

D1419-G50-7, -8, -9



High Power AO Deflector / Dual Spot AOM

1722

APPLICATIONS

- Material Processing
- Via Hole Drilling
- Surface texturing

The D1419-G50 series are low loss multi-spot deflector/modulators optimized for CW and duty cycled applications and designed to minimize thermal lensing and reduce beam degradation at high optical powers.

SPECIFICATIONS (TYPICAL)

A/R Wavelength:	9.4 μ m, 9.6 μ m or 10.6 μ m (as specified)
Interaction Material:	Germanium
Static Insertion Loss:	< 5%
Maximum Optical Power:	600 Watts, 7mm dia. Gaussian beam
Laser Polarization:	Linear, Horizontal
Water Cooling (minimum):	> 2 Liter/Min. @ < 20°C
Active Aperture: H=7	7mmH x 30mmW
H=8	8mmH x 30mmW
H=9	9mmH x 30mmW
VSWR	< 2:1 at 60W per RF input
Centre Frequency (fc):	50 MHz
Minimum RF Scan Bandwidth:	20 MHz

Combined RF Power for maximum Diffraction Efficiency:

Active Aperture	9.3 μ m	9.6 μ m	10.6 μ m
H=7 mm	105W	115W	140W
H=8 mm	120W	130W	160W
H=9 mm	135W	145W	180W

Angles	9.3 μ m	9.6 μ m	10.6 μ m
Centre Freq.	50MHz	50MHz	50MHz
Bragg Angle, mrad	42.4	43.6	38.3
Separation Angle, mrad	84.8	87.3	96.5
Max. Scan Angle, mrad	33.8	34.9	38.6

Deflector Performance for 8mm (H) x 8mm (W) beam

Diffraction Efficiency	> 85%, dual spot modulation
Access Time:	1.45 μ sec
Resolution:	30 resolvable spots

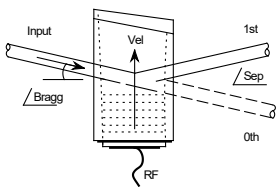
RF Drivers*

Line scanning:	iMS4-P synthesizer + RFA200-2 amplifier
Dual spot modulation - Fixed frequency:	RN5BR-4060-2-90

* The drivers apply phase shifting across the two RF input channels depending on the drive frequency. This feature compensates for the variation in efficiency due to Bragg angle errors.

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



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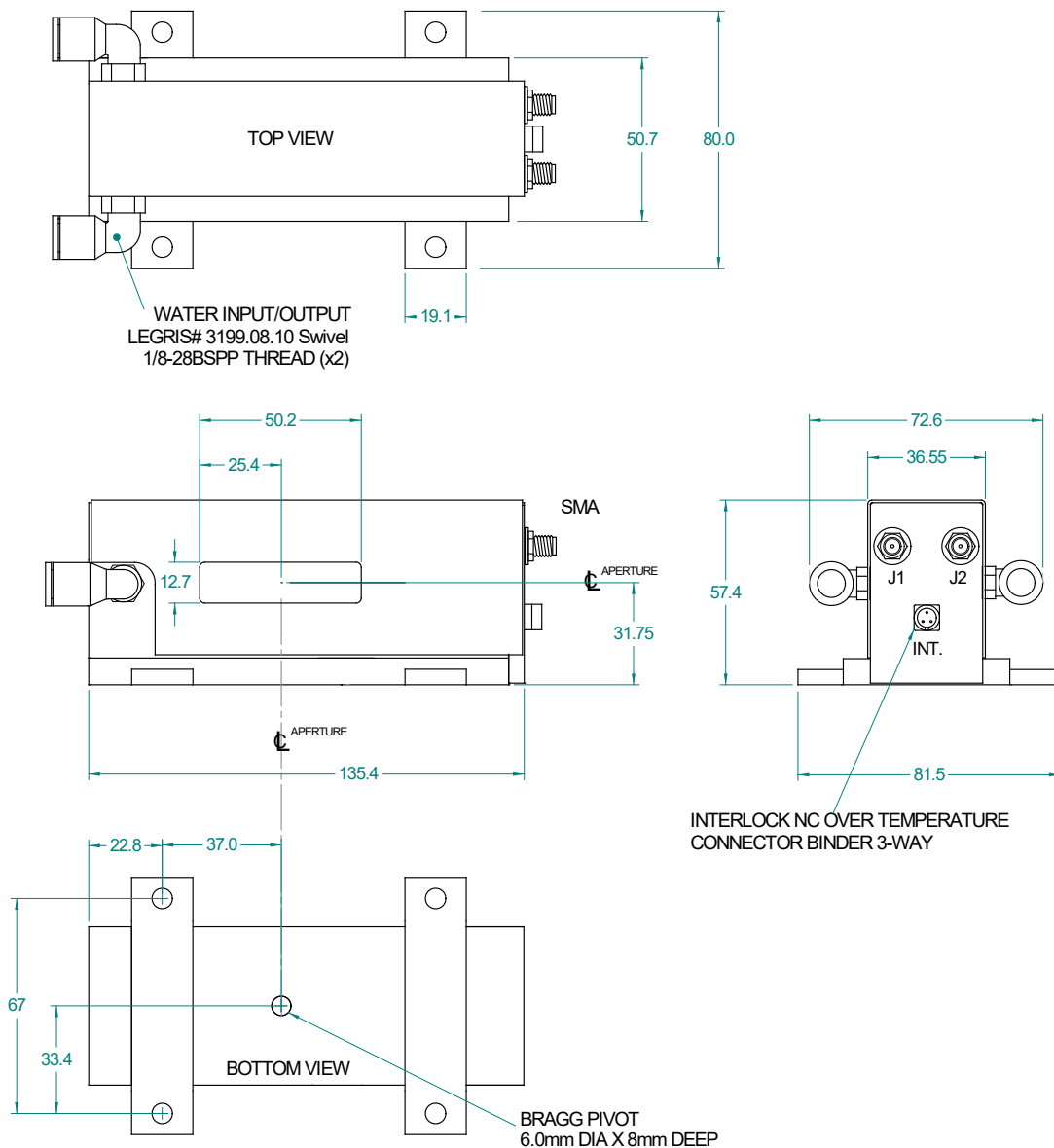


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OUTLINE DRAWING

Dimensions: mm



Refer application note AN1906 regarding Coolant Specification
Water washed parts fabricated in Te-copper.

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