

# 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 axes
- Continuous tilting
- Single mirror
- 2.0 x 2.5 mm<sup>2</sup> mirror
- High fill factor

## APPLICATIONS

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

## ORDERING INFORMATION

TM-2520-X20Y10-AR15 *Gold coated mirror*

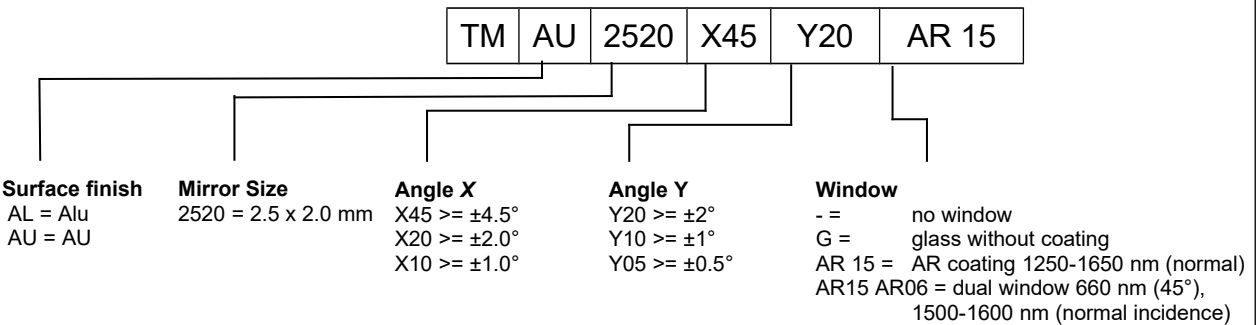
## CONTACT:

Sercalo Microtechnology Ltd  
Landstrasse 151, FL 9494 Schaan  
Fürstentum Liechtenstein  
Tel. +423 237 57 97 Fax. +423 237 57 48  
www.sercalo.com Email: info@sercalo.com

## 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	2400		
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	<b>Unprotected = VERY SENSITIVE</b> Overvoltage above 70 V can permanently damage the device.			

### ORDERING INFORMATION

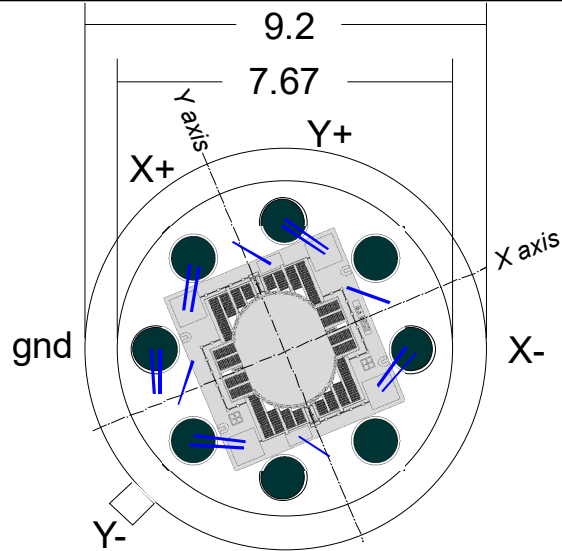


*Ordering Information:*

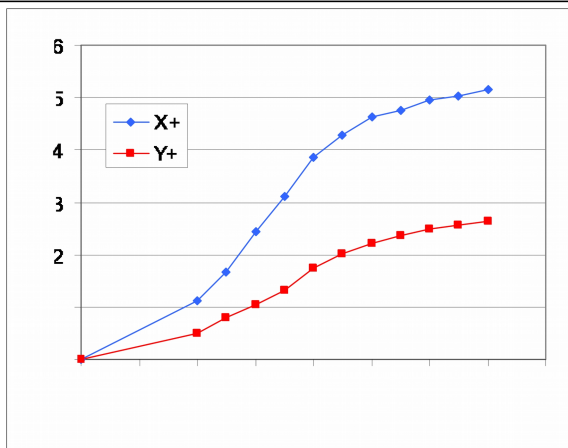


800 Village Walk #316  
 Guilford, CT 06437  
 Ph: 203-401-8093

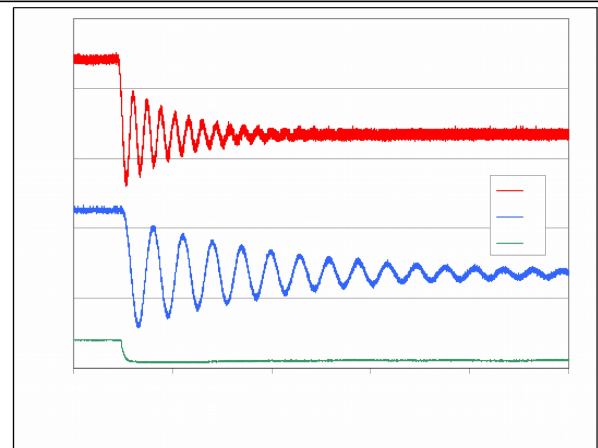
Email orders to: [sales@xsoptix.com](mailto:sales@xsoptix.com)  
 Fax orders to: 800-878-7282



**Figure 1:** Pin layout of a 2.5 x 2.0 mm<sup>2</sup> micro-mirror chip on TO5 socket



**Figure 2:** Typical tilt angle vs. applied voltage



**Figure 3:** Typical step response