

Z axis | P76.Z50S/K

Piezo Objective Scanner



Characteristics >>

- Active axes Z
- Travel to 50 μ m
- Load capacity to 0.5kg
- Millisecond response time
- Closed loop for high repeatability

Applications >>

- 3D imaging
- Surface structure analysis
- Biotechnology
- Interference/metering
- Confocal microscope
- Semiconductor test

Introduction

P76.Z50S/K piezoelectric objective scanner features a large load capacity up to 0.5kg, Z-axis linear motion range up to 50 μ m, adopting flexible hinge mechanism, no friction, good linearity, high closed-loop positioning accuracy.



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Technical Data >>

Type	S-Closed loop K-Open loop	P76.Z50S	P76.Z50K	Units
Active axis		Z	Z	
Travel range(0~120V)		40	40	$\mu\text{m} \pm 10\%$
Travel range(0~150V)		50	50	$\mu\text{m} \pm 10\%$
Integrated sensor		SGS	-	
Resolution		1.5	0.5	nm
Linearity		0.03	-	%F.S.
Repeatability		0.02	-	%F.S.
Push/pull force		35/10	35/10	N
Stiffness		0.8	0.8	$\text{N}/\mu\text{m} \pm 20\%$
Unloaded resonant frequency		800	800	$\text{Hz} \pm 20\%$
Unloaded step time		5	2	$\text{ms} \pm 20\%$
Load capacity		0.5	0.5	kg
El. capacitance		3.2	3.2	$\mu\text{F} \pm 20\%$
Operating temperature ^[1]		-20~80	-20~80	°C
Material		Steel, Al	Steel, Al	
Mass		430	430	$\text{g} \pm 5\%$
Cable length ^[2]		1.5	1.5	$\text{m} \pm 10\text{mm}$

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.

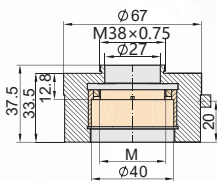
[1] Custom ultralow temperature and ultrahigh vacuum versions are available.

[2] Custom cable length and connector is available.

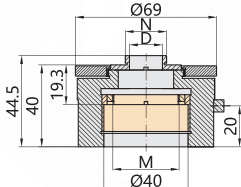
Note: The parallelism of the moving platform is about 20 μm , and the roughness is about 1.6 to 3.2. Please contact the sales engineer for confirmation before purchase.

Drawing >>

P76.Z50S/K

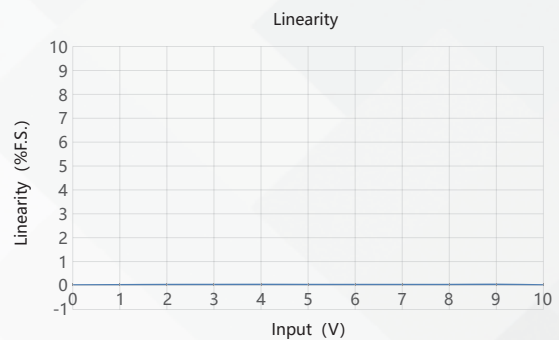
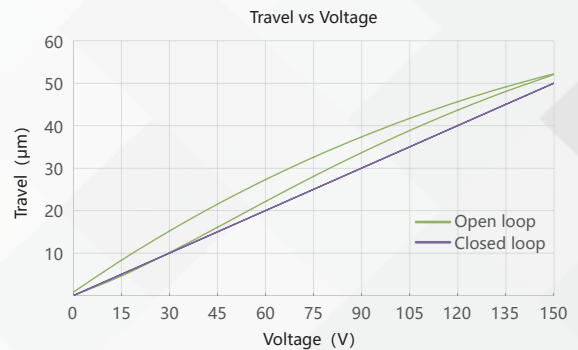


P76.Z50S/K with Adapter



M(Model)	N(Model)	D
M38×0.75	/	φ27
M32×0.75	M32×0.75	φ27
M28×0.75	M28×0.75	φ23
M27×0.75	M27×0.75	φ22
M26×0.75	M26×0.75	φ21
M26×1/36"	M26×1/36"	φ21
M25×0.75	M25×0.75	φ20
W0.8×1/36"	W0.8×1/36"	φ15
M19×0.75	M19×0.75	φ14

Curves >>



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

Recommended Controllers >>



E01.D1
 LCD, membrane button, up to 625mA
 RS-232/RS-422/USB interface
 Software secondary development



E53
 Small size, 60mA
 RS-232/RS-422/USB interface
 Software secondary development



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