

# D1384-aQ110-7



## High Power Acousto-Optic Deflector

0718

The D1384-aQ110 is high speed, high efficiency AO deflector developed specifically for industrial laser applications. Also available in a dual axis X-Y configuration.

- Material Processing
- Drilling
- Surface texturing
- Micro machining

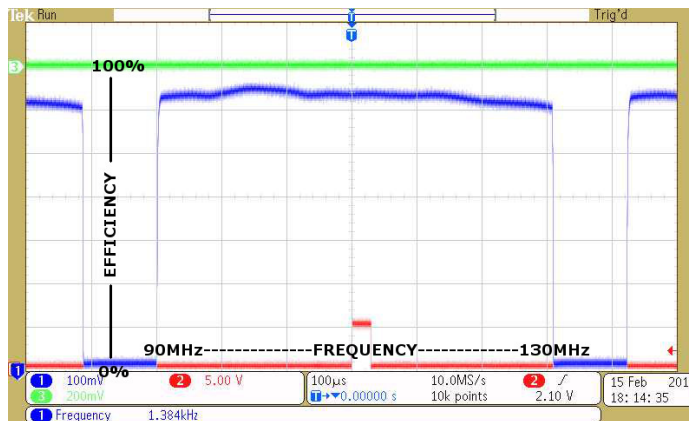
### SPECIFICATIONS

Operating Wavelength:	515nm or 532nm, as specified
Centre Frequency (fc):	110MHz (+/- 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 @ 110MHz
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

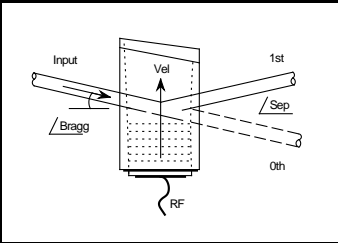
Wavelength:	515nm
Total RF Drive Power:	~30.0W
Bragg Angle:	5.0mrad
Separation Angle (at fc):	9.9mrad
Scan Angle ( $\Delta f = 30\text{MHz}$ ):	2.7mrad
Resolution:	Up to 35 <u>resolvable</u> spots >1000 non-resolvable points

### TYPICAL SCAN RESPONSE



**ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE**  
 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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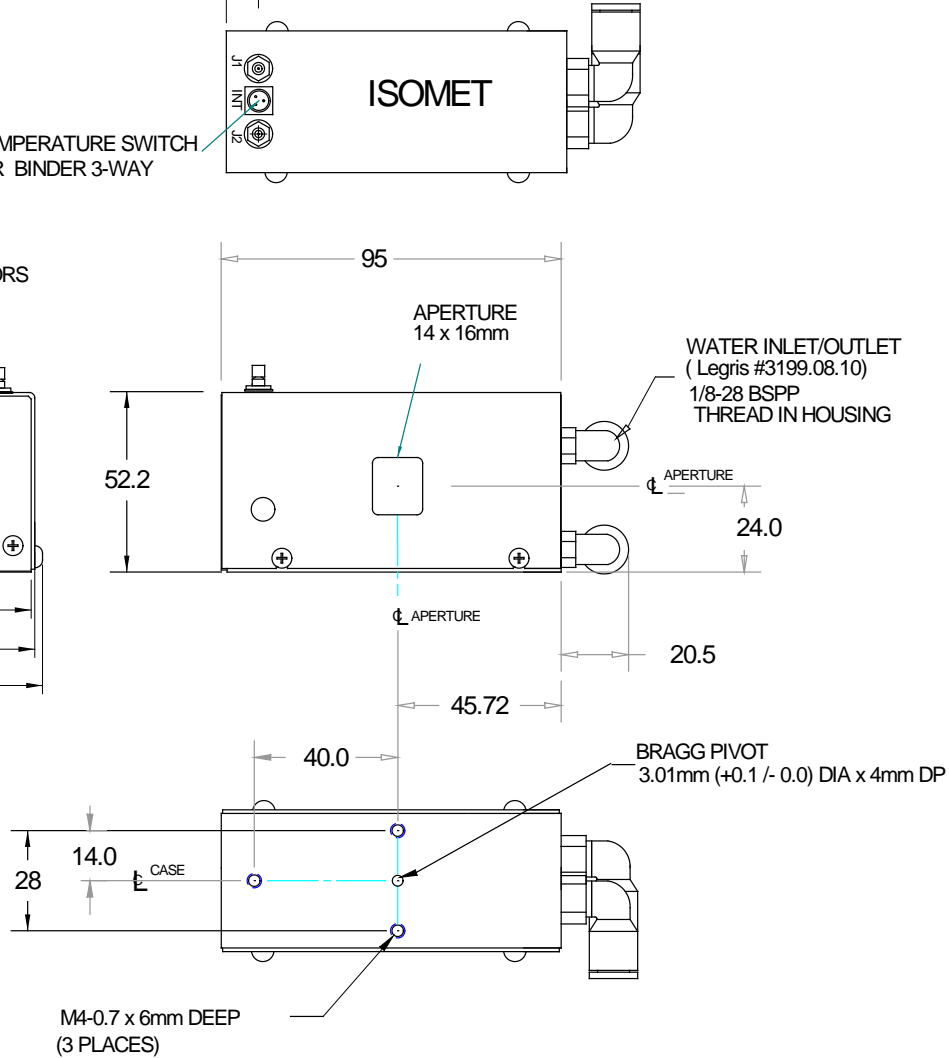
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### OUTLINE DRAWING

Dim'n: mm

INTERLOCK  
NC OVER TEMPERATURE SWITCH  
CONNECTOR BINDER 3-WAY

RF INPUT  
CONNECTORS  
SMB (2 off)



Water cooled case parts are Aluminium.

Refer application note AN1606 regarding Coolant Specification

### DRIVERS

Synthesizer based: iMS4-L (or -P) programmable synthesizer + RFA0110-2-20 amplifier

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