

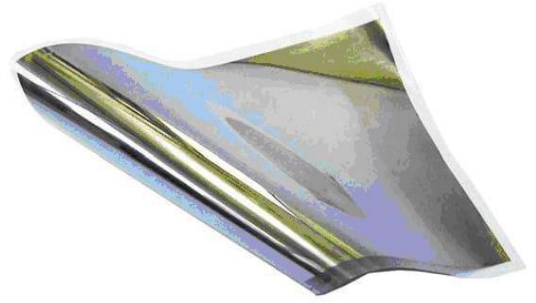
Metallized Piezo Film Sheets

Thin, flexible film sheets

Multi-purpose ... design your own Sensor

Different Electrode Options – Sputtered metallization or Silver ink

Various Film Thickness Options



Piezo Film Sheets are available in a different film sizes and thicknesses. These can be fabricated into simple transducers, or for use as full size sheets for applications such as speakers.

Metallization options include a compliant silver ink as well as sputtered metallization. The silver ink is best for applications where mechanical stress is being applied. Silver ink also lends itself to custom metallization patterns for easy lead attachment.

The thin, sputtered metallization is more brittle and used where signal to noise requirements dictate very low mass loading by the electrodes. Our standard sputtered metallization is 700 Å of copper covered with 100Å of nickel, which has good conductivity and is resistant to oxidation. Other metallizations such as gold are available on a custom basis with a set up fee. For the sputtered Metallized film, there is no border.

FEATURES

- Film Thickness Options: 28µm, 52µm, 110µm PVDF
- Electrode Type Options: Silver Ink & NiCu Metallization
- Sheet Size Options: 8" x 5.5" and 8" x 11"

APPLICATIONS

- Film Transducer
- Speaker Element

typical specifications

Electro-Mechanical Conversion

(1 direction) $23 \times 10^{-12} \text{m/V}$, $700 \times 10^{-6} \text{N/V}$
(3 direction) $-33 \times 10^{-12} \text{m/V}$

Mechano-Electrical Conversion

(1 direction) $12 \times 10^{-3} \text{V}$ per microstrain, $400 \times 10^{-3} \text{V}/\mu\text{m}$,
 14.4V/N

Pyro-Electrical Conversion

(3 direction) $13 \times 10^{-3} \text{V/N}$
 $8 \text{V}/^\circ \text{K}$ (@ 25°C)

Capacitance

$1.36 \times 10^{-9} \text{F}$; Dissipation Factor of 0.018 @ 10 KHz;
Impedance of $12 \text{K}\Omega$ @ 10 KHz

Maximum Operating Voltage

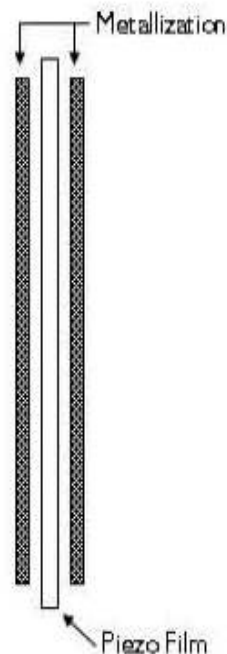
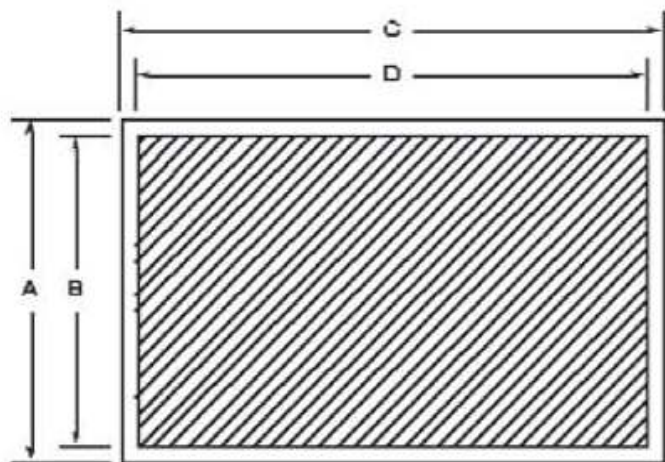
DC: 280 V (yields 7 µm displacement in 1 direction)
AC: 840 V (yields 21 µm displacement in 1 direction)

Maximum Applied Force (at break, 1 direction)

6-9 kgF (yields voltage output of 830 to 1275 V)

Metallized Piezo Film Sheets

dimensions



DIMENSIONS in INCHES (mm)

Film Thickness	Total Thickness (μm)	Metallization	A Film	B Electrode	C Film	D Electrode
28 μm	28	Cu-Ni	8.00 (203)	8.00 (190)	11.00 (280)	11.00 (267)
28 μm	40	Silver Ink	8.00 (203)	7.50 (190)	5.50 (140)	5.00 (127)
28 μm	40	Silver Ink	8.00 (203)	7.50 (190)	11.00 (280)	10.50 (267)
52 μm	52	Cu-Ni	8.00 (203)	8.00 (190)	11.00 (280)	11.00 (267)
52 μm	64	Silver Ink	8.00 (203)	7.50 (190)	5.50 (140)	5.00 (127)
52 μm	64	Silver Ink	8.00 (203)	7.50 (190)	11.00 (280)	10.50 (267)
110 μm	110	Cu-Ni	8.00 (203)	8.00 (190)	11.00 (280)	11.00 (267)
110 μm	122	Silver Ink	8.00 (203)	7.50 (190)	5.50 (140)	5.00 (127)
110 μm	122	Silver Ink	8.00 (203)	7.50 (190)	11.00 (280)	10.50 (267)

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