

"A special feature: copper technology!"

Andreas Wisgien, Membrane Keypad Designer

In contrast to many firms which offer keys using conductive silver technology, BOPLA manufactures high-quality keypads with copper-laminated base membranes, galvanically silver-plated (gold-plated on request).

Technical data: copper base membrane:

Key area	from 7 x 7mm
Min. average distance between keys	11 mm
Installation height	from 0.6 mm
Contact surfaces (depending on type)	copper-laminated, silver- or gold-plated, snap domes gold-plated
Switch travel (depending on construction, up to IP 65)	approx. 0.6 – 0.7 mm
Switch pressure, depending on membrane	3 – 5 N
Protection type (depending on construction)	up to IP 67
Voltage	1 – 42 VDC
Current	≤ 100 mA
Output	≤ 1 W
Conductor strip resistance* depending on design	< 0.1 Ohm (for 100 mm length – 1 mm width)

* Conductor strip resistance depends on the design of the product layout.
Conductive silver bridges in CuLs technology increase conductive resistance.

Insulation resistance	≥ 100 MOhm
Bouncing time (dep. on actuation)	< 10 msec
Operating life	< 1 million actuations
Operating temperature:	
For keypads with embossing	0° C to + 45° C
For keypads without embossing	- 20° C to + 70° C
Transport/storage temperature:	
For keypads with embossing	- 30° C to + 45° C
For keypads without embossing	- 40° C to + 80° C

The copper-laminated material is extremely flexible, so there is almost no possibility of breaks to the membrane cable, and problems such as silver migration are practically impossible.

Instead of using an adhesive as in the case of conductive silver technology, we can safely and permanently solder LEDs, photo diodes or other components, and these are features which give our customers the security they require for everyday use.

