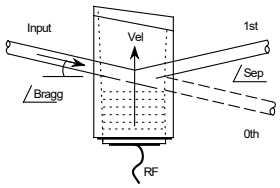


D1460-XY-aQ80L-4

Dual Axis AO Deflector (NIR)

(Preliminary)

1026

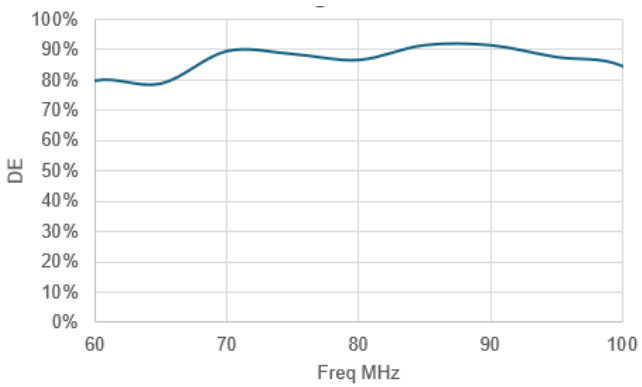
The D1460-XY offers high speed dual axis scanning at 1064nm. This deflector consists of two 4mm active aperture AO deflectors mounted orthogonally in one assembly, with independent fine thread Bragg angle adjustment. Subject to availability, a half wave plate is included to rotate the input polarization between AO deflectors. Applications include:

- Material Processing
- Drilling
- Surface texturing
- Micro machining

SPECIFICATIONS

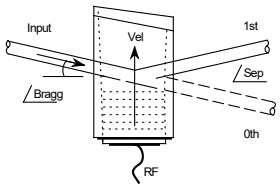
Operating Wavelength:	1064nm
Interaction Material:	Quartz
Active Aperture:	4mmH x 4mmW max.
Centre Frequency (fc):	80MHz (+/-10% for maximum bandwidth)
3dB Sweep Bandwidth:	40MHz minimum, 45MHz typical.
Diffraction Efficiency (DE) at fc:	>80%, 85% typical per axis
DE across 27MHz scan:	>70%, 80% typical per axis
On:Off Contrast Ratio:	>1000:1 min (2000:1 typical)
Optical Insertion Loss:	<5%
Reflectivity:	<0.5%/surface
Input Laser Polarization:	Linear, Vertical w.r.t. to X-axis (Half waveplate included between X & Y axis)
Water Cooling (Minimum):	> 2 Liter/Min. @ < 23ºC
Wavelength:	**1064nm**
Total RF Power per axis for max' DE:	~50.0W
Bragg Angle:	7.47mrad
Separation Angle at fc:	14.9mrad
Scan Angle (40MHz sweep):	7.5mrad
Deflector Performance:	Using 3.5 x 3.5mm beam
Total dual axis efficiency	~60% across 40MHz XY scan
Access Time:	0.6μsec
Resolution:	24 x 24 resolvable spots >1000 x 1000 non-resolvable points

Typical 40MHz Sweep Response *per AXIS*



ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE
ISOMET CORP, 10342 Battleview 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



D1460-XY-aQ80L-4

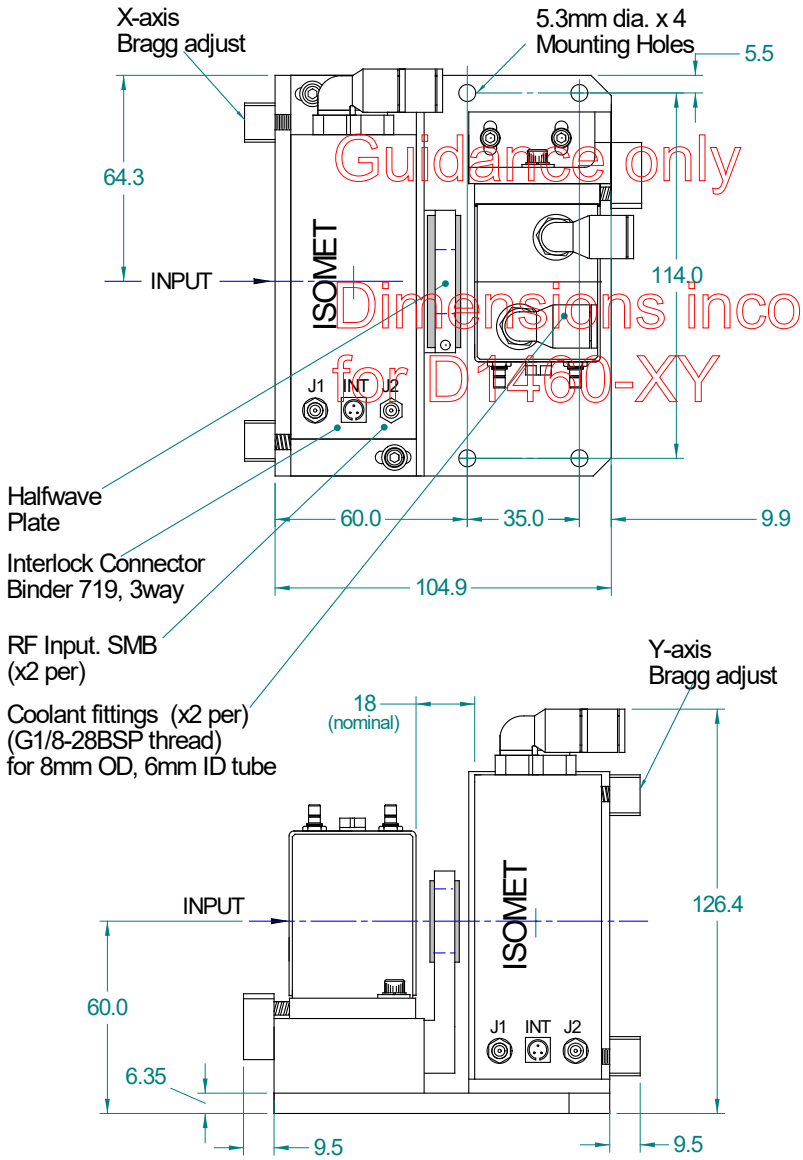
Dual Axis AO Deflector (NIR)

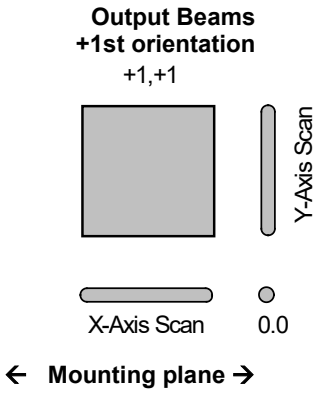
(Preliminary)

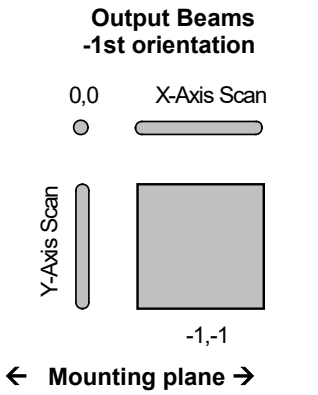
1026

OUTLINE DRAWING

Dim'n: mm







Refer application note AN1906 regarding Coolant Specification

DRIVERS

Synthesizer based: iMS4-P programmable synthesizer + (1off) RFA080-4-30 amplifier.

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