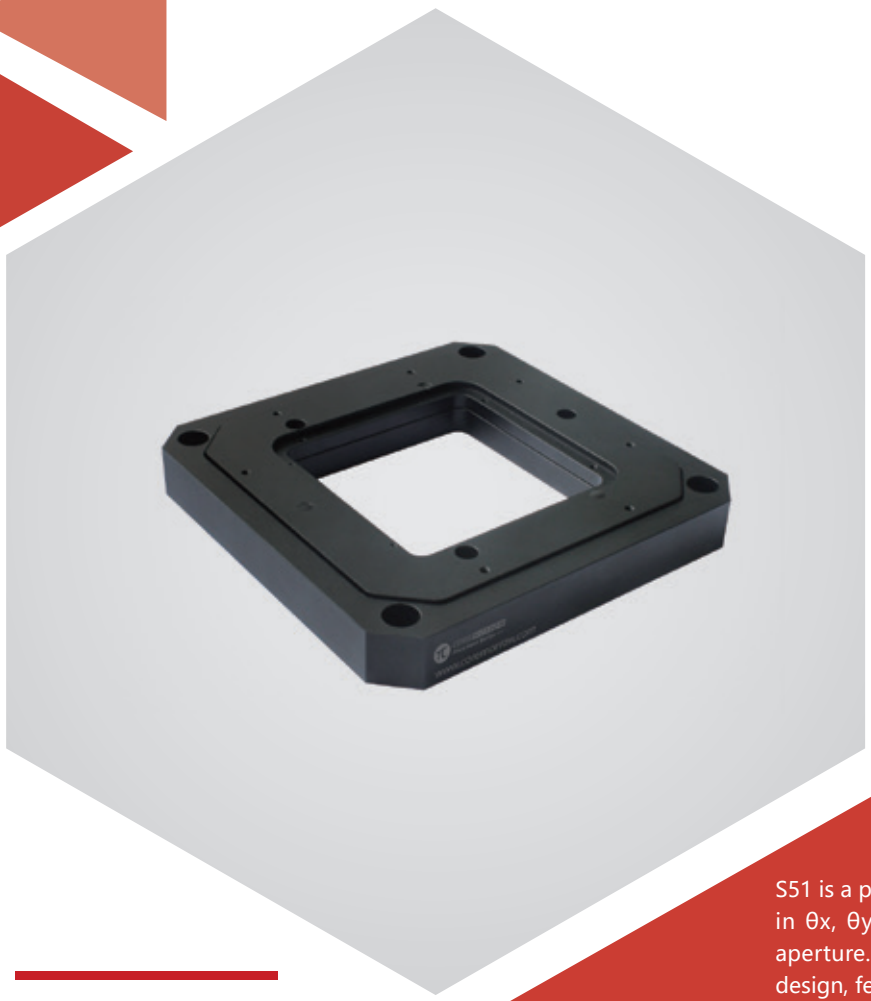
COREMORROW
Piezo Nano Motion

Make Your Motion and Control More Accurate!

θx/θy/Z axes | S51.ZT1S/K

Piezo Tip/Tilt and Z Stage



Introduction

S51 is a piezoelectric deflection stage with 3 axes motion in θx, θy and Z, and with a 80×80mm central large aperture. It adopts frictionless flexible hinge structure design, featuring fast response speed and high precision of closed-loop positioning. The central large aperture makes it easy to integrate into microscopic and scanning optical system.

Characteristics »

- θx, θy and Z motion
- High closed-loop positioning accuracy
- Fast respons
- Light aperture: 80×80mm

Applications »

- Optical beam scanning
- Light path adjustment
- Graphical stability
- Interference/metering
- Large loading tilt motion
- Space perturbation simulation system
- Calibration of acceleration sensor
- Calibration of angular velocity sensor

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CoreMorrow
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Technical Data »

Type	C-Closed loop K-Open loop	S51.ZT1S	S51.ZT1K	Units
Active axes		θx, θy, Z	θx, θy, Z	
Linear travel axes(0~120V)		80	80	μm±10%
Linear travel axes(0~150V)		100	100	μm±10%
Tilt angle(0~120V)		±0.9/ axis(≈ ±190")		mrad±10%
Tilt angle(0~150V)		±1.1/ axis(≈ ±220")		mrad±10%
Integrated sensor		SGS	-	
Resolution in Z		7	4	nm
Resolution(θx, θy)		0.25(≈ 0.05")	0.05(≈ 0.01")	μrad
Closed loop linearity		0.1	-	%F.S.
Closed-loop repeatability		0.05	-	%F.S.
Push/pull force		120	15	N
Stiffness in Z		1.5	1.5	N/μm±20%
Unloaded resonant frequency		340	340	Hz±20%
Unloaded step time		30/4.5	30/4.5	ms±20%
Load capacity		1		kg
Operating temperature[1]		-20~80	-20~80	℃
El. capacitance		5.4	5.4	μF±20%
Material		Aluminum, Steel		
Mass		820	820	g±5%
Cable length[2]		1.5	1.5	m±10mm
Sensor/voltage connector[2]		-	-	

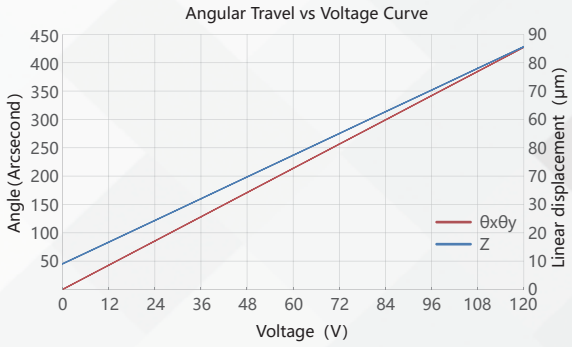
Note: Technical data are measured by CoreMorrow E00/E01 series piezo controller. Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation.Unless otherwise specified, the above parameters are measured at room temperature about 25° C.

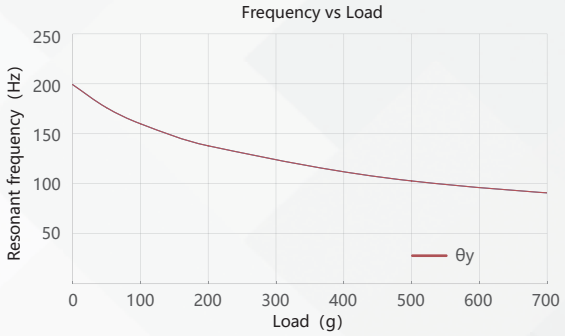
[1] Custom ultralow temperature and ultrahigh vacuum versions are available.

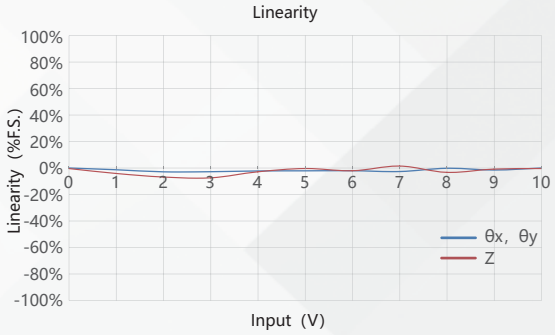
[2] Custom cable length and connector is available.

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

Curves »

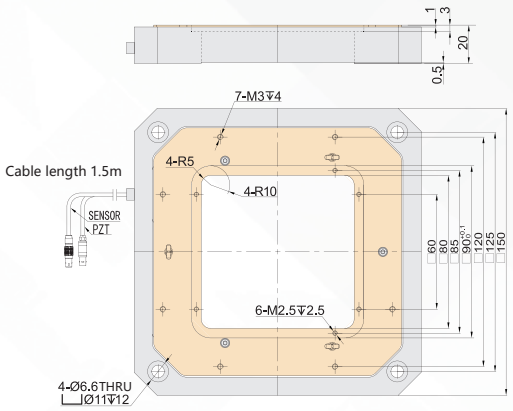






Disclaimer: The data here are typical, only for reference. Some variations will occur for different batch.

Drawing »



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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