

Flexible & Wearable Electronics Application Experiments

Sinnocon

Sinnocon GmbH is a dynamic e-commerce company for lighting technology, i.e. LED lamps, interior and exterior lighting, from Dresden. Our customers appreciate our strong service philosophy, a simple, well thought-out shopping platform and the way we reflect the latest trends in our rapidly growing range. In addition to high-quality self developed products, this includes LED bulbs, LED lighting for indoor and outdoor use and suitable accessories.

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Problem to be solved

Most control panels in the smart home market (1st target market) and automotive market (2nd target market) are made with conventional electronics and consist of many single parts with high assembly share and an old-fashioned look. There are also central control units based on display technology, but they are quite expensive.

The use of in-mold electronics (IME) allows a high design freedom, a simpler production process (reduced number of tooling and assembly parts), lower raw materials usage and reduced part weight and volume.

Solution provided by SmartEEs

Development of an Intuitive lightning control panel using flexible electronics and over-moulding techniques. The target was to integrate function (button & slider) + light driving + μ controller inside a decorative plastic cover. The advantages are:

- No need of multiple injection tools (all functions are in one part)
- High flexibility in shape
- Reduced use of raw materials (no waste of material – reduced environmental impact)
- Reduced total part weight and volume

Business model & impact

The SMARTFlex project aims to develop an innovative and beautiful HMI (human machine interface) to target the remotely smart home applications and automotive markets.

