Membrane & Rubber Keypads

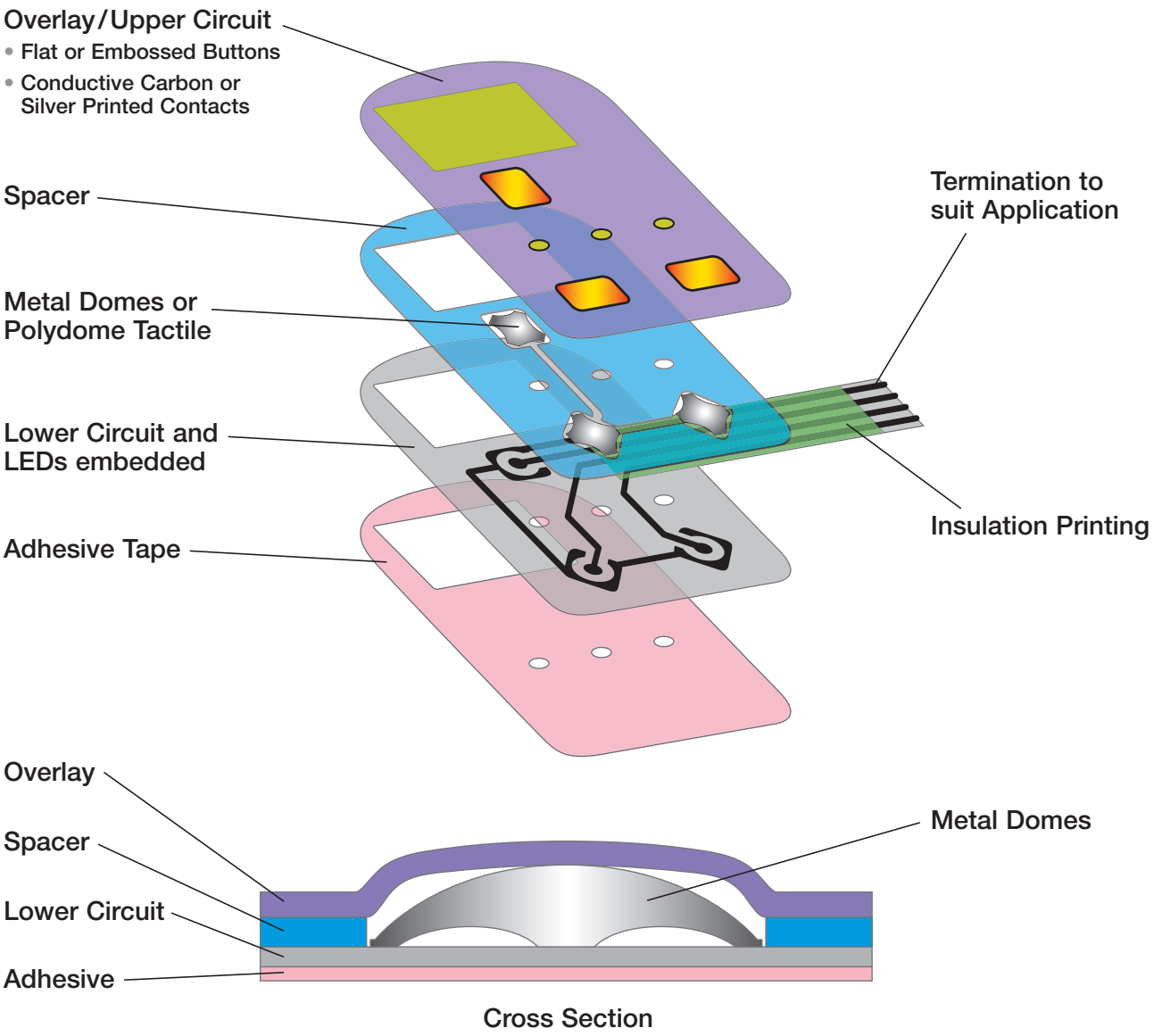
Membrane Keypads

- Graphic overlay only or full switching membrane
- Metal or polydome contacts
- Tactile or non-tactile feel
- Integral SMD LEDS
- LCD windows
- ESD/RFI shielding
- Insertable legend options

Rubber Keypads

- Backlighting options
- Various coatings eg epoxy, polyurethane
- Harder rubber options to give ‘plastic’ feel
- Various travel/operating force options
- Combination with tactile switches
- Wide variation of colours and designs
- Plastic key tops available

Membrane Keypad Structure



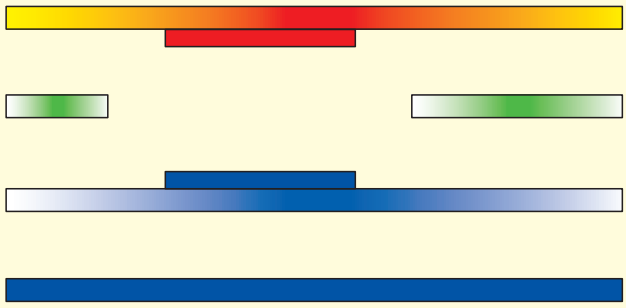
Cross Section

Reference Materials	
Overlay	Polycarbonate Film (PC) – Matt or Glossy surface Thickness (mm): 0.075, 0.125, 0.175, 0.250, 0.375, 0.500 Polyester Film (PET) with UV-cured texture coating – Matt or Glossy surface Thickness (mm): 0.15, 0.20, 0.25
Circuit Layer	Polyester Film (PET) – Thickness (mm): 0.075, 0.100, 0.125
Conductive	Carbon Ink, Conductive Silver Paste or Metal Domes
Spacer	Polyester Film (PET)
Adhesive	Adhesive Double Tape

Standard Specification for Membrane Keypad	
Contact Resistance	10 ~ 500 Ohms
Operation Voltage	<35 VDC
Operation Current	<100 mA
Open Circuit Resistance	>10 Meg Ohms
Operation Force	30g ~ 500g
Operation Temperature	-20°C ~ +70°C
Operation Temperature	-20°C ~ +70°C
Life Expectancy	5×10^5 ~ 10×10^5 cycles
Switch Stroke (travel)	0.1mm ~ 0.6mm
Contact Bounce	5 ~ 30 mSec

Membrane Switch Structure

Flat Type (Non-Tactile)



Graphic overlay

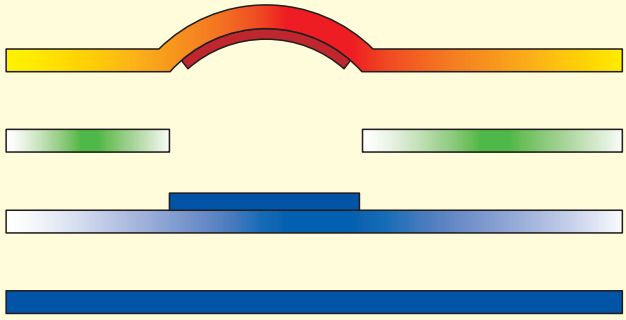
Upper spacer with adhesive

Printed circuit

Back adhesive

Tactile Type

POLYDOME



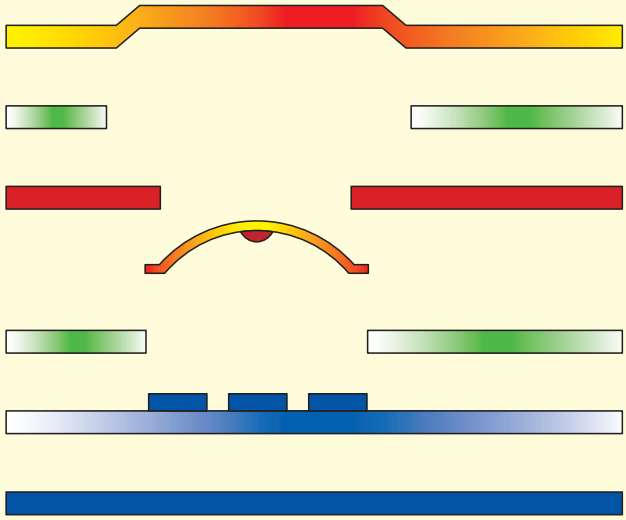
Embossed graphic overlay with upper circuit

Spacer with adhesive

Lower circuit

Back adhesive

METAL DOME



Embossed graphic overlay

Mounting spacer with adhesive

Mounting spacer

Metal dome

Lower spacer with adhesive

Lower circuit

Back adhesive