

D1384-aQ170-7



High Power Acousto-Optic Deflector (Preliminary)

3221

The D1384-aQ170 is high speed, high efficiency AO deflector developed specifically for industrial UV laser applications. Also available in a dual axis X-Y configuration.

- Material Processing
- Drilling
- Surface texturing
- Micro machining

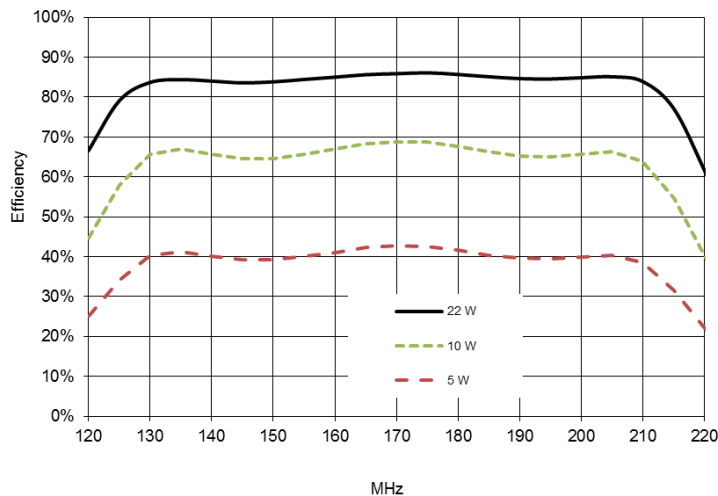
SPECIFICATIONS

Operating Wavelength:	343nm or 355nm, as specified
Centre Frequency (fc):	170MHz (+/- 5% for best scan response)
RF Bandwidth:	80MHz
Diffraction Efficiency:	>80% at fc
Input Impedance:	50Ω(Nominal)
Input VSWR:	<1.5:1 @ 170MHz
Active Aperture:	7mm max, optimal for 5mm beam
Optical Insertion Loss:	<3% (<2% typical)
Reflectivity:	<0.5%/Surface
DC Contrast Ratio:	>1000:1 min (2000:1 typical)
Laser Polarization:	Vertical, Perpendicular to scan
Water Cooling (Min):	2L/minute @ 25deg C

PERFORMANCE vs. WAVELENGTH

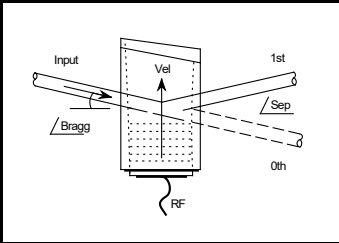
Wavelength:	355nm
Total RF Drive Power:	~20.0W
Bragg Angle:	5.3mrad
Separation Angle (at fc):	10.6mrad
Scan Angle ($\Delta f = 80\text{MHz}$):	5.0mrad
Resolution:	Up to 100 <u>resolvable</u> spots >1000 non-resolvable points

ESTIMATED SCAN RESPONSE



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 ISOMET CORP, 10342 Battlevue Parkway, Manassas, VA 20109, USA.
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Quality Assured.
 In-house: Crystal Growth,
 Optical Polishing,
 A/R coating, Vacuum Bonding



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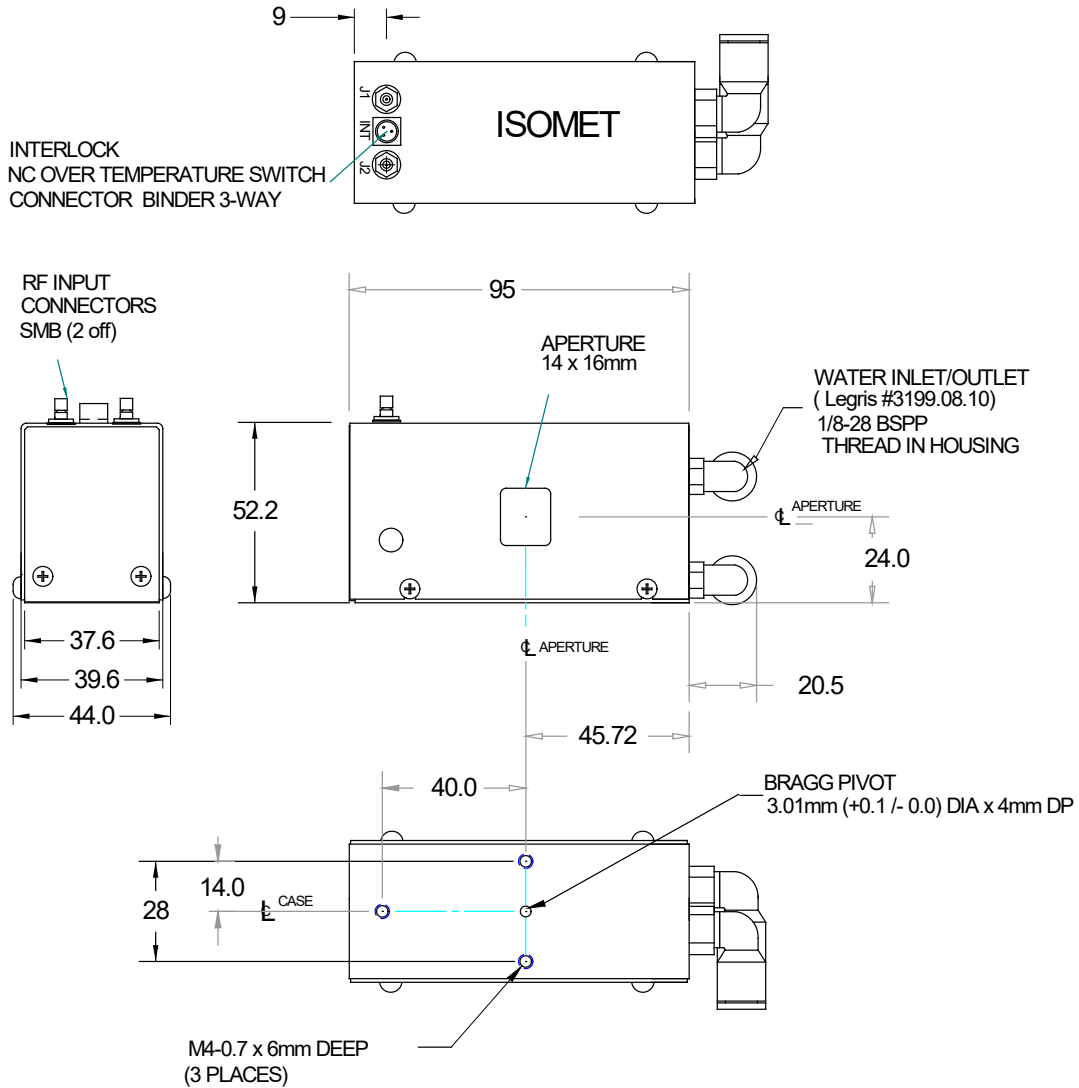
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OUTLINE DRAWING

Dim'n: mm



Water cooled case parts are Aluminium.

Refer application note AN1906 regarding Coolant Specification

DRIVERS

iMS2-HF programmable synthesizer + RFA0170-2-10 amplifier

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