

$\theta_x\theta_y$ axes | XD304.T1S/K-B1 Piezo Fast Steering Mirror



Characteristics >>

- θ_x , θ_y deflection
- Optional closed loop sensor
- Small size
- High resonant frequency

Applications >>

- Laser scanning
- Beam deflection
- Beam stabilization
- Light filter
- Light path adjustment
- Laser communication
- Beam stabilization
- Fast beam scanning

Introduction

XD304-B1 Piezo Fast Steering Mirror is specially designed for small size, micro stroke and high frequency applications. It can perform $\theta_x \theta_y$ two-dimensional precision angular deflection motion. It is an ideal compact fast-reflection mirror, which is very suitable for deflection adjustment of small reflective mirrors.



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Technical Data >>

Type	S - closed loop K - open loop	XD304.T1S-B1	XD304.T1K-B1	Units
Active axes		θ_x, θ_y	θ_x, θ_y	
Driving channels		3	3	
Tilt angle (0~100V)		1 or ± 0.5 ($\approx \pm 103^\circ$)	1 or ± 0.5 ($\approx \pm 103^\circ$)	mrad $\pm 10\%$
Tilt angle (0~120V)		1.2 or ± 0.6 ($\approx \pm 123^\circ$)	1.2 or ± 0.6 ($\approx \pm 123^\circ$)	mrad $\pm 10\%$
Sensor		SGS	-	
Resolution		0.03 (< 0.01")	0.01 (< 0.01")	μrad
Linearity		0.2	-	%F.S.
Repeatability		0.1	-	%F.S.
Size		$\Phi 25 \times 22$	$\Phi 25 \times 22$	mm
Unloaded resonant frequency		15	15	kHz $\pm 20\%$
Resonant frequency with load		11.6($\Phi 12.7\text{mm} \times 3\text{mm}$ mirror)	11.6($\Phi 12.7\text{mm} \times 3\text{mm}$ mirror)	kHz $\pm 20\%$
El. capacitance		0.8/axis	0.8/axis	$\mu\text{F}/\pm 20\%$
Operating temperature ^[1]		-20~80	-20~80	$^\circ\text{C}$
Material		Titanium, steel	Titanium, steel	
Mass (not include cable)		<60	<60	g $\pm 5\%$
Line position		Side	Side	
Cable length ^[2]		1.5	1.5	m $\pm 10\text{mm}$

Note: Technical data are measured by CoreMorrow E00/E01 series piezo controller. Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25°C.

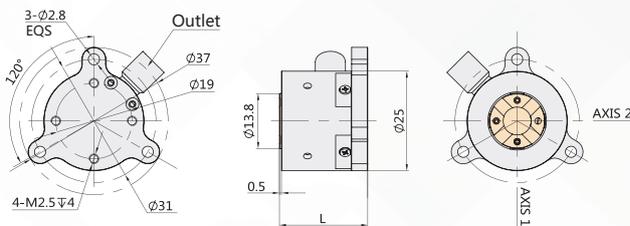
[1] Custom ultralow temperature and ultrahigh vacuum versions are available.

[2] Custom cable length and connector is available.

Note: The parallelism of the moving platform is about 20 μm , and the roughness is about 1.6 to 3.2. Please contact the sales engineer for confirmation before purchase.

Drawing >>

Type	L[mm]
XD304.T1-B1	22
XD304.T2-B1	31



Recommended Controllers >>



E01.D3
 LCD, membrane button, up to 625mA
 RS-232/RS-422/USB interface
 Software secondary development



E70
 Small size, ave current 70mA/channel
 RS-232/RS-422/USB interface
 Software secondary development



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