

D1384-XY-aQ110-7



High Power Dual Axis AO Deflector

0818

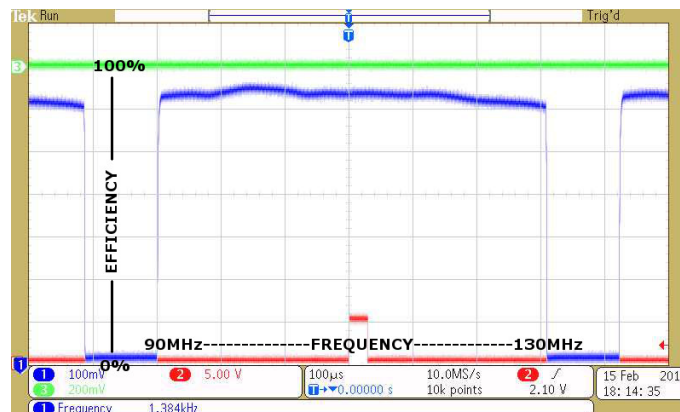
The D1384-XY offers high speed dual axis scanning at 515nm. This deflector consists of two AO deflectors mounted orthogonally in one assembly, with independent fine thread Bragg angle adjustment. A half wave plate is included to rotate the input polarization between AO deflectors. Applications include:

- Material Processing
- Drilling
- Surface texturing
- Micro machining

SPECIFICATIONS

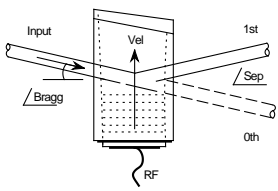
Operating Wavelength:	515 nm (contact Isomet for other VIS wavelengths)
Interaction Material:	Quartz
Active Aperture: H=7	7mmH x 7mmW
Centre Frequency (x=fc):	110MHz (+/- 5% for best scan response)
Sweep Bandwidth:	30MHz minimum
Diffraction Efficiency (DE) at fc:	> 85%, 90% typical per axis
Diffraction Efficiency across scan:	> 80%, 85% typical <u>per axis</u>
RF Power for max' DE	< 30 Watts total per axis
Static Insertion Loss:	< 4%
Bragg Angle 515nm:	5.0 mrad
Separation Angle at fc:	9.9 mrad
Scan Angle:	2.7 mrad (30MHz sweep).
Input Laser Polarization:	Linear, Vertical w.r.t. to X-axis
Water Cooling (Minimum):	> 2 Liter/Min. @ < 23°C
<u>Deflector Performance:</u>	Using 5 x 5mm beam
Total XY Diffraction Efficiency	> 60% across 30MHz scan
Access Time:	0.9µsec
Resolution:	25 x 25 <u>resolvable</u> spots
	>1000 x 1000 non-resolvable points
	(driver dependent)

TYPICAL SCAN RESPONSE per AXIS



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 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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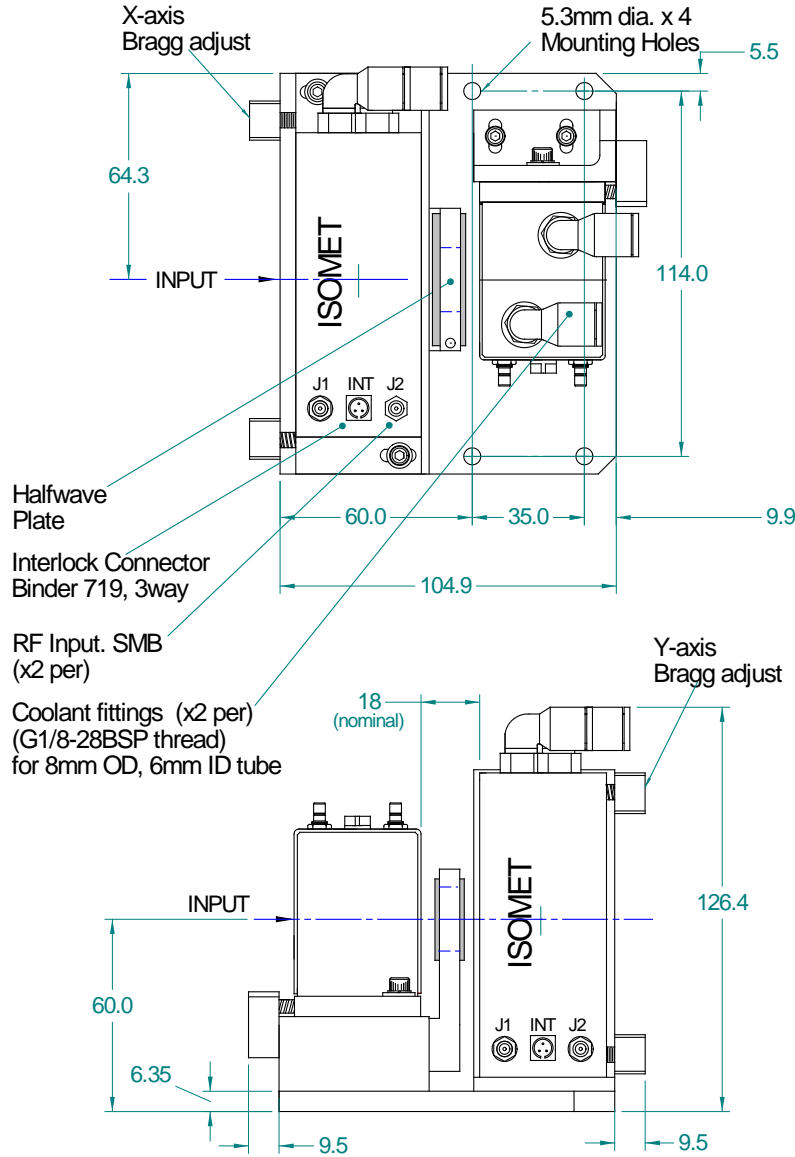
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OUTLINE DRAWING

Dim'n: mm



**Output Beams
+1,+1**



Y-Axis Scan



X-Axis Scan 0.0

← Mounting plane →

**Output Beams
-1,-1**

0,0 X-Axis Scan



Y-Axis Scan



-1,-1

← Mounting plane →

Refer application note AN1606 regarding Coolant Specification

DRIVERS

Synthesizer based: iMS4-L (or -P) programmable synthesizer + (1off) RFA0110-4-20 amplifiers

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