

DXY110-T100S-9

Dual Axis AO Deflector

Visible Wavelengths



2822

The DXY110-T100S provides high speed simultaneous 2D laser beam scanning at visible wavelengths. It is fabricated from two orthogonally-mounted single axis TeO₂ deflectors which diffract the input laser beam to generate up to a 750 x 750 sequential spot matrix. The DXY110 may be operated in raster (linear), random access and vector scanning modes from the same RF drive electronics. The Isomet deflector-driver combination is designed to maintain the Bragg relationship over the specified RF frequency bandwidth. This results in a uniform diffracted beam intensity across the full XY scan angle range.

SPECIFICATIONS

<u>DXY110</u>	-T100S-9	-T100S-9	-T100S-9	-T100S-9
Wavelength (specify)**:	488nm	515nm	532nm	633nm
Centre Freq. (nominal)	100MHz	100MHz	100MHz	100MHz
RF Bandwidth Δf:	50MHz	50MHz	50MHz	50MHz
Scan Angle/axis:	2.3°	2.4°	2.5°	2.9°
Separation Angle :	4.5°	4.8°	4.9°	5.9°
Total RF driver power:	MAX average or CW drive power limit = 3W per axis			
Nominal, per axis	1.9W	2.0W	2.0W	2.7W
Diffraction Efficiency across scan:				
CW	>40% (50% typical)			
Aperture:	<u>Active Aperture:</u>		<u>Access Time:</u>	
D110-T100S-9	9.3mm(H) x 9.3mm(W)		15 μs	
Resolution N:	N = maximum number of <u>resolvable</u> spots (angles), beam width dependent			
D110-T100S-9	N=750x750, 9.3mm beam			

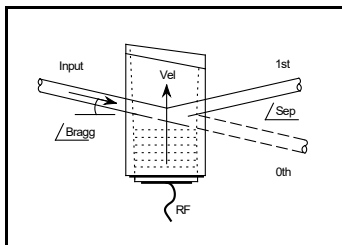
Input Laser Polarization:	Linear. (Quarter wave plate included)
Output Laser Polarization:	Circular (Nominal)
Interaction Material:	TeO ₂ (Slow Shear)
Acoustic Velocity:	0.617mm/μs
RF Input Impedance:	50Ω Nominal
Insertion loss:	< 8%
Optical power:	10W CW full aperture.

* Theoretical Rayleigh resolution with a uniformly illuminated aperture.
Incremental / non-resolvable spots are limited by the drive frequency resolution.

** Please specify with order. Call for other operating wavelengths.
See model DXY110-T50S for NIR.
See model DXY110-T120S for <488nm.

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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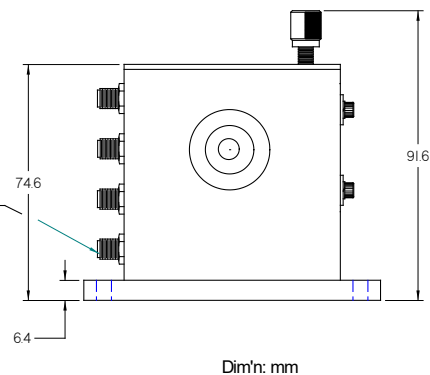
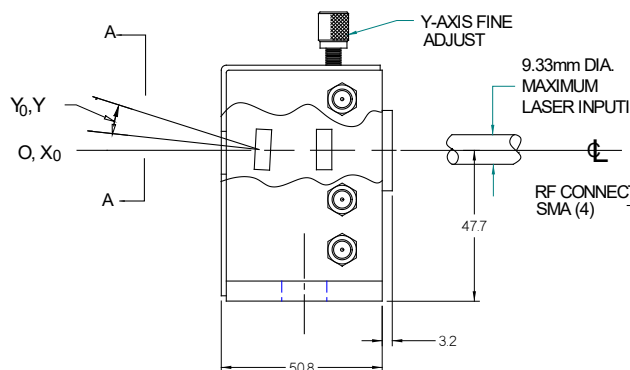
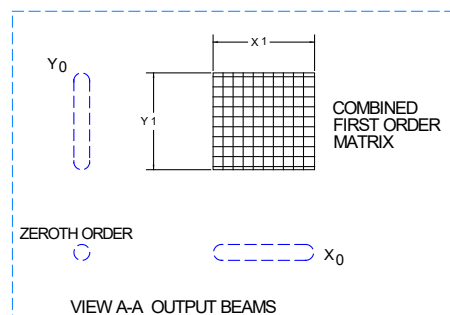
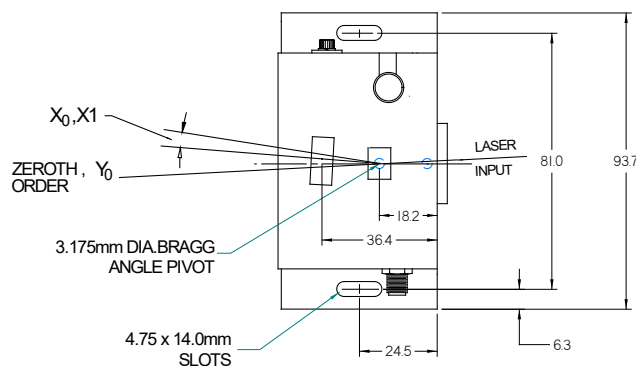
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OUTLINE DRAWING



RF DRIVE ELECTRONICS

- 1 off iMS4-L (or -P) quad output synthesizer
- plus -
- 4 off AG0-100T-1-1 amplifiers

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