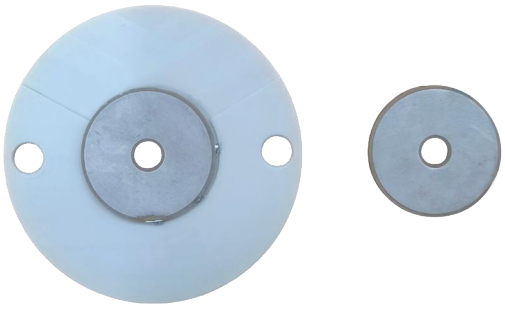
Round Piezoelectric Bimorph Bender



Features

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

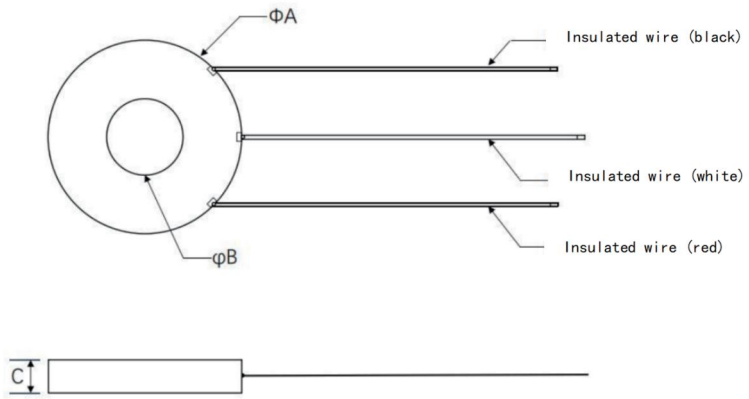
Description

Piezo Bender Actuator, made by co-firing multiple layers of piezoelectric ceramics, and can independently control the drive voltage of each layer of ceramics. The free end can bend to produce displacement, the amplitude and direction of displacement are functionally related to the applied voltage.

Applications

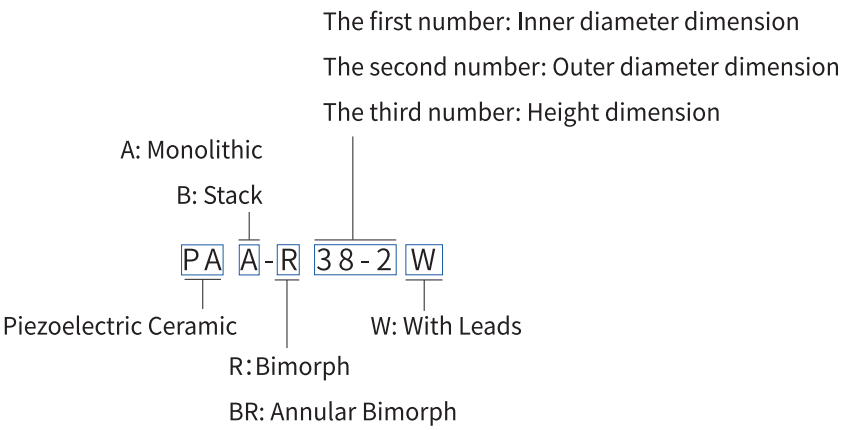
- Laser technology and laser beam control
- Medical technology
- Printing technology
- Acceleration transducer
- Fibre channel switch

Interface Definition



General dimension, Unit: mm

Model Interpretation



Technical Specifications

	PAA-BR420-13W	Unit	Tolerance
Active axes	Z		
Max. displacement	±28	μm	±15%
Displacement hysteresis	<15%		
Load capacity	1.5	N	Max. value
Electrical properties			
Operating voltage	0-150	V	
Resonant frequency	13.1	kHz	Max. value
Dielectric loss	<2.0%		
Electrical capacitance	840/unilateral	nF	±15%
Miscellaneous			
Operating temperature range	-25~130	℃	
Electrode	Silver		
Cable length	75	mm	±5 mm
Curie temperature	230	℃	
Dimensions			
A	20	mm	±0.5 mm
B	4	mm	±0.1 mm
L	1.2	mm	±0.1 mm

Customization Information

Depending on the different application scenarios of the annular bimorph actuator, we can offer product customization in terms of performance parameters and structural shape.

- **Drive Voltage:** Different drive voltages can meet various displacement requirements. We can provide common drive voltages such as 100V, 120V, and 150V. Other special maximum drive voltages can also be customized flexibly according to customer requirements.

- **Output Displacement:** The output displacement is primarily determined by the structure of the annular bimorph. YiNGUAN offers a maximum displacement stroke of up to 30μm.

- **Operating Frequency:** The long-term operating frequency of the annular bimorph depends on factors such as the resonant frequency of the device and the drive voltage. YiNGUAN can flexibly design according to customer requirements, with the highest drive frequency of the annular bimorph reaching up to 20kHz. For ultra-high-frequency application scenarios, we can also customize higher drive frequencies.

- **Wiring Harness:** Under the condition of meeting the AWG usage standards, the wiring harness is optional. For convenient connection of the positive and negative electrode wires, the soldering point position can be selected within the allowable error range of performance variation.

- **Dimensions:** The inner diameter, outer diameter, and thickness of the annular bimorph can be customized flexibly according to customer requirements. In terms of the outer diameter, the minimum available size is 8 mm, and the maximum is 30mm. For the inner diameter, the minimum available size is 1mm, and the maximum is 10mm. The maximum thickness that can be customized is 2mm.