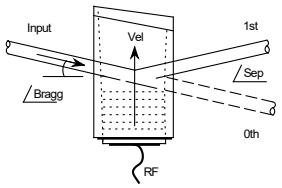



# D1384-aQ120L-12

ISOMET

## High Power Acousto-Optic Deflector (NUV)

**(PRELIMINARY)**

*1123*

The D1384-aQ120 is large aperture, high efficiency AO deflector developed specifically for industrial near-UV laser applications. Also available in a dual axis X-Y configuration.

- Material Processing
- Drilling
- Surface texturing
- Micro machining

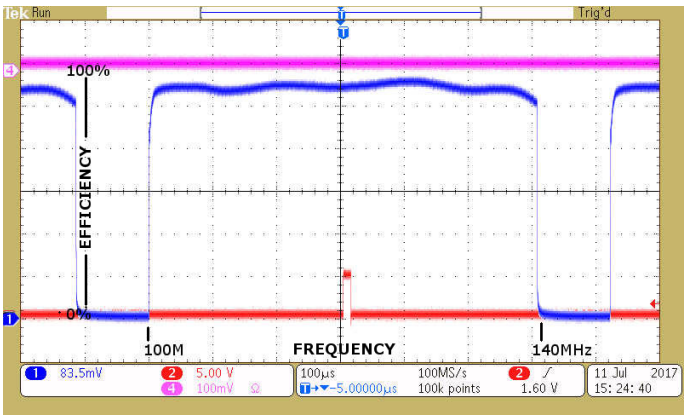
### SPECIFICATIONS

| | |
|---|---|
| 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: | 12mm max |
| 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

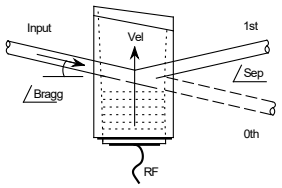
| Wavelength: | **343nm** | **355nm** |
|---|---|---|
| Total RF Drive Power: | ~27W | ~30W |
| Bragg Angle: | 3.6mrad | 3.7mrad |
| Separation Angle (at fc): | 7.25mrad | 7.5mrad |
| Scan Angle (△f = 40MHz): | 2.4mrad | 2.5mrad |
| Resolution: | Up to 50 resolvable spots | |
| | >1000 non-resolvable points | |

### TYPICAL SCAN RESPONSE




**ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE**
ISOMET CORP, 10342 Battleview 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**




# D1384-aQ120L-12

ISOMET

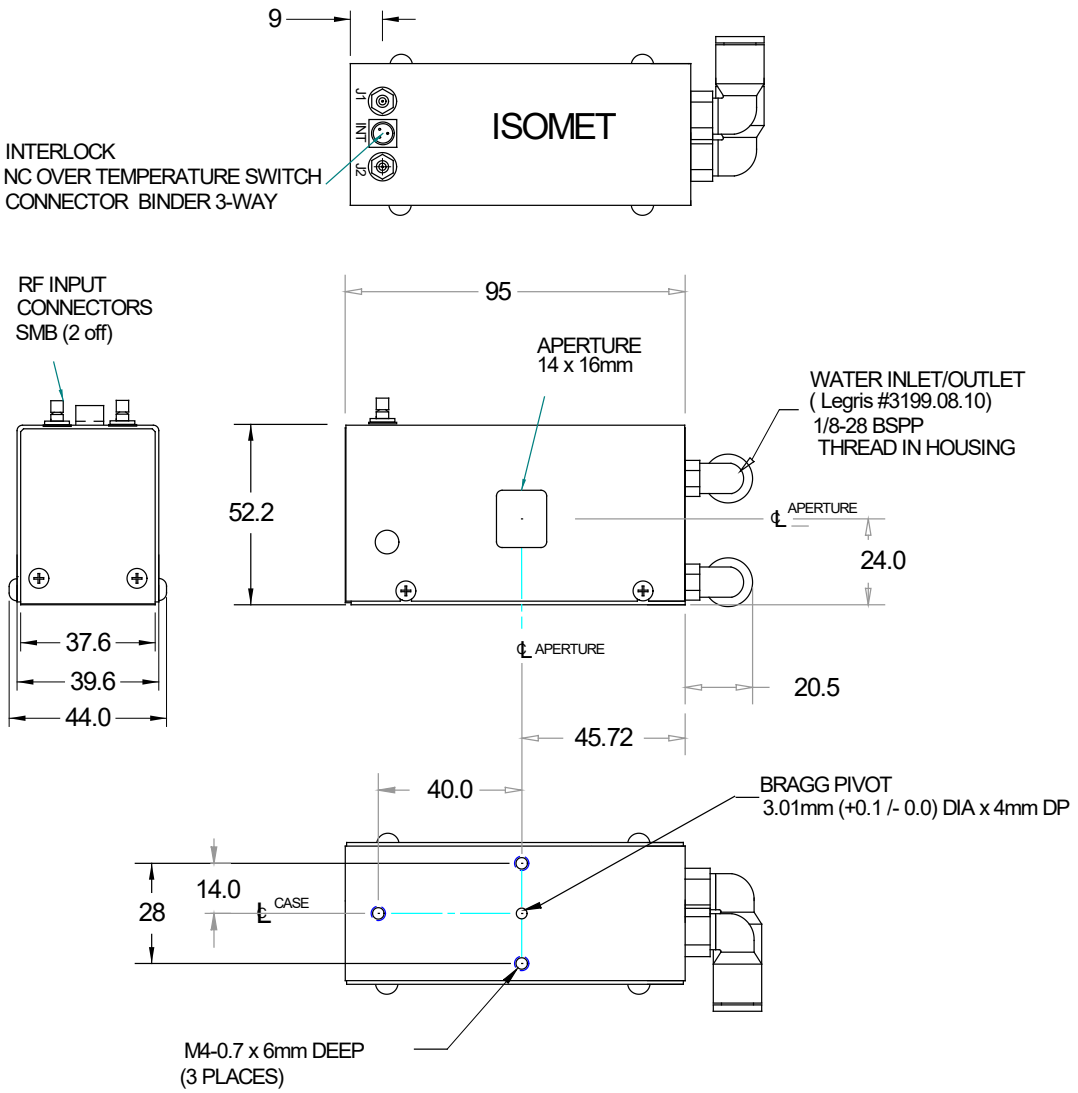
## High Power Acousto-Optic Deflector (NUV)

**(PRELIMINARY)**

*1123*

**OUTLINE DRAWING**

Dim'n: mm




Water cooled case parts are Aluminium.

**Refer application note AN1906 regarding Coolant Specification**

**DRIVERS**

Synthesizer based: iMS4-P programmable synthesizer + RFA0120-2-25 amplifier

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