

D1384-XY-aQ120-9

UV Dual Axis AO Deflector



0818

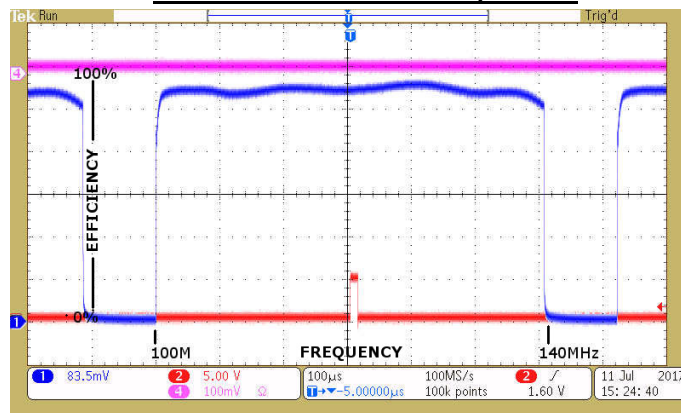
The D1384-XY offers high speed dual axis scanning at 355nm. This deflector consists of two 9mm active aperture AO deflectors mounted orthogonally in one assembly, with independent fine thread Bragg angle adjustment. A half wave plate is included to rotate the input polarization between AO deflectors. Applications include:

- Material Processing
- Drilling
- Surface texturing
- Micro machining

SPECIFICATIONS

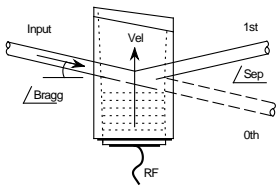
Operating Wavelength:	355 nm (contact Isomet for other UV wavelengths)
Interaction Material:	Quartz
Active Aperture:	9mmH x 9mmW max.
Centre Frequency ($x=fc$):	120MHz
Sweep Bandwidth:	40MHz
Diffraction Efficiency (DE) at fc :	> 85%, 90% typical per axis
Diffraction Efficiency across scan:	> 75%, 80% typical per axis
RF Power for max' DE	< 20 Watts total per axis
Static Insertion Loss:	< 4%
Bragg Angle 355nm:	3.7 mrad
Separation Angle at fc :	7.5 mrad
Scan Angle:	2.5 mrad (40MHz sweep).
Input Laser Polarization:	Linear, Vertical w.r.t. to X-axis (Half waveplate included between X & Y axis)
Water Cooling (Minimum):	> 2 Liter/Min. @ < 23°C
<u>Deflector Performance:</u>	Using 7 x 7mm beam
Total XY Efficiency	~60% across 40MHz scan
Access Time:	1.5µsec
Resolution:	50 x 50 <u>resolvable</u> spots >1000 x 1000 non-resolvable points

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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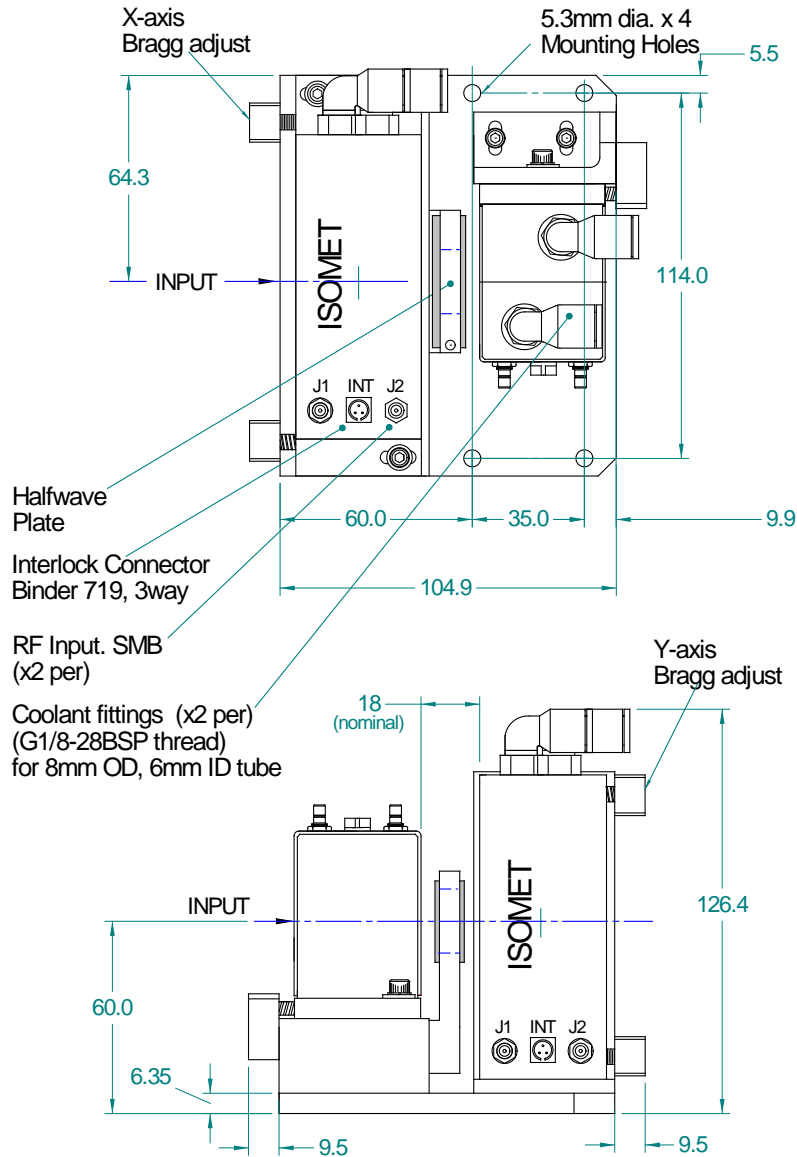
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OUTLINE DRAWING

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) RFA0120-4-15 amplifier

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