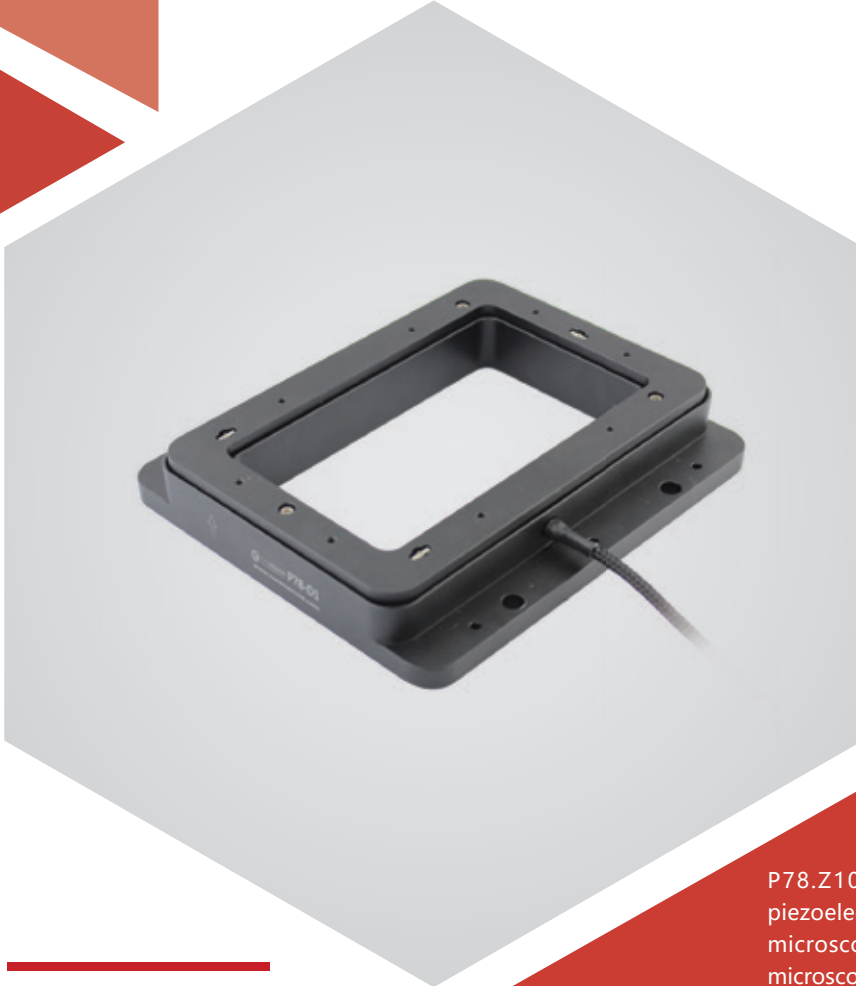


Z axis | P78.Z100S/K

Piezo Z Microscope Scanner



Introduction

P78.Z100 piezo microscope scanner is a Z-axis piezoelectric scanning stage designed for biomedical microscopy applications. It is easy to integrate into microscopic instruments.

Characteristics >>

- Active axes Z
- Max stroke to 100 μ m
- Resolution to 1nm
- Aperture size: 120 \times 70mm

Applications >>

- Biotechnology
- Microscopic imaging
- Interferometry/measurement
- Confocal microscopy
- Super-resolution microscopy
- Autofocus system
- Semiconductor test
- 3D imaging



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Technical Data >>

Type	S-Closed loop K-Open loop	P78.Z100S	P78.Z100K	Units
Active axis		Z	Z	
Travel range(0~120V)		80	80	$\mu\text{m}\pm 10\%$
Travel range(0~150V)		100	100	$\mu\text{m}\pm 10\%$
Sensor		SGS	-	
Aperture		120×70	120×70	mm
Resolution		3	1	nm
Closed-loop linearity		0.3	-	%F.S.
Repeatability		0.1	-	%F.S.
Pitch/yaw/roll		<25	<25	μrad
Push/pull force capacity		120/15	120/15	N
Stiffness		1.5	1.5	$\text{N}/\mu\text{m}\pm 20\%$
Unloaded resonant frequency		400	400	$\text{Hz}\pm 20\%$
Unloaded Step time		30	5	$\text{ms}\pm 20\%$
Load capacity		1	1	kg
El. capacitance		5.4	5.4	$\mu\text{F}\pm 20\%$
Operating temperature ^[1]		-20~80	-20~80	°C
Material		Steel, Al	Steel, Al	
Size(L×W×H)		154×136×25	154×136×25	mm
Mass		560	560	$\text{g}\pm 5\%$
Cable length ^[2]		1.5	1.5	$\text{m}\pm 10\text{mm}$
Sensor/voltage connector ^[2]		LEMO	LEMO	

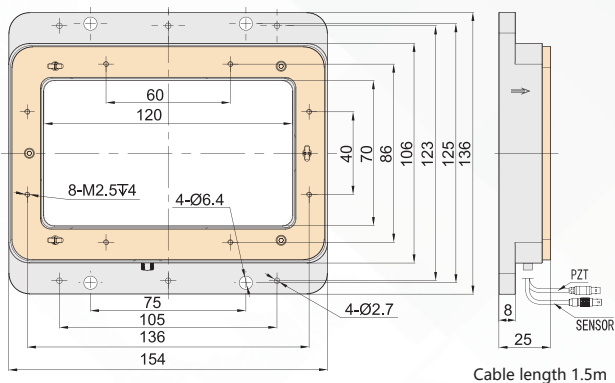
Note: Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25° C.

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

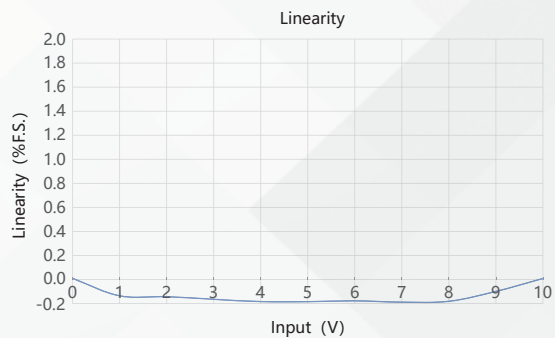
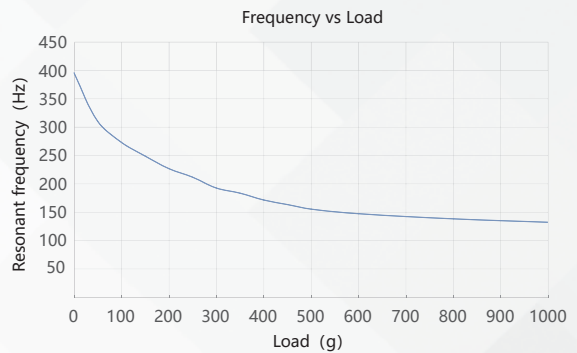
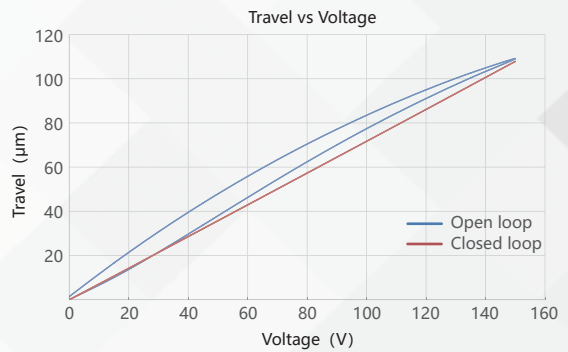
[2] Custom cable length and connector is available.

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 >>



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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