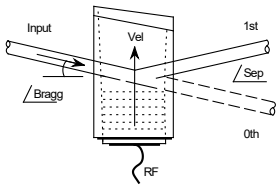


D110-T50S-4

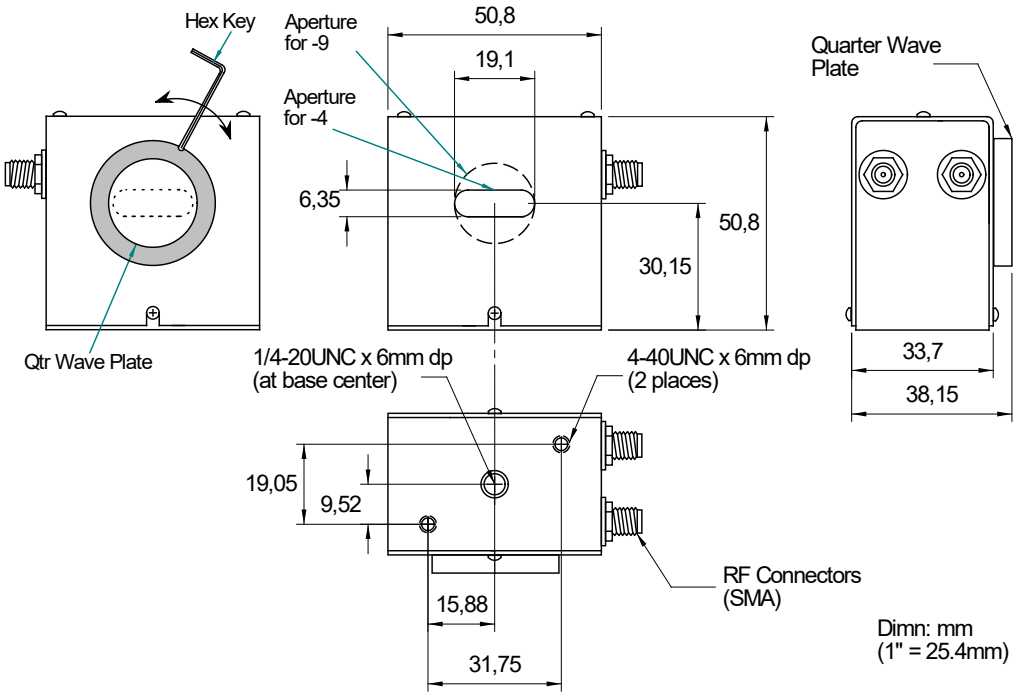
Acousto-Optic Deflector

NIR

4421

The D110-T50S provides high speed laser beam scanning and each model is optimized for a specific operating wavelength in the NIR spectrum. The D110-T50S 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 scan angle.

OUTLINE DRAWING



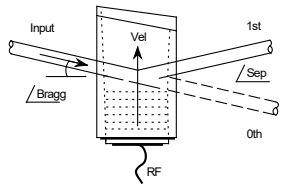
(Formerly model LS110-)

RF DRIVE ELECTRONICS

1 off iMS4-L (or –P) quad output synthesizer
- plus -
2 off AF0-50T-1-2 amplifiers

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



D110-T50S-4

Acousto-Optic Deflector

NIR

4421

SPECIFICATIONS

D110-	**-T50S-4**	**-T50S-4**	**-T50S-4**	**-T50S-4**	**-T50S-4**
Wavelength (specify)**	**729nm**	**830nm**	**1064nm**	**1300nm**	**1550nm**
Centre Freq. (nominal)	50MHz	50MHz	50MHz	50MHz	50MHz
RF Bandwidth, Δf	25MHz	25MHz	25MHz	20MHz	20MHz
Scan Angle	1.7º	1.9º	2.5º	2.4º	2.9º
Separation Angle	3.4º	3.9º	4.9º	6.2º	7.2º
Total RF driver power	**MAX average or CW drive power limit = 3W**				
D110-T50S-**4**	1.0W	1.2W	1.6W	2.6W	Peak pulse drive 4.0W Average limit 3.0W
	Diffraction Efficiency (CW) across scan				
CW Diffraction Efficiency across scan:	60% (65% typ)	60% (65% typ)	60% (65% typ)	60% (65% typ)	45% (50% typ)
Peak Diffraction Efficiency:					60% (65% typ)
Aperture***	Active Aperture:			Access Time:	
D110-T50S-**4**	4mm(H) x 14mm(W)			22.7μs	
Resolution, N*	N = maximum number of resolvable spots (angles), beam width dependent				
14mm beam	N=550	N=550	N=550	N=440	N=440

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:	< 5%
Optical power:	10W CW, full aperture

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

** Please specify with order. Call for other operating wavelengths.
See model D110-T100S for >488nm.
See model D110-T120S for <488nm.

*** See model D110-T50S-9, for increased aperture height (9mm) but reduced max' resolution, N=750

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