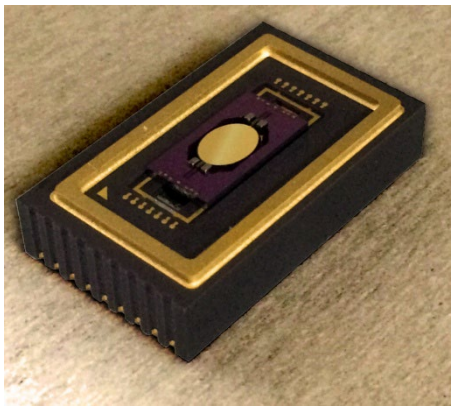
MAR1800 | 1D MEMS VECTOR SCANNING MIRROR MODULE

The MAR1800 is a MEMS 2D vector scanning mirror module, comprises of 2 single axis vector scanners, attached together.



MAR1800 module supports large laser beam diameters (> 3mm), high deflection angles, multiple scan modes, all with very high accuracy and repeatability. The MAR1800 is designed for harsh environment conditions, with high stiffness of the mirrors and an innovative hermetic packaging. The MEMS mirrors utilizes Maradin's proprietary powerful electro-magnetic actuator, which yields peak performance under varying conditions, along with a novel controller for accuracy and high performance.

APPLICATIONS

FEATURES

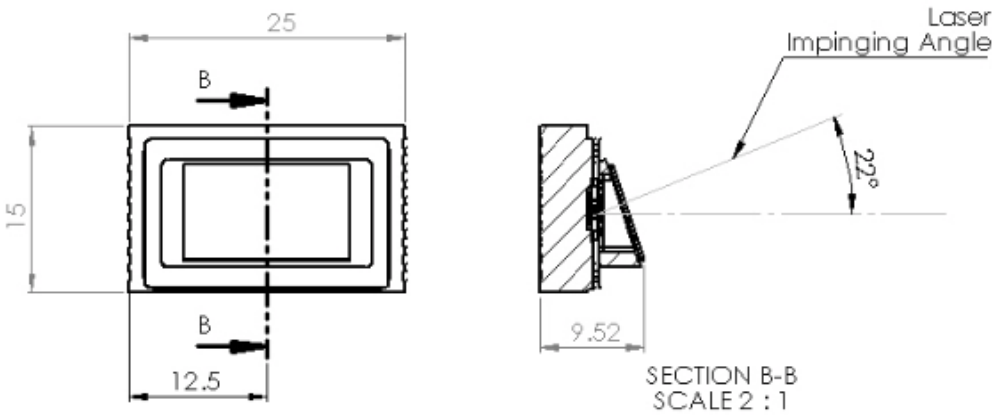
- 1D MEMS vector scanning mirror module
- Large aperture (Laser spot up to 3mm)
- Electro-magnetic actuators for wide optical field-of-view
- A full, real time FOV control (size and location)
- Accurate and continuous sensing mechanisms for precise mirror control
- Hermetic ceramic package

ELECTRICAL AND OPTICAL CHARACTERISTICS

	Parameter	Min	Typical Value	Max	Unit	Remarks
General	Optical angle		20	30	Deg.	
	Position error		1		mRad	Both vertical and Horizontal
	Scan Frequency Range	1		1300	Hz	Scan regim dependence
	Mirrors natural Frequency	1.1	1.3	1.5	KHz	
	Mirrors Effective size		3.6X4.7		mm	
	MEMS Scanning module power consumption			<350	mW	RMS for single mirror. Mirror deflection dependent
Optical	Mirror flatness		350	800	nm	
	Mirror reflectance	90		97	%	Gold coating Coating could be adjusted to achieve higher reflectance
	Overall reflectance	84		92	%	Mirror and Optical window
	Wave length range for reflection	440		9000	nm	Optical window coating dependent
	laser spot size			3	mm	@1/e^2
	Laser max Power			2	W	

OPTO-MECHANICAL INTERFACE

Scanning Module



Scanning Module Electrical Connection

The scanning module should be connected to control board by a specified flat printed flex.

Laser Interface

The optical window of the MAR1800 enables typical projection of a 20[deg] FOV. Laser input angle is flexible.

IMPORTANT NOTE

CONTACT DETAILS

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