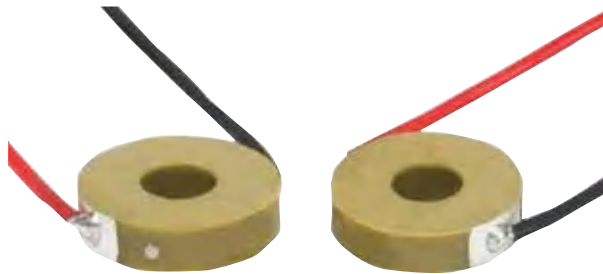


Piezo Chip Actuator - Ring



Features

- AC lifetime: 10^9 cycles
- Compact structure
- Microsecond-level response
- Vacuum compatible up to 10^{-6} Pa
- Sub-nanometer resolution
- Curie temperature: 230°C
- Operating voltage: -20 to +150V

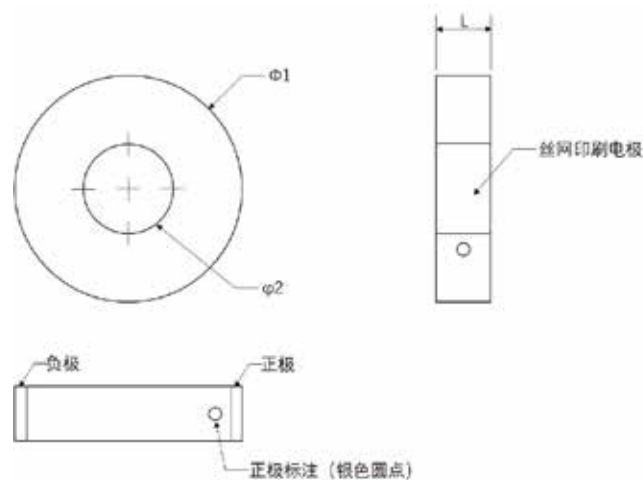
Description

The Piezo Chip Actuator consists of multiple ceramic layers and electrode layers stacked and intersected internally, with external electrodes printed on both sides to lead out the internal electrodes. Through precision grinding processes, the height tolerance of each piezoelectric ceramic is controlled to be smaller than $\pm 5\mu\text{m}$. The company has achieved seamless integration from piezoelectric ceramic powder to the finished actuator, and mass production has been implemented. Currently, the products are applied in the fields of nanoscale positioning, precision manufacturing, and dispensing valve technology.

Applications

- Laser tuning
- Life Science
- Micro-jetting

Interface Definition



General dimension, Unit: mm

Technical Specifications

	PAA-R38-2W	Unit	Tolerance
Active axes	Z		
Max. displacement	2.6	μm	±20%
Displacement hysteresis	<15%		
Load capacity	72	N	Max. value
Holding force (150 V)	1800	N	Max. value
Electrical properties			
Operating voltage	150	V	
Resonant frequency	515	kHz	Max. value
Resonant impedance	150	mΩ	±20%
Antiresonant frequency	670	kHz	Max. value
Dielectric loss	<2.0%		
Electrical capacitance	550	nF	±20%
Miscellaneous			
Operating temperature range	-25~130	°C	
Electrode	Silver		
Cable length	75	mm	±5 mm
Curie temperature	230	°C	
Dimensions			
Φ1	8.3	mm	±0.1 mm
Φ2	3	mm	±0.1 mm
L	2	mm	±5 μm

*Optional soldering of standard wiring harness available, length 75mm, AWG32, PTFE insulation, followed by 'W' in the product code
 Other specifications can be customized on request.

Customization Information

Piezo Chip Actuator - Ring

Option	Description
PAA-R38-2	Piezo Chip Actuator - Ring, inner diameter 3mm, outer diameter 8.3mm, effective travel 2.6μm, without wire
PAA-R38-2W	Piezo Chip Actuator - Ring, inner diameter 3mm, outer diameter 8.3mm, effective travel 2.6μm, with wires