

## Z axis | P77.S/K154 Piezo Phase Shifter



### Characteristics >>

- Motion in Z
- Stroke to 20 $\mu$ m
- Max load to 25kg
- Aperture size:  $\Phi$ 155mm
- Custom versions are available

### Applications >>

- Optical trapping
- Surface inspection
- Precision positioning
- Microscopic imaging
- Phase shifter
- Phase shifting/interference/metering

## Introduction

P77.S/K154 piezo phase shifter is specially designed for optical detection and phase shifting applications, with travel range of up to 20 $\mu$ m and load capacity is upright 25kg, lateral 20kg, inverted 20kg, which is very suitable for large-aperture optical inspection equipment, like laser interferometer, for various lenses. Custom versions are available.



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### Technical Data >>

Type	S-Closed loop K-Open loop	P77.S154	P77.K154	Units
Active axis		Z	Z	
Travel range(0~120V)		16	16	μm±10%
Travel range(0~150V)		20	20	μm±10%
Sensor		SGS	-	
Aperture		Φ155	Φ155	mm
Resolution		0.5	0.2	nm
Pitch/yaw/roll		<10	<10	μrad
Push/pull force capacity		50/30	50/30	N
Unloaded resonant frequency		1300	1300	Hz±20%
Unloaded Step time		3.5	2	ms±20%
Load capacity		Upright 25, Lateral 20, Inverted 20		kg
El. capacitance		14.4	14.4	μF±20%
Operating temperature <sup>[1]</sup>		-20~80	-20~80	°C
Material		Aluminum, steel		
Size(L×W×H)		214×214×36	214×214×36	mm
Mass		3020	3020	g±5%
Cable length <sup>[2]</sup>		1.5	1.5	m±10mm
Sensor/voltage connector <sup>[2]</sup>		LEMO	LEMO	

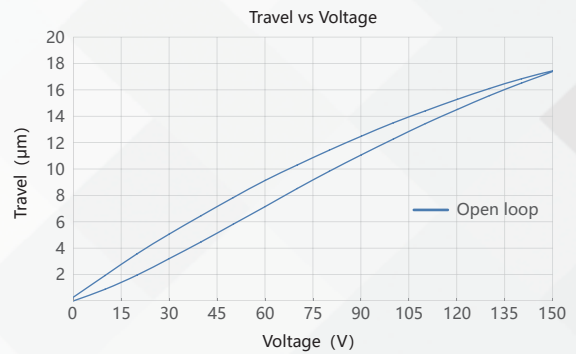
Note: Max driving voltage could be -20V~150V, 0~120V is recommended for long-term and high-reliable operation. Unless otherwise specified, the above parameters are measured at room temperature about 25° C.

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

[2] Custom cable length and connector is available.

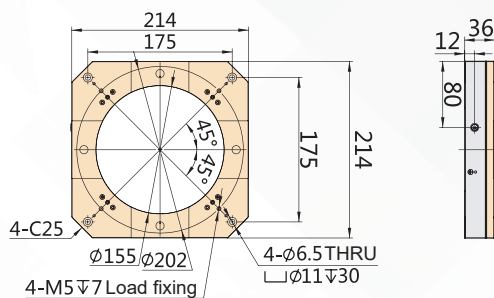
Note: The parallelism of the moving platform is about 20μm, and the roughness is about 1.6 to 3.2. Please contact the sales engineer for confirmation before purchase.

### Curves >>



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

### Drawing >>



### Recommended Controllers >>



**E01.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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