

# M1340-XY-aQ120-5



## UV Dual Axis AO Deflector (355nm)

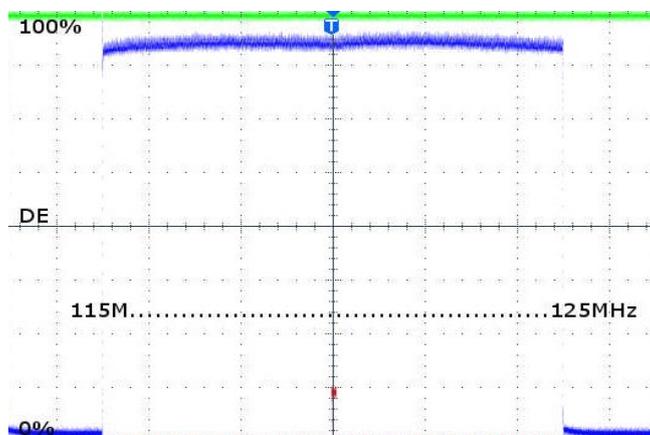
0820

The M1340-XY offers dual axis high speed scanning using two AO modulators mounted orthogonally in one assembly. Each axis includes independent fine thread Bragg angle adjustment. This design suits lower angle scanning applications and simplifies the RF driver requirements. A half wave plate is included to rotate the input polarization between AO devices.

### SPECIFICATIONS (TYPICAL)

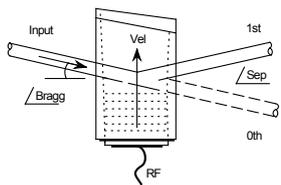
Operating Wavelength:	355 nm (standard)*
Interaction Material:	Quartz
Active Aperture: H=5	5mmH x 5mmW
Centre Frequency (x=fc):	120MHz
Sweep Bandwidth:	10MHz minimum, 15MHz typical
Diffraction Efficiency (DE) at fc:	> 85%, 90% typical per axis
RF Power for max' DE	< 10 Watts total per axis
Static Insertion Loss:	< 4% per axis
Bragg Angle 355nm:	3.74 mrad
Separation Angle at fc:	7.47 mrad
Scan Angle:	0.6 mrad (10MHz sweep).
Input Laser Polarization:	Linear, Vertical w.r.t. to X-axis
Water Cooling (Minimum):	> 2 Liter/Min. @ < 23°C
<u>Deflector Performance:</u>	5 x 5mm beam
Total XY Diffraction Efficiency	> 75% across 10MHz scan
Access Time:	0.9µsec
Resolution:	8 x 8 <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.  
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**Quality Assured.**  
 In-house: Crystal Growth,  
 Optical Polishing,  
 A/R coating, Vacuum Bonding



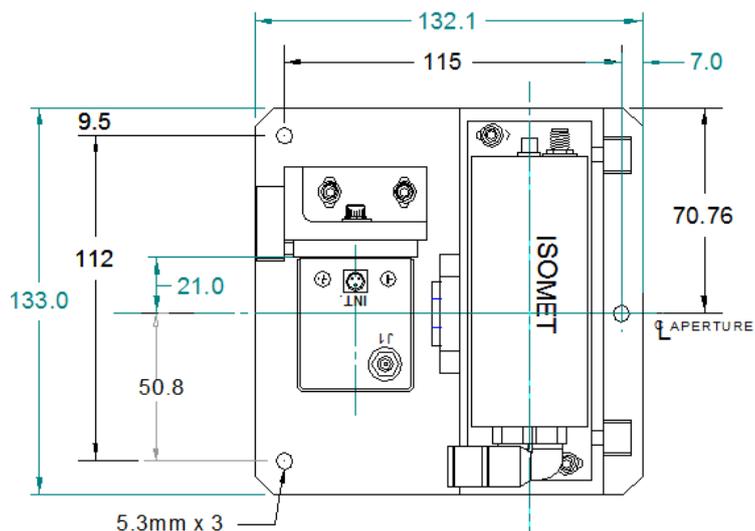
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### OUTLINE DRAWING

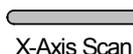


#### Output Beams +1st orientation

+1,+1



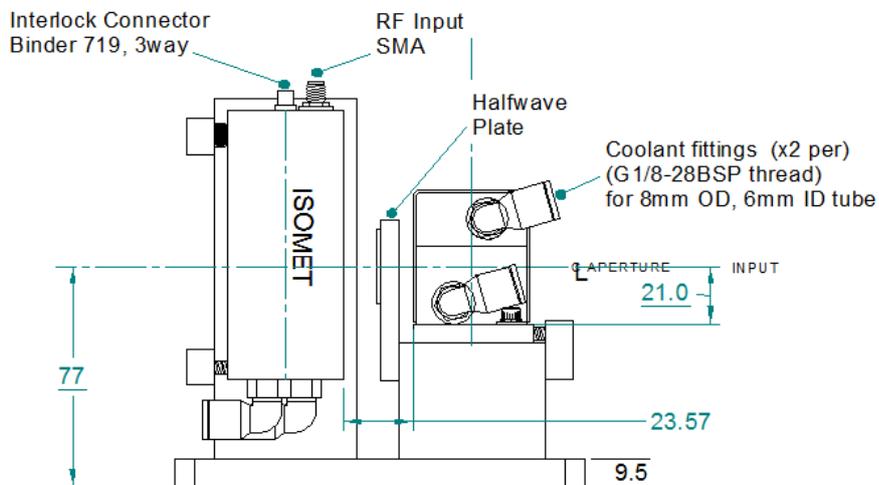
Y-Axis Scan



X-Axis Scan

0.0

← Mounting plane →



#### Output Beams -1st orientation

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) RFA0120-2-15 amplifier

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