

Z axis | P76.Z80S/K

Piezo Objective Scanner



Characteristics >>

- Active axes Z
- Travel to 80 μ m
- Load capacity to 0.9kg
- Millisecond response time
- Closed loop for high repeatability

Applications >>

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

Introduction

P76.Z80 piezoelectric objective scanner features a large load capacity up to 0.9kg, Z-axis linear motion range up to 80 μ m, adopting flexible hinge mechanism, no friction, good linearity, high closed-loop positioning accuracy.



Harbin Core Tomorrow Science & Technology Co., Ltd.

Tel: +86-451-86268790 Email: info@coremorrow.com
Fax: +86-451-86267847 Web: www.coremorrow.com

Headquarters: Building I2, No.191 Xuefu Road, Nangang District, Harbin
Shanghai Office: Building 2, No.608 Shengxia Road, Pudong District, Shanghai

Technical Data >>

Type	S-Closed loop K-Open loop	P76.Z80S	P76.Z80K	Units
Active axis		Z	Z	
Travel range(0~120V)		64	64	$\mu\text{m}\pm 10\%$
Travel range(0~150V)		80	80	$\mu\text{m}\pm 10\%$
Integrated sensor		SGS	-	
Resolution		3	1	nm
Linearity		0.03	-	%F.S.
Repeatability		0.02	-	%F.S.
Unloaded resonant frequency		1700	1700	Hz $\pm 20\%$
Closed-loop operating frequency (-3dB)		-	-	Hz $\pm 20\%$
Unloaded step time		15@24 μm , 900g	-	ms $\pm 20\%$
Load capacity		0.9	0.9	kg
El. capacitance		14.4	14.4	$\mu\text{F}\pm 20\%$
Operating temperature ^[1]		-20~80	-20~80	$^{\circ}\text{C}$
Material		Steel, Al	Steel, Al	
Mass		765	765	g $\pm 5\%$
Cable length ^[2]		1.5	1.5	m $\pm 10\text{mm}$

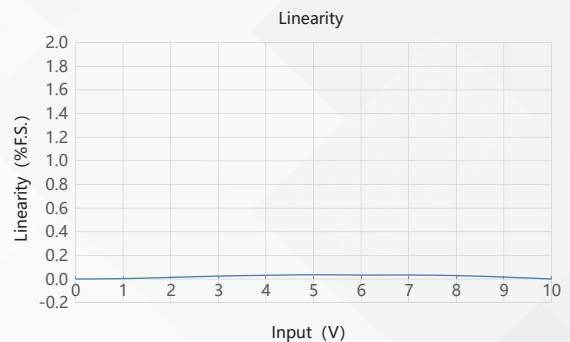
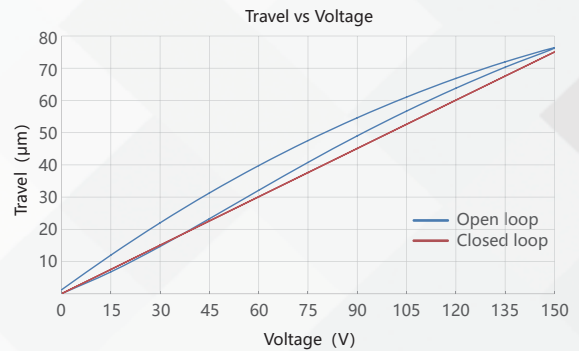
Note: Technical data are measured by CoreMorrow E00/E01 series piezo controller. Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25 $^{\circ}\text{C}$.

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

[2] Custom cable length and connector is available.

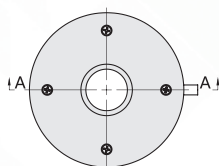
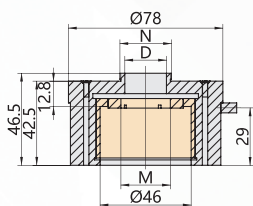
Note: The parallelism of the moving platform is about 20 μm , and the roughness is about 1.6 to 3.2. Please contact the sales engineer for confirmation before purchase.

Curves >>



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

Drawing >>



M(Model)	N(Model)	D
M38×0.75	M38×0.75	Φ27
M32×0.75	M32×0.75	Φ27
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

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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