

# FLEX Membrane Switch Introduction

## Technical White Paper

by Alan Burk

ALMAX, Membrane Switch & Touch Screen Design & Consulting



Of the five categories of membrane switches the most common is the Flex Membrane Design.

This construction incorporates the conventional thin, flexible, polyester or polyimide circuit layer. This allows efficient manufacturing using relatively inexpensive raw materials producing many circuit images rapidly using screen-printed or etching processes.

Even though the entire switch package is made from flexible materials, there are many options available.

The keys can be made to provide either a tactile sensation or no sensation at all (like on most microwave ovens). Metal domes or formed polyester domes are used to provide a tactile response to the keys.

Backlighting can be achieved as well by laminating or inserting discrete LEDs or illuminating large areas using fiber optics or electroluminescents.

Decoration can be a conventional polyester or polycarbonate screen-printed layer or elastomer or plastic keys to satisfy a more 3D approach to the graphic layer.