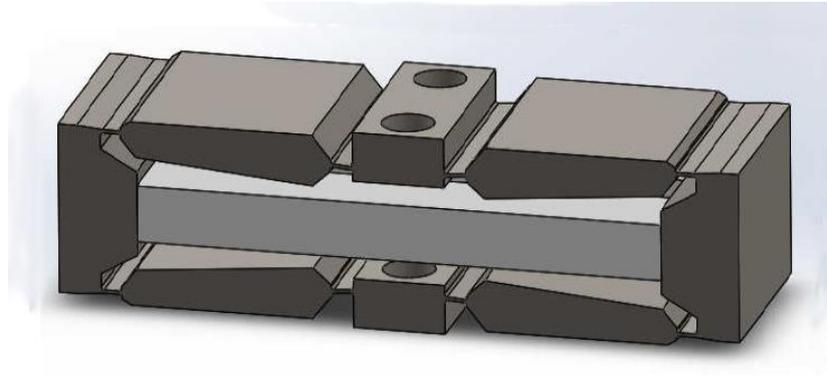


## AP Series Amplified Piezoelectric Actuators

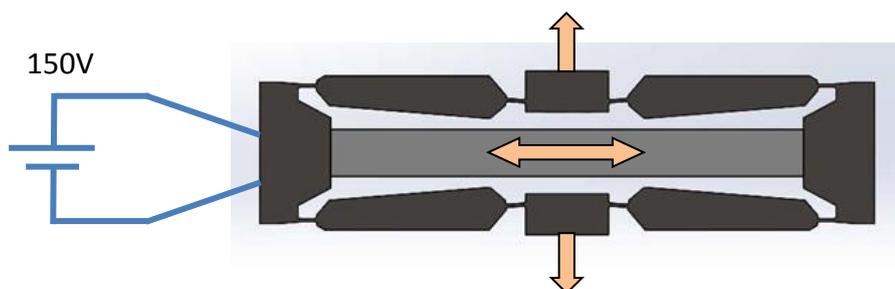


The PiezoDrive AP Series displacement actuators utilize an advanced flexural mechanism and high performance piezoelectric stack actuators to provide an exceptionally large range of motion, fast response, and sub-nanometer resolution. The advanced dual-hinge flexure mechanism significantly outperforms competing devices due to its significantly higher in-plane and out-of-plane stiffness, greater mechanical efficiency, and higher resonance frequency. The dual-hinge flexure design also results in extremely compact dimensions.

Applications include: Nanopositioning, Biomedical, Microscopy, Precision machining, Vibration control, High-speed valves, and Optics.

A range of standard devices are available for immediate delivery, however, custom dimensions and travel ranges can be produced with a four-week lead time.

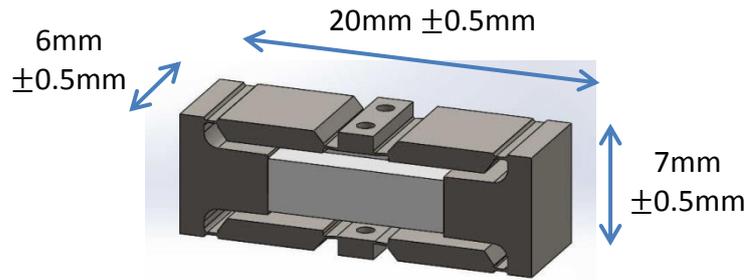
The AP actuators can be mounted in a fixed-free or free-free configuration using the threaded mounting holes. When a voltage is applied, a proportional expansion is developed in the vertical direction, as illustrated below.



The AP actuators can be driven with a modular amplifier such as the PDm200 or MX200, or an instrument such as the PDL200, PDX150b, or PDQ150b.

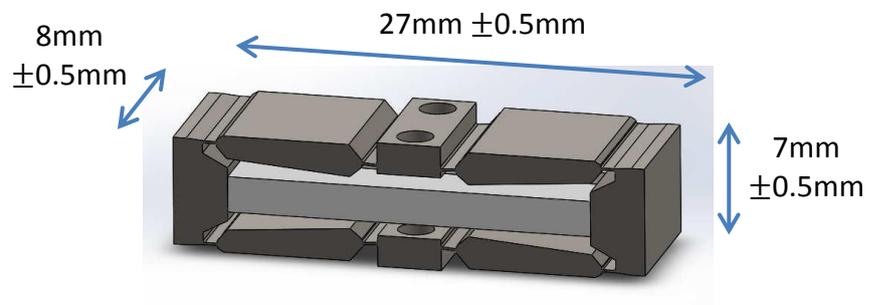
## AP120 - 120um Range Actuator

Displacement	>120 um
Voltage	-15V to 150V
Unipolar Disp.	>110 um
Resonance	900 Hz
Force	11 N
Stiffness	0.10 N/um
Capacitance	400 nF



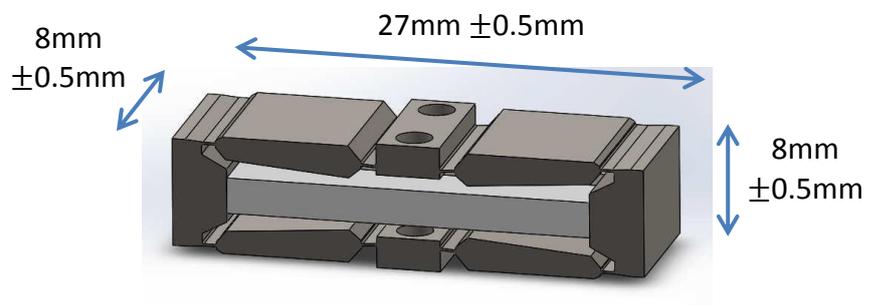
## AP340 - 340um Range Actuator

Displacement	>340 um
Voltage	-15V to 150V
Unipolar Disp.	>310 um
Resonance	460 Hz
Force	16 N
Stiffness	0.052 N/um
Capacitance	780 nF



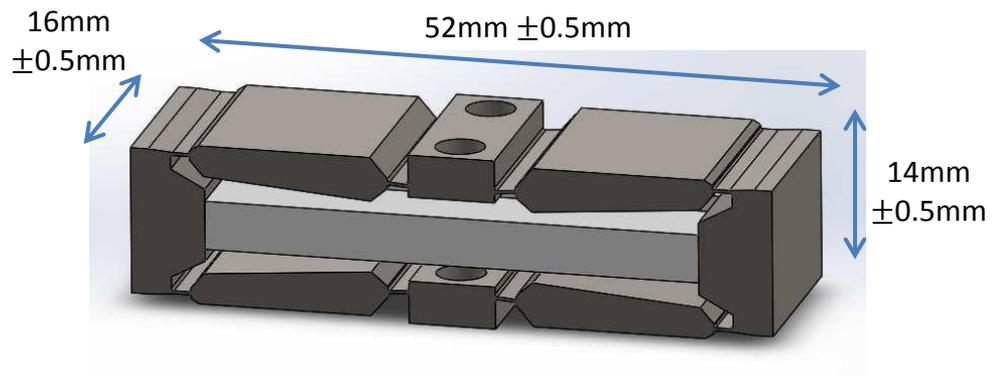
## AP350 - 350um Range Actuator

Displacement	>350 um
Voltage	-15V to 150V
Unipolar Disp.	>320 um
Resonance	480 Hz
Force	18 N
Stiffness	0.057 N/um
Capacitance	900 nF



## AP830 - 830um Range Actuator

Displacement	>830 $\mu\text{m}$
Voltage	-15V to 150V
Unipolar Disp.	>750 $\mu\text{m}$
Resonance	230 Hz
Force	90 N
Stiffness	0.12 N/ $\mu\text{m}$
Capacitance	8.3 $\mu\text{F}$



For further information or customization inquiries:

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