Piezoelectric Actuator Fitted with a Strain Gauge



The PZS001 is comprised from an AE0505D16F piezoelectric actuator with a built-in strain gauge bridge that is used to monitor the amount of piezo displacement. The strain gauge feedback and fast response time makes this actuator ideal for use in applications that require precise nanometer positioning. They are designed to be incorporated into OEM products to form a tightly controlled, high-speed, closed-loop actuator.



Note: If this product is to be used with a Thorlabs closed-loop piezo controller, a preamplification circuit is required between the bridge output and the controller. Please contact technical support for more information.

ITEM#	\$	£	€	RMB	DISPLACEMENT @ 150 V	DISPLACEMENT @100 V	CAPACITANCE @1 kHz, 1 V RMS	RESONANT FREQUENCY
PZS001	\$ 175.00	£ 121.40	€ 155,40	¥ 1,477.80	17.4 ± 2.0 μm	$11.6 \pm 2.0 \ \mu m$	1.40 µF	69 kHz

Strain Gauge Preamp Circuits

Specifications

- Drive Voltage: 150 V
- Displacement: 17.4 ± 2 μm
- Bridge Arm Resistance: 350 Ω
- Piezo Capacitance: 1.4 µF
- Resonant Frequency: 69 kHz
- Gauge Factor: 2 ± 2%



The AMP001 Preamp Circuit is required when using our wide range of closed-loop controllers with bare piezo stacks fitted with strain gauges. These circuits amplify the signal generated from the strain gauge by 500 times to generate a large enough signal to be interpreted by a controller such as the BPC201. (See page 569)

ITEM#	\$		£		€		RMB		DESCRIPTION	
AMP001	\$	89.50	£	62.10	€	79,50	¥	755.80	Strain Gauge Preamp Board	

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TECHNOLOGY 🔻

Motion Control

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