

# D1372-XY-aQ110-7



## High Power Dual Axis AO Deflector

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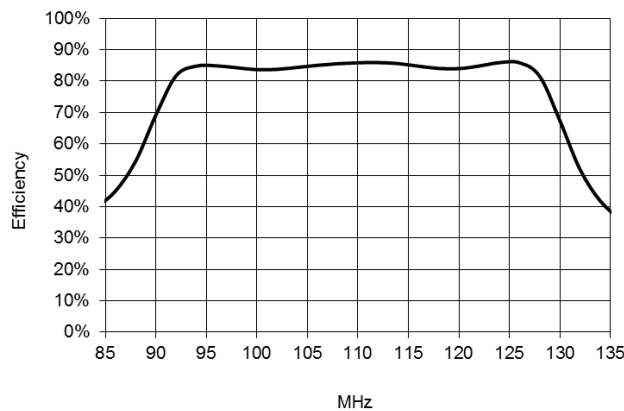
The D1372-XY offers high speed dual axis scanning at 515nm. This deflector consists of two AO deflectors mounted orthogonally in one assembly, with independent fine thread Bragg angle adjustment. A half wave plate is included to rotate the input polarization between AO deflectors. Applications include:

- Material Processing
- Drilling
- Surface texturing
- Micro machining

### SPECIFICATIONS (TYPICAL)

Operating Wavelength:	515 nm
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% per axis
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>	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)

### ESTIMATED SCAN RESPONSE per AXIS



**ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE**

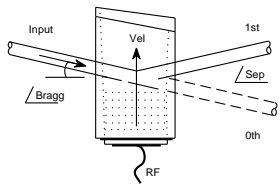
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**Quality Assured.**

**In-house: Crystal Growth,  
Optical Polishing,  
A/R coating, Vacuum Bonding**



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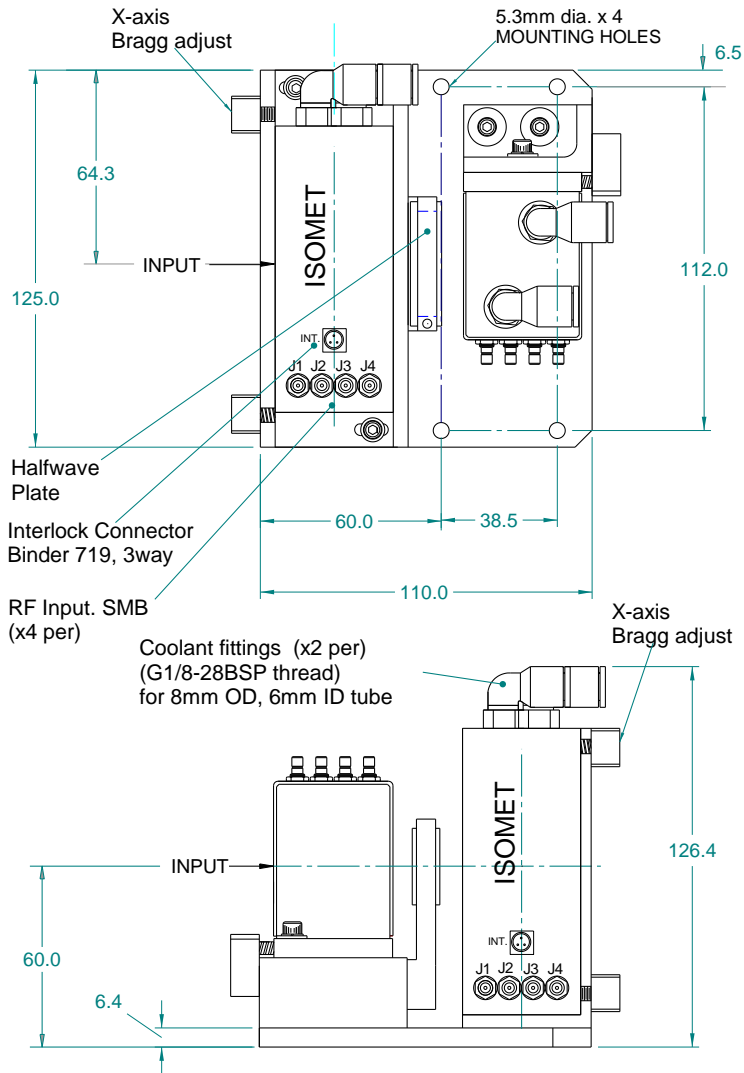
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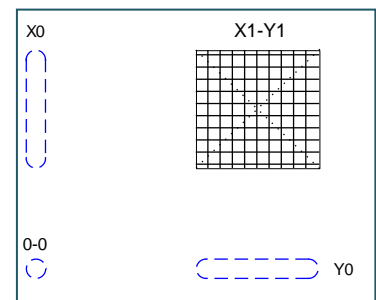
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### OUTLINE DRAWING

Dimensions:mm.



### Output Beams



← Mounting plane →

Refer application note AN1206 regarding Coolant Specification

### DRIVERS

Synthesizer based: iMS4-L (or -P) programmable synthesizer + (2off) RFA0110-2X4-10 amplifiers

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