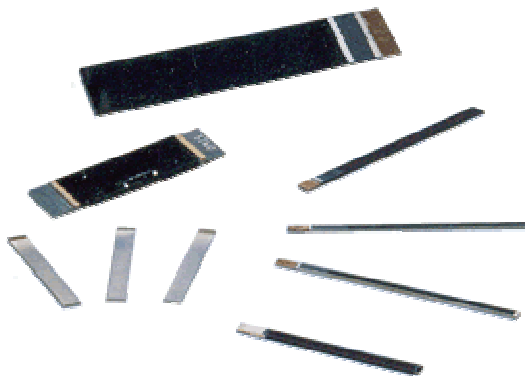


Piezoelectric Actuators – Data Sheet

Bimorph Sensors and Actuators

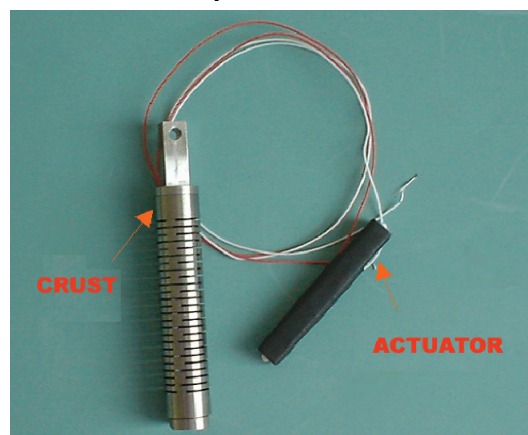


Bimorph sensors / actuators are made from a sandwiched pair of piezoelectric elements which can expand and contract in length. When used as a sensor, bending causes one side to go into tension and the other into compression, and having a response frequency in the audible range permits the bimorph element to be used as a high sensitivity sound sensor. When used as an actuator, an electrical input results in a bending force which can be used as a switching element in a wide range of applications (Braille readers, micro-pumps, valve flappers, audio-phones, vibration switches etc.)

Model:	Length (mm)	Width (mm)	Thickness (mm)	Free length (mm)	Voltage (V DC)	Deflection (mm)	Force (N)
QDA60-20-0.6	60	20	0.60	53	150	≥2.6	≥0.40
QDA60-10-0.6	60	10	0.60	53	150	≥2.6	≥0.20
QDA49-2.3-0.75	49	2.3	0.75	38	200	≥1.5	≥0.10
QDA45-10-0.6	45	10	0.60	38	150	≥1.3	≥0.20
QDA45-6.5-0.6	45	6.5	0.60	38	150	≥1.3	≥0.15
QDA40-20-0.6	40	20	0.60	33	150	≥1.1	≥0.50
QDA40-10-0.6	40	10	0.60	33	150	≥1.1	≥0.18
QDA35-2.5-0.6	35	2.5	0.60	28	150	≥0.7	≥0.11

Stack Actuators (Multilayer Piezoceramic Actuators)

Stack actuators utilise super thin piezo-ceramic wafers, bonded in a stack to provide high sensitivity, rapid response sensing and low driver voltage displacement and force actuation, both with outstanding cycle rates and superb reliability. They are used widely for the accurate displacement control of equipment, and are commonplace in optical, semiconductor, aviation, medical and genetic engineering fields.



Model:	Size (mm)	Driver Voltage (max)	Displacement (max)	Force (max)
QDS-5-5-18	5 x 5 x 18	150V DC	18µm	1000N
QDS-5-5-30	5 x 5 x 30	150V DC	30µm	1000N
QDS-5-5-95	5 x 5 x 95	150V DC	90µm	1000N
QDS-10-10-30	10 x 10 x 30	150V DC	25µm	4000N