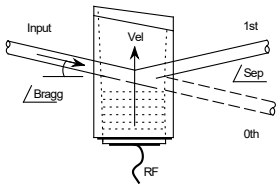
Quality Assured.
In-house: Crystal Growth, Optical Polishing, A/R coating, Vacuum Bonding



M600-G50-7,8,9

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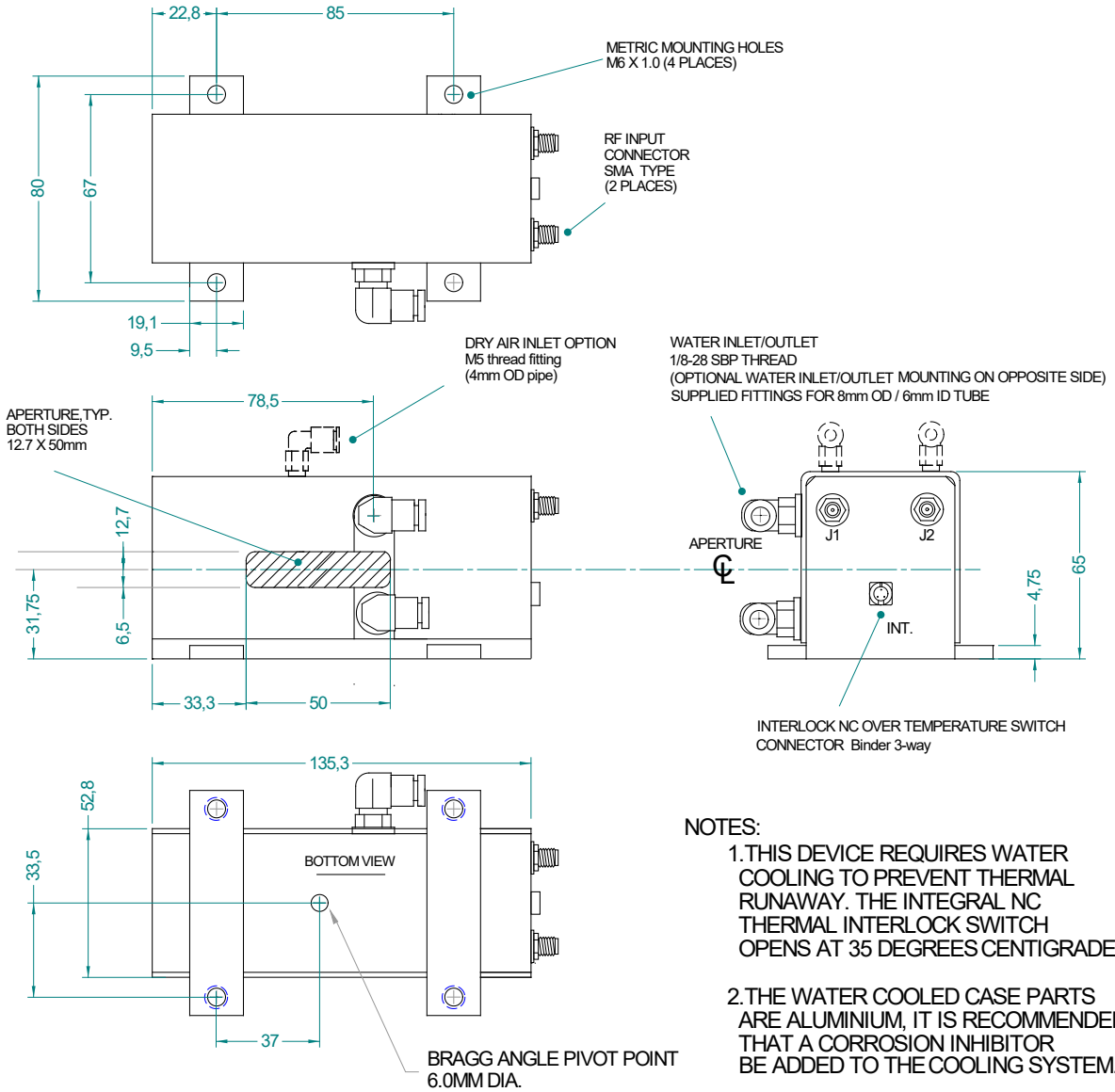
OUTLINE DRAWING

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.

Refer application note AN1906 regarding Coolant Specification

Alternative low corrosion Brass case parts, option -BR

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