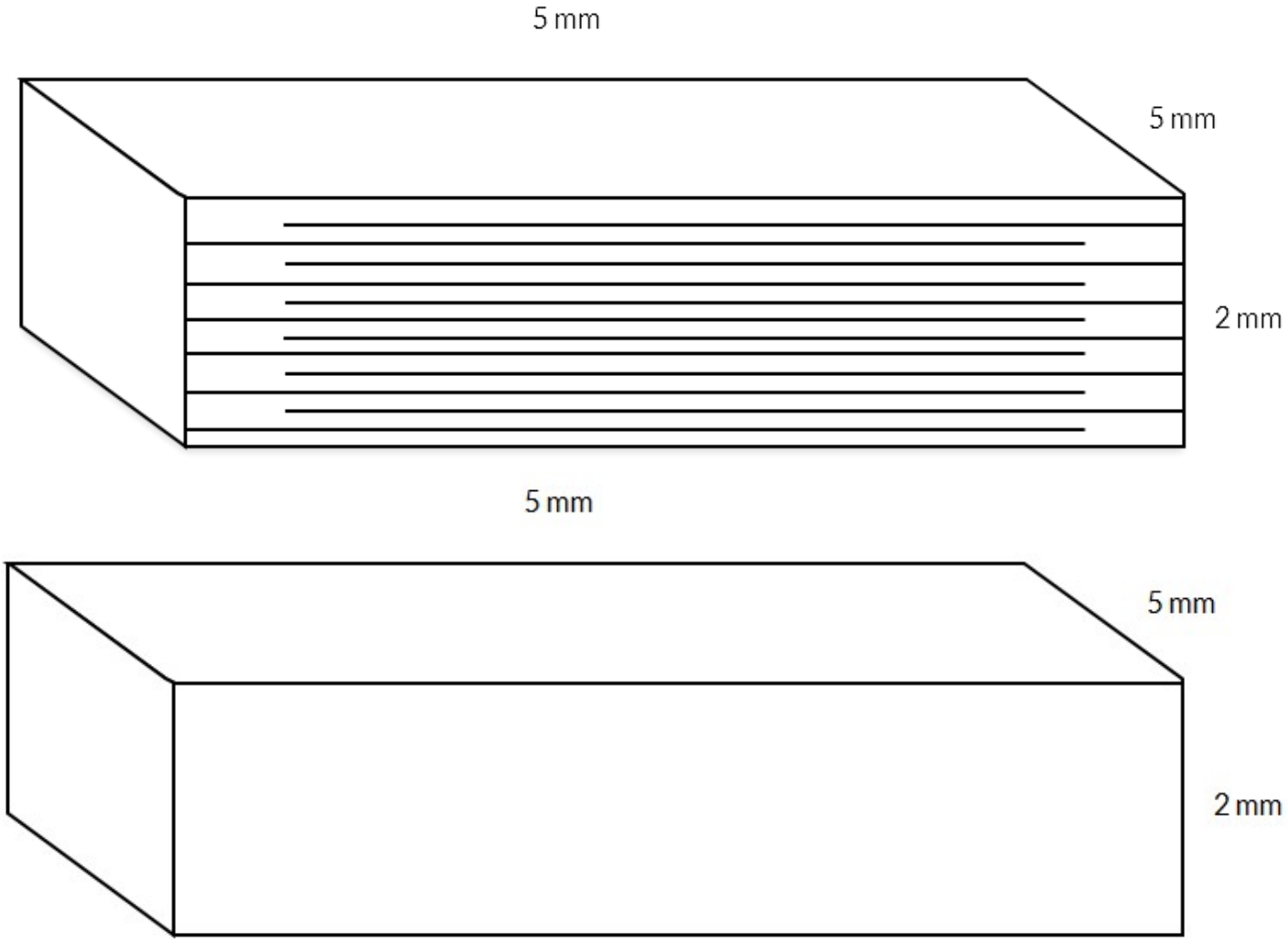
Adjusting nominal voltage

Noliac can customize the nominal voltage from 45 V and up to match your specific requirements. Our standard nominal voltage range of 60 V to 200 V can be applied to all shapes and dimensions of our piezo actuators.

ADJUSTING THE NUMBER OF LAYERS



Adjusting the number of layers to customize the nominal voltage
Noliac materials have a recommended operating electrical field of 3 kV/mm. A standard single layer component made of soft doped material (e.g. NCE51) exposed to such an operating field will result in a 3.5 µm displacement. The single layer component requires 6 kV, and since this is undesirable in many cases, we offer to produce an alternative component with many thinner layers instead of just one layer. A

component with 100 layers of 20 µm thickness will give the same displacement as the single layer component, but only 60 V is needed as opposed to 6 kV to reach 3 kV/mm.

Examples - both made of NCE51

Number of layers: 1

- E_{nom}: 3 kV/mm
- U_{nom}: 6 kV
- Stroke: 3.5 µm
- Capacitance: 0.2 nF

Number of layers: 100

- E_{nom}: 3 kV/mm
- U_{nom}: 60 V
- Stroke: 3.5 µm
- Capacitance: 1800 nF

CONTACT US FOR FURTHER INFORMATION

If you have any questions or want further information about custom design of the operating voltage on your piezo actuator, please contact us either by using our Request for Quote form or contact sales.