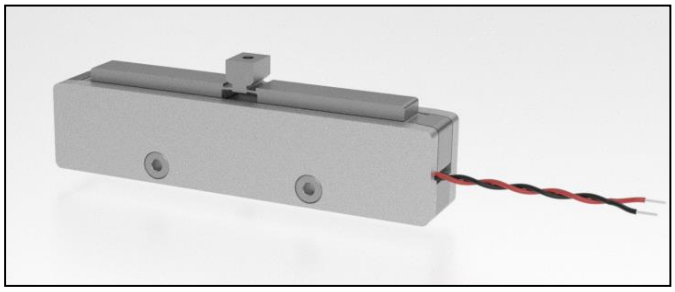
PSA500 High Frequency Piezo Actuator

Description

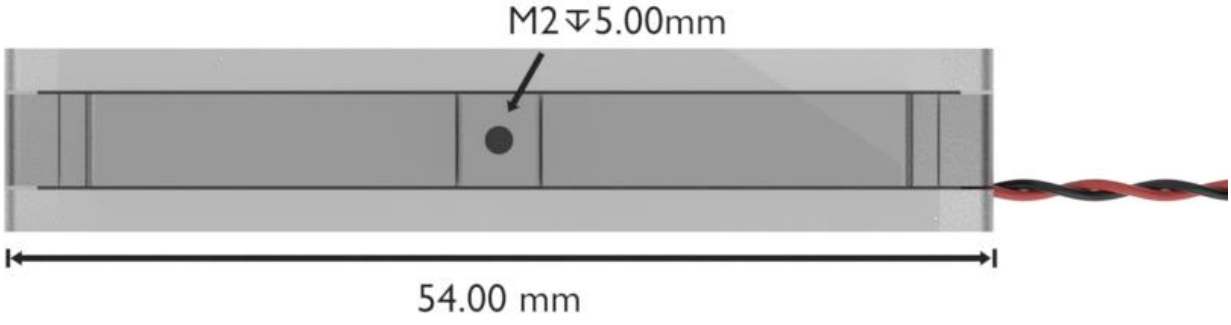
- Linear contracting motion with displacement to 500 µm
- Minimal moving mass results in exceptionally high resonant frequency
- Optimal actuator for force generation in adaptive systems technology, nanoimprint processes, or machine tools
- Customizable and scalable for new applications

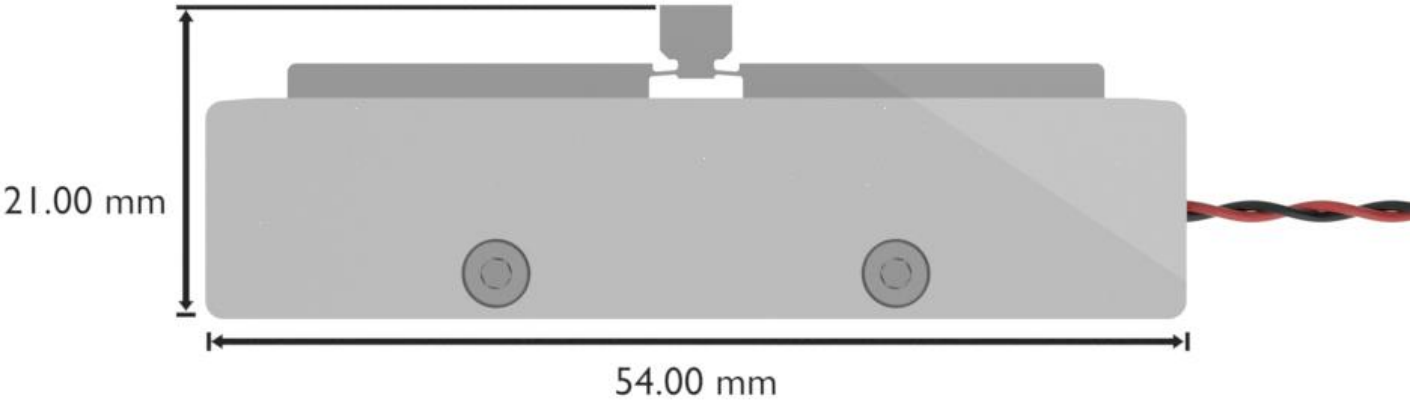


Recommended Applications

- Shutters
- Valves
- Pick and Place
- High-frequency switches
- Industrial Automation

Specifications	
Motion Direction (positive voltage):	Contracting
Resonant Frequency, No Load	1000 Hz
Open-loop Displacement: Voltage Range: 0V to +150V	500 µm ±15%
Open-loop Displacement: Voltage Range: -30V to +150V	625 µm ±15%
Stiffness In Motion Direction:	0.03 N/µm
Blocked Force in Pull Direction: (Stiffness x Displacement 0 to +150V)	15 N
Blocked Force in Push Direction: (Stiffness x Displacement 0 to -30V)	3 N
Max. External Pushing Load: (Limited by Internal Preload)	16 N
Mass:	20 g
Integrated Thermocouple:	K-Type
Capacitance at 1VDC:	1.6 µF
Operating Environment:	-20°C to 80°C; 0 to 50% RH
Materials:	Titanium Alloy, Cu, PTFE, Al
Dimensions:	16 mm x 11 mm x 56 mm
Recommended Electronics:	VF-500 Amplifier, VF-500 XRS for shutter applications
Connectors:	Flying Leads, Custom Options Available
Options:	Contact DSM for Integrated Sensor Options for Closed Loop Operation





A K-type thermocouple lead and two 26 AWG Lead Wires (a single red and a single black) exit the actuator per PZT stack polarity
Standard Flying Lead length is 50 mm