



MEMS STEERING MIRROR

*large static
deflection*

OVERVIEW

The **sercalo** MEMS 3D mirrors are used for precise optical beam steering.

The micromirror is designed to minimize effects such as drift, hysteresis and temperature dependent performance. The angle is set using electrostatic actuation.

FEATURES

- Low drift
- 2 independent axis
- Continuous tilting
- Single mirror
- 2.0 x 2.5 mm² mirror
- High fill factor

APPLICATIONS

- Optical Beam Steering
- Reconfigurable Add-Drop Multiplexer
- Vibration control in free space optics
- Optical Processor

ORDERING INFORMATION

TM-2520 *2.5 x 2.0 mm² mirror*

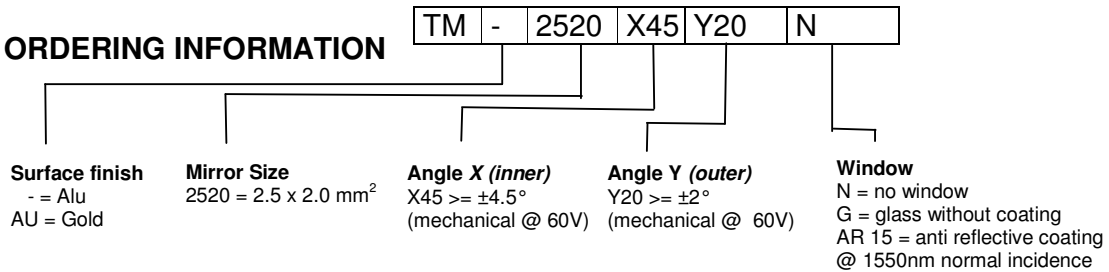
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TYPICAL SPECIFICATIONS

	Unit	Min	Typ	Max
Max. Actuation Voltage	V		60	70
Surface Finish	-		Al or Au	
Reflectivity (900-2000 nm)	%		95	
Mirror Size – X	μm	2500		
Mirror Size – Y	μm	2000		
Mirror Radius of Curvature	m	1.0		
Tilt Angle – X (Mechanical) @ 60 V	°		±4.5	
Tilt Angle – Y (Mechanical) @ 60 V	°		±2.5	
Resonant Frequency - X	Hz		170	
Resonant Frequency - Y	Hz		360	
Package	TO5			
ESD	Unprotected = VERY SENSITIVE Overvoltage above 70 V can permanently damage the device.			

ORDERING INFORMATION



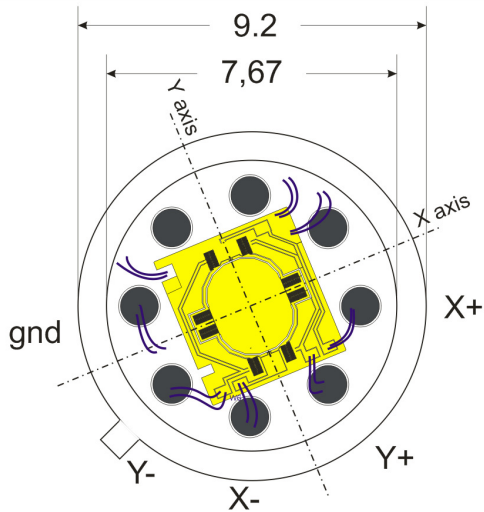


Figure 1: Pin layout of a Ø2.0 mm micro-mirror chip on TO5 socket

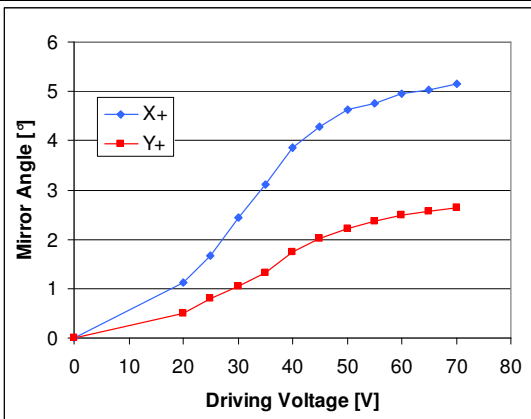


Figure 2: Typical tilt angle vs. applied voltage

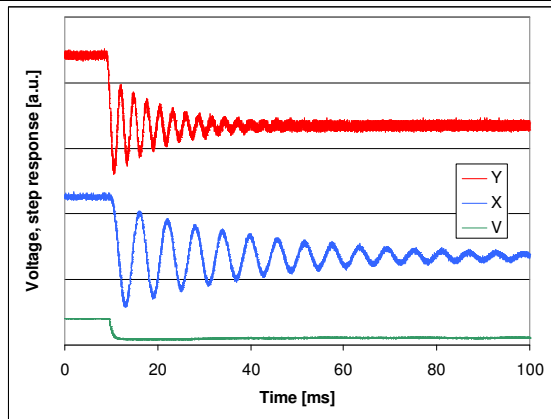


Figure 3: Typical step response