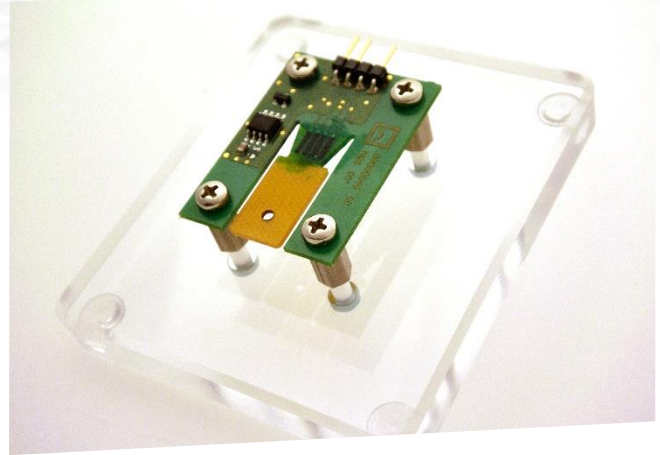


## Information sheet

# Polymer Strain Gage (P-DMS)

### Properties

- › Polymer paste screen printed to PCB board
- › Captures strain and compressive deformations
- › Small deformations cause change in the electrical resistance
- › Polymer strain gage on populated PCB board
- › Direct integration into PCB design
- › Cost-effective solution



Additionally, polymer strain gages (P-DMS) for the detection of strains and compressions are part of our portfolio. In contrast to ordinary strain gages, the polymer paste is printed directly on FR4 material, thus avoiding process-critical adhesive bonding and bonding of the DMS. A cost-effective solution that can be integrated directly into the PCB design and allows for further electronic assembly. Even the smallest deformations cause electrical resistance changes.

### Your advantages:

- › long-term experience in the field of printed electronics
- › Integration of the polymer strain gage technology at an early stage of development
- › Cost of optimization starts early during development phase
- › In-house development, design and manufacturing
- › Joint-development, tailored to customer needs
- › Prevention of process critical adhesive bonding of polymer strain gage on substrate
- › No contact (bonding) of the polymer strain gage necessary

Further information regarding the operating principle can be found in our [video](#).

## Information sheet

# Polymer Strain Gage (P-DMS)

### In series:

#### Printed polymer strain gage on PCB

- › Polymer strain gage in a piano (combination of piano and electric piano)
- › According to an idea of Mario Aiwasian, Founder of ALPHA Pianos GmbH ([www.alpha-pianos.com](http://www.alpha-pianos.com))
- › Integrated in outstanding electronic musical instruments of the highest quality, with unique technical properties and exceptional design



### Development and Innovation:

#### Printed polymer strain gage on spring steel

- › Smart spring technology wins innovation award at Blechexpo 2015

### Possible applications for pressure-sensitive pastes:

- › As sensor for pressure distribution in shoes
- › Keystroke velocity sensitivity for electric piano
- › Musical instruments such as electrical guitar or DJ control unit with pressure sensitive keys