

# PRINTED ELECTRONICS

Vehicle interior surfaces, human-machine interfaces and consoles are migrating away from traditional “flat and square” to more appealing 3D shapes and forms, incorporating capacitive sensing and switching. Innovations in capacitive sensing, embedded electronics and 3D shapes and forms are taking electronics applications into the future, introducing new ways to interact with the device input systems.

## Inks

Polymer thick film materials, including conductors, dielectrics and resistive inks in silver, silver with nano particles, copper, carbon, dielectric and protective inks (transparent and non) but also stretchable, are key components in the innovations, offering new ways to use and incorporate electronics in the polymer film parts.

## IME (In Mold Electronics)

Stretchable silver conductors and dielectric barrier layers are making it possible to merge capacitive sensing with 3D shapes and forms, increasing reliability and decreasing failure modes associated with individual mechanical switches or buttons.

New inks are highly compatible with a wide variety of plastic surfaces, including polyester, polycarbonate and graphic inks, and can be effectively embedded within the part's structure via thermo-forming and over-mold processes.

## Capability

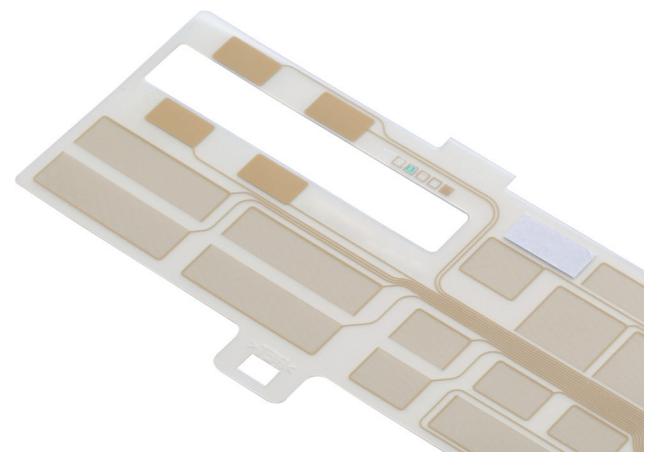
- High printing accuracy for thin lines
- Multilayer printing
- 40 µm thickness for capacitive displays
- Different types of polymerization (IR, UV, Convection)

## Benefits

- High level of integration
- Weight reduction
- Reduction of moving parts and wiring
- Design freedom
- New form factors
- Touch Screen Generation
- Green process

## Application fields

- Automotive Electronics
- Lighting (3D shapes, integration)
- White Goods
- Energy (Batteries and storage, OPV)
- Medical Devices
- Consumer



The above information is the result of analysis and tests performed internally. It is not intended as a guarantee of results.