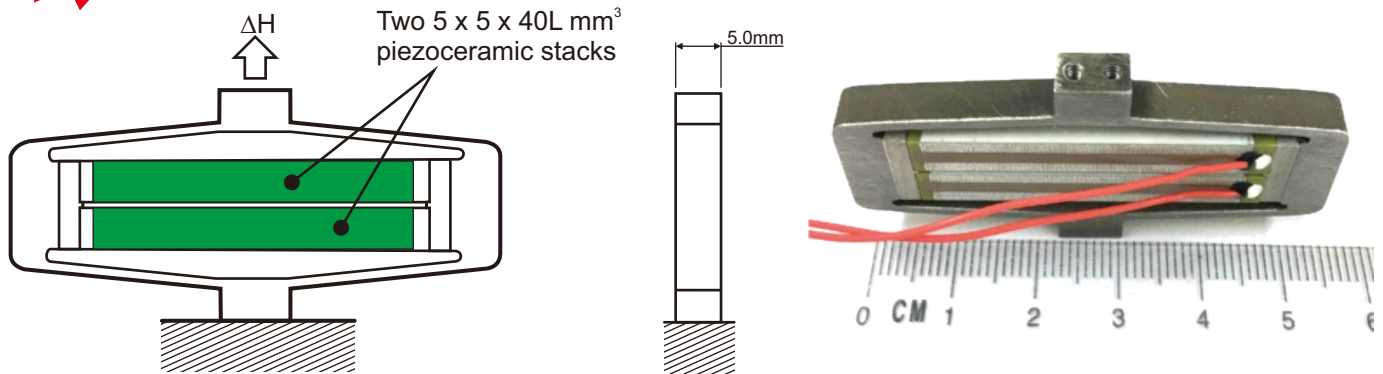


Flextensional Piezoelectric Actuator (FTA)



Flextensional Piezoelectric Actuator



Key Features

- Driven by 2 vertically-parallel stacks and of only 5 mm in depth (or thickness)
- Up to 500 μm in stroke and 140 N in maximum working load
- Free-free mode resonance frequencies \approx 2.0-3.3 kHz

Performance specifications of FTAs (See behind page for voltage- ΔH response curves)

Feature \ Product Code	FTA-500-15	FTA-350-50	FTA-300-40	FTA-200-140	FTA-175-70
Dimensions (LxDxH*;mm)	56x5x25.4(H)*	56x5x25.4(H)*	56x5x25.4(H)*	56x5x25.4(H)*	56x5x25.4(H)*
Voltage Range (V)	0-150	0-150	0-150	0-150	0-150
Stroke, ΔH (μm) @ 150V	500	350	310	200	175
Max. Working Load (N)	15	50	40	140	70
Approx. Stiffness (N/ μm)	0.03	0.14	0.13	0.7	0.4
Reson. Freq. (free-free; Hz)	2050	2200	2200	3270	3448
Reson. Freq. (free-blocked; Hz)	570	690	610	970	1008
Op. Temperature Range ($^{\circ}\text{C}$)	-20 to +80	-20 to +80	-20 to +80	-20 to +80	-20 to +80
Capacitance (μF) @ b1 kHz	7.75 \pm 0.25	7.75 \pm 0.25	3.86	7.75 \pm 0.25	3.64
Mass (g)	27.2	28.3	16.8	30.5	18.9
Std. mechanical interface	2 flat mounting surfaces of 5x8 mm ² each with two M2 threaded holes				
Std. electrical interface	80 mm long wires of 0.8 mm in outer dia.(lead wire dia.= 0.5 mm)				

* Height of device, H, is the excitation direction



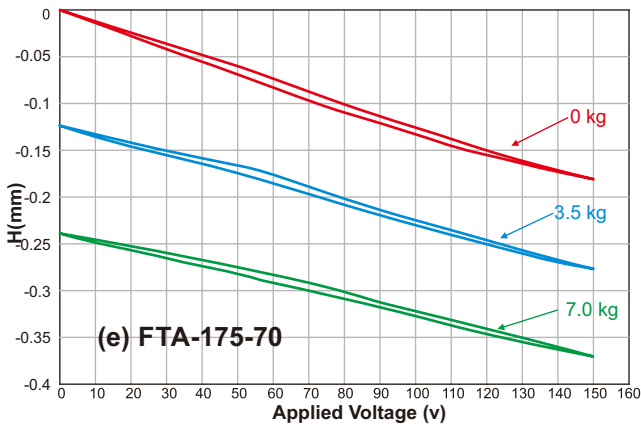
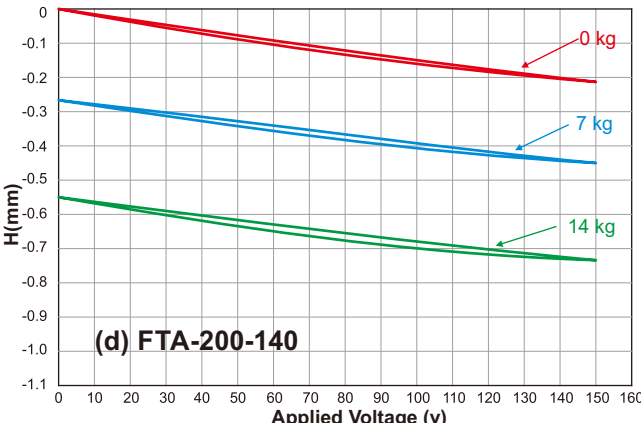
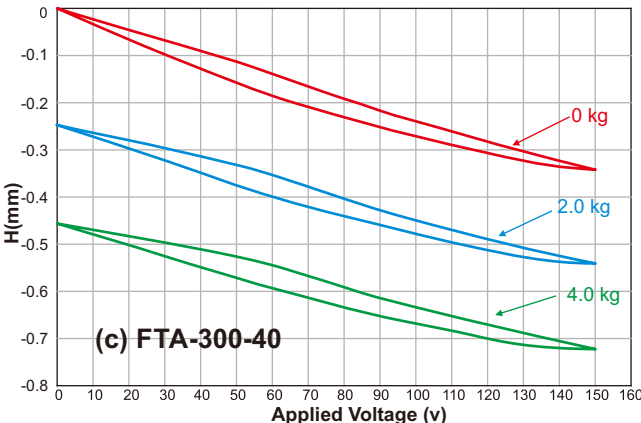
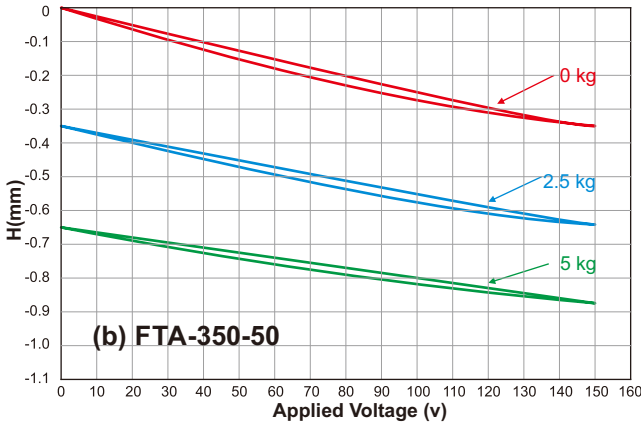
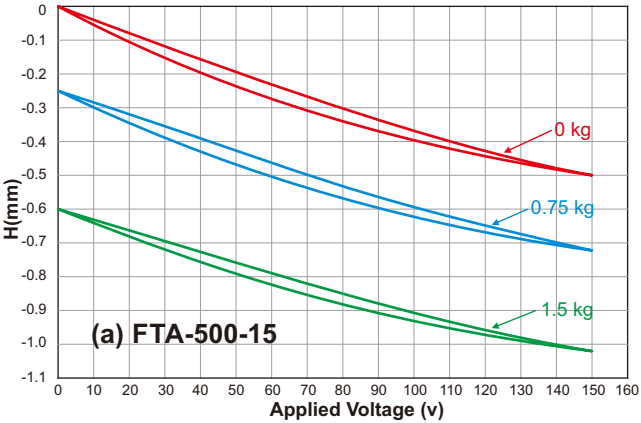
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Please contact us for other details.

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Vertical displacement (ΔH) responses of “FTAs” under different loads



Mircofine reserves the right to change specifications without notice.



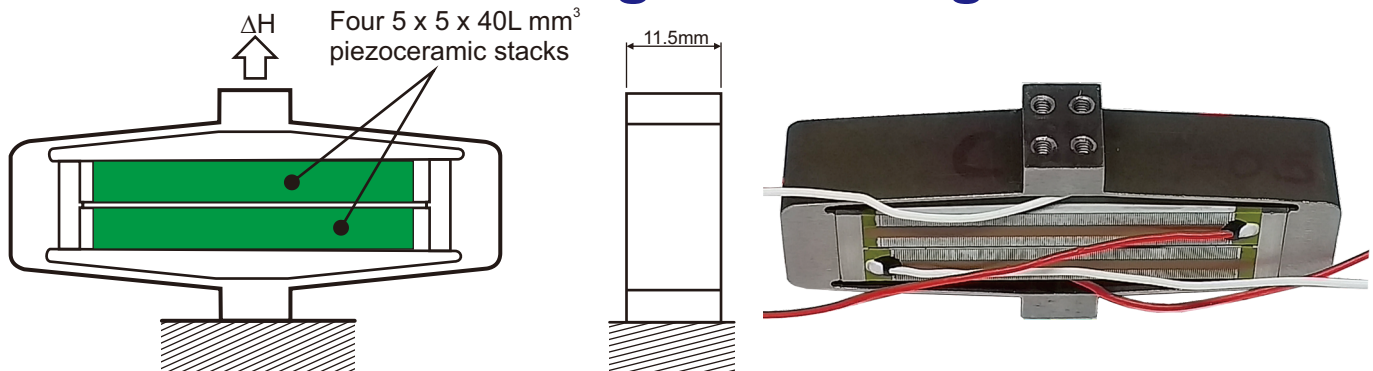
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Flextensional Piezoelectric Actuator (FTA)

FTAs For Twice Larger Working Load



Key Features

- Driven by 4 vertically-parallel stacks and of only 11.5 mm in depth (or thickness)
- Up to 500 μm in stroke and 250 N in maximum working load
- Free-free mode resonance frequencies of up to 3.5 kHz

Performance specifications of FTAs (See behind page for voltage-ΔH response curves)

Feature \ Product Code	FTA-500-30	FTA-350-130	FTA-200-250
Dimensions (LxDxH*;mm)	56x11.5x25.4(H)*	56x11.5x26(H)*	56x11.5x27(H)*
Voltage Range (V)	0-150	0-150	0-150
Stroke, ΔH (μm) @ 150V	500	350	200
Max. Working Load (N)	30	130	250
Approx. Stiffness (N/μm)	0.06	0.37	1.25
Reson. Freq. (free-free; Hz)	1573	1734	3509
Reson. Freq. (free-blocked; Hz)	365	450	900
Op. Temperature Range (°C)	-20 to +80	-20 to +80	-20 to +80
Capacitance (μF) @ b1 kHz	15.46	14.83	14.91
Mass (g)	57.9	61.02	65
Std. mechanical interface	2 flat mounting surfaces of 11.5x8 mm ² each with four M2 threaded holes		
Std. electrical interface	80 mm long wires of 0.8 mm in outer dia.(lead wire dia.= 0.5 mm)		

* Height of device, H, is the excitation direction



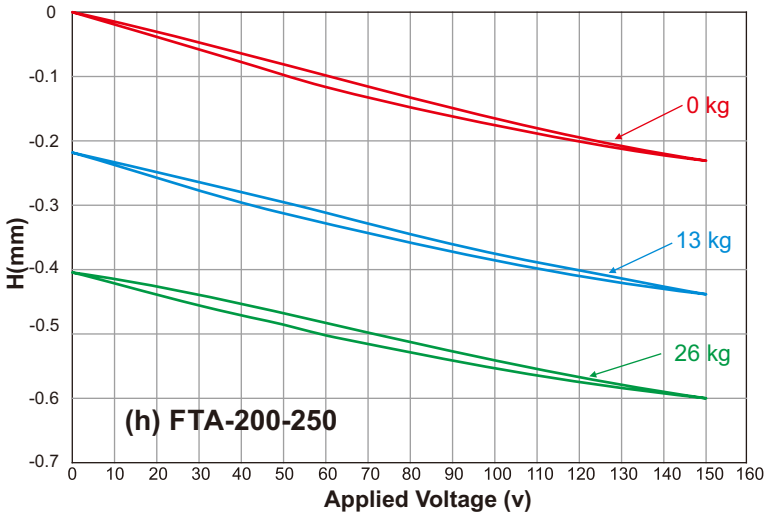
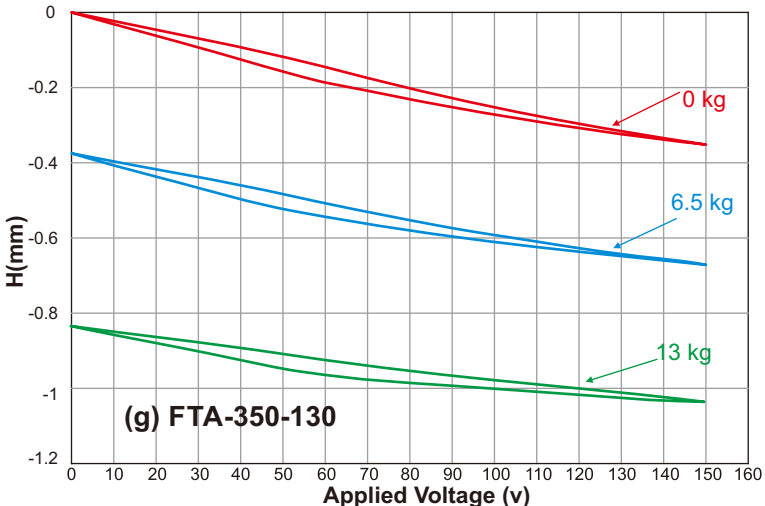
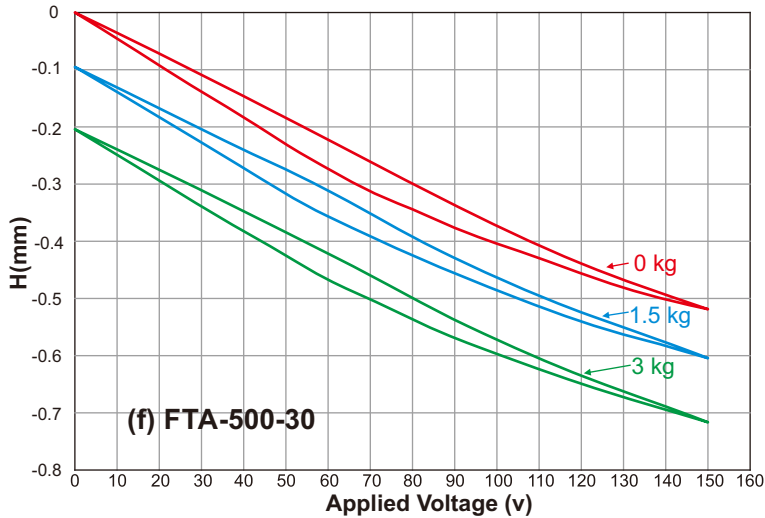
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Vertical displacement (ΔH) responses of “FTAs” under different loads



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