



Epoxy Foam Technology

3D keys and membrane switches with flexible surfaces and fast prototyping

Keetronics Introduces Its Advanced Epoxy Foam Technology, A Breakthrough In 3d Keys Surface Technology For Membrane Key pads And Switches.

This Modular Concept Provides The Freedom To Design Flexible Layers That Adapt Perfectly To Concave And Convex Surfaces, Enhancing Both Appearance And Functionality.

The Technology Combines Lightweight Construction, High Tactile Precision, And Design Flexibility With Significant Environmental And Cost Advantages. Ideal For Modern Electronic Devices That Demand Thin Form Factors, Aesthetic Appeal, And Durability, Epoxy Foam Technology Transforms How Key Surfaces Are Made.

SPECIFICATIONS :

- Technology Type: Modular epoxy-foam layer construction
- Surface Compatibility: Flat, concave, and convex forms
- Switch Types: Membrane and capacitive
- Environmental Compliance: RoHS, halogen-free, solvent-free, VOC-free
- Design Capability: Full 3D key formation and multi-color print support
- Manufacturing Efficiency: Supports high throughput with reduced cycle time
- Durability: Resistant to mechanical wear and deformation

Key Features :

- Enables 3D contoured key surfaces for improved tactile response
- Compatible with flat, concave, and convex product designs
- Eliminates expensive injection molding tools and processes
- Fast prototyping with minimal design modification cost
- Broad range of color and surface finish options
- Allows image or branding graphics on the back of the keyboard surface
- Supports ultra-thin and lightweight device architectures
- Integrates seamlessly with capacitive switch technologies

Advantages :

- Eco-friendly production: No VOCs, solvents, or halogens
- Lower production cost: Eliminates injection molding and tooling expenses
- Reduced energy use: Low-temperature curing with minimal power demand
- Compact and versatile design: Perfect for ultra-thin devices
- Enhanced productivity: Rapid curing and shorter production cycles
- Freedom of design: Choose any shape, color, surface texture, or lighting option
- Integration-ready: Works with both mechanical and capacitive switch solutions

Application :

- Mobile phones and PDAs
- Laptop keyboards and portable devices
- Automotive dashboards and control panels
- Digital music players
- GPS and navigation systems
- Industrial control keypads and consumer electronics