

D1384-aQ120-9



High Power Acousto-Optic Deflector

0718

The D1384-aQ120 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

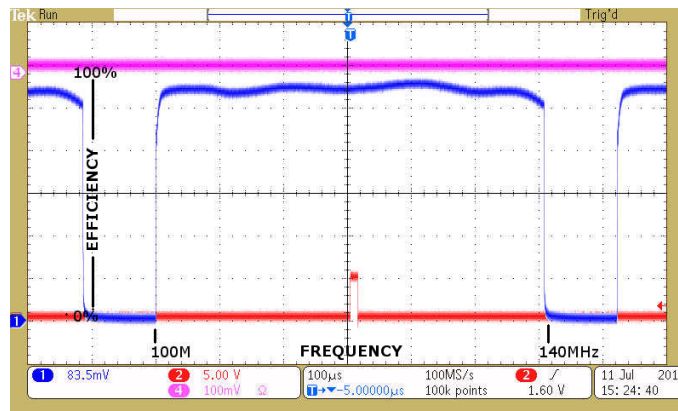
SPECIFICATIONS

| | |
|-------------------------|--|
| Operating Wavelength: | 343nm or 355nm, as specified |
| Centre Frequency (fc): | 120MHz (+/- 5% for best scan response) |
| RF Bandwidth: | 30MHz minimum, 40MHz typical |
| Diffraction Efficiency: | >85% at fc |
| Input Impedance: | 50Ω(Nominal) |
| Input VSWR: | <1.5:1 @ 120MHz |
| Active Aperture: | 9mm max, optimal for 7mm 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

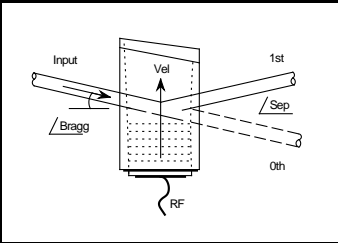
| | |
|---|---|
| Wavelength: | 355nm |
| Total RF Drive Power: | ~20.0W |
| Bragg Angle: | 3.7mrad |
| Separation Angle (at fc): | 7.5mrad |
| Scan Angle ($\Delta f = 40\text{MHz}$): | 2.5mrad |
| Resolution: | Up to 50 <u>resolvable</u> spots >1000 non-resolvable points |

TYPICAL 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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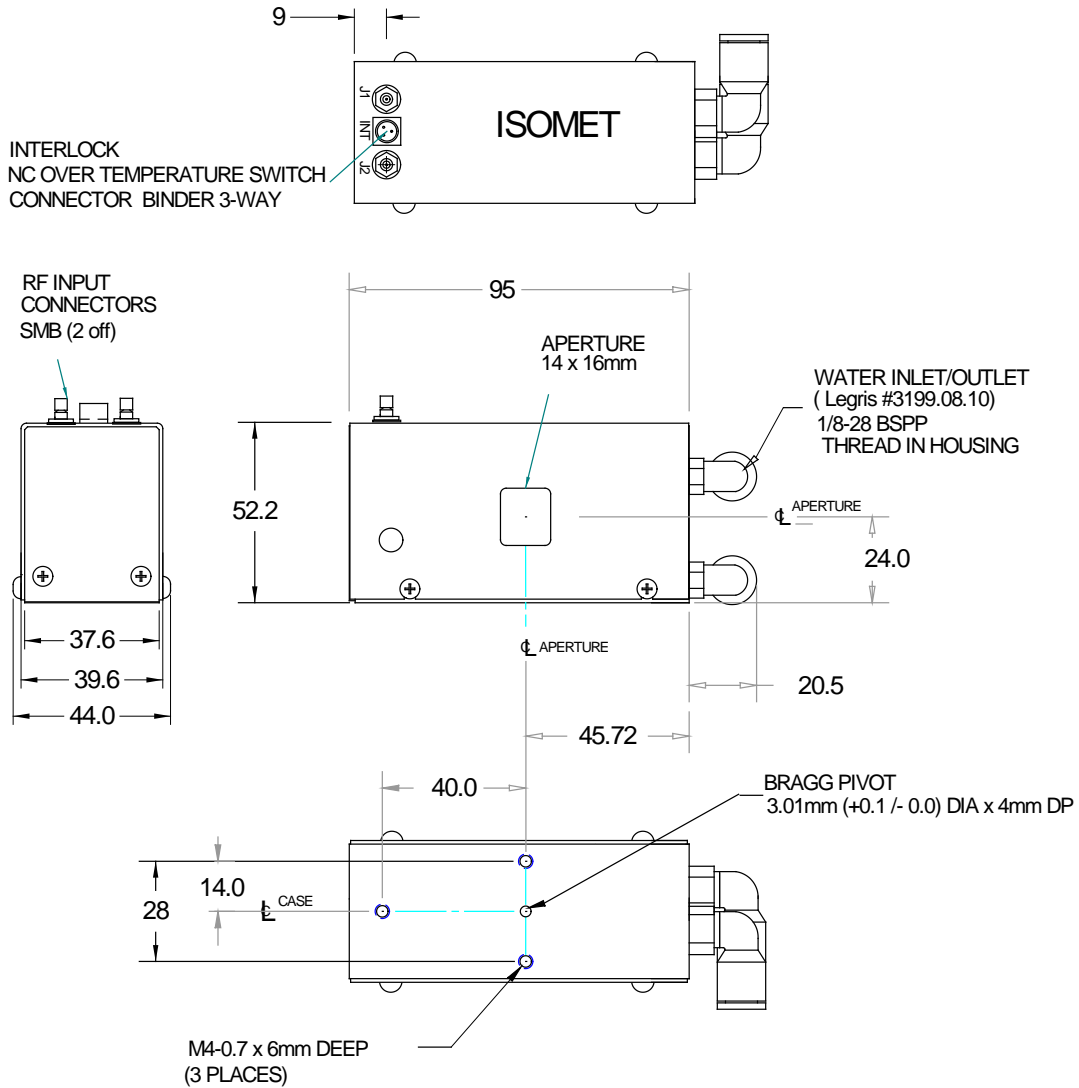


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OUTLINE DRAWING

Dim'n: mm



Water cooled case parts are Aluminium.

Refer application note AN1606 regarding Coolant Specification

DRIVERS

Synthesizer based: iMS4-L (or -P) programmable synthesizer + RFA0120-2-15 amplifier

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