



**Shanghai Ouliya Industry Co. , Ltd.**

A Professional Membrane Switch Manufacturer

# Company Profile

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# 1、Company Overview

## Profile

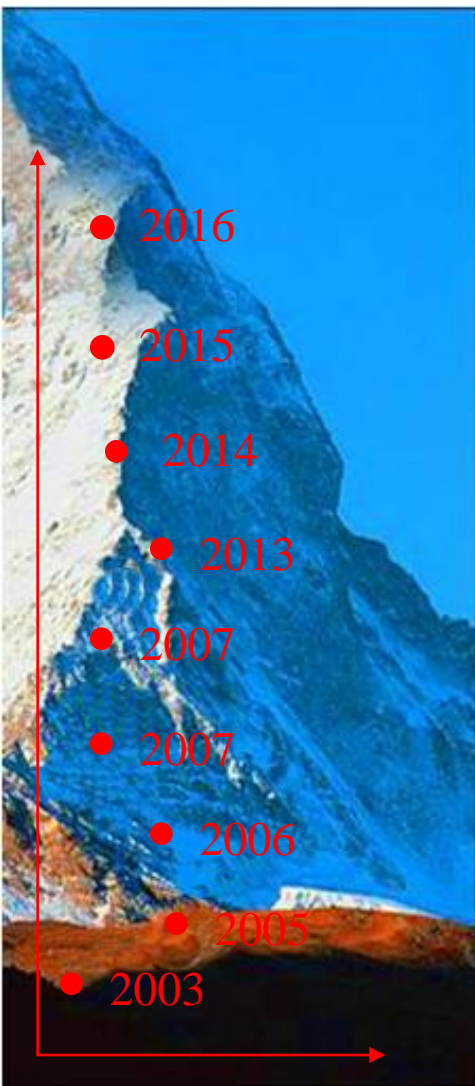
**Ouliya is a leader and professional membrane switch & flexible Circuits manufacturer of China.**

- Ouliya offers world-class design, prototyping, value added assembly and custom manufacturing for flexible circuits Membrane Switch.
- Many Fortune 500 companies trust us to help design, prototype and manufacture their most demanding new products.
- With over 13 years of experience in membrane switch and manufacturing, Ouliya offers the broadest range of Membrane Switch and services in the electronics industry.



- Our business development and engineering teams work together to choose the best design, right materials, and define production methods that maximize product performance for our customers.
- We are anchored in our commitment to quality and cost effective product by an exceptional manufacturing team that coordinates operations .

# Development



2016

Pass Shanghai Environmental Protection Bureau project approval

2015

Added Digital printing technology

2014

Got ISO14001 Certificate

2013

Replaned workshop & use ERP system

2007

Be 3M company's qualify supplier

2007

Set up Business Department of membrane switch

2006

Moved from Tongli RD to Cangjing RD

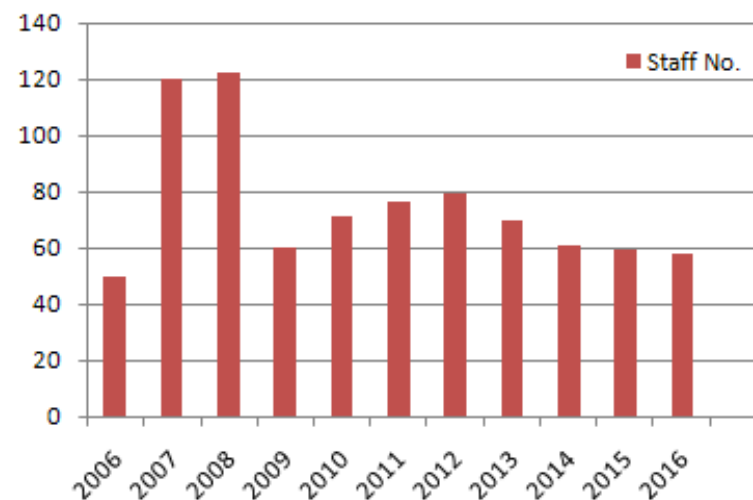
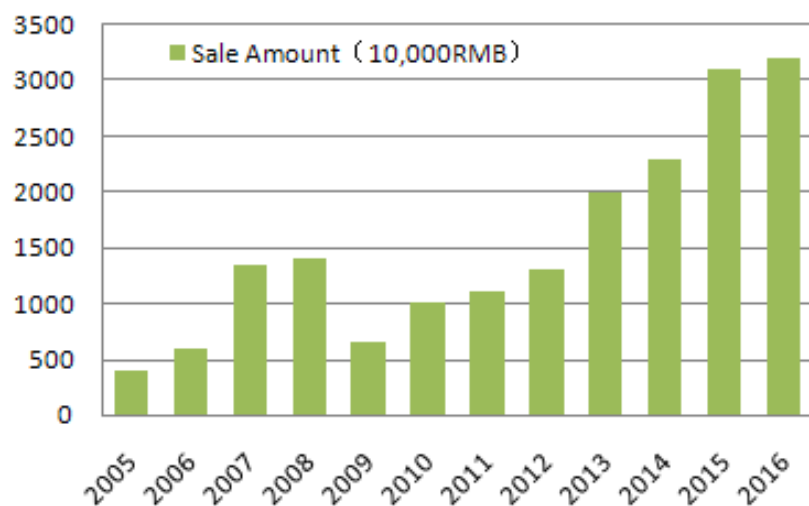
2005

Got ISO9001: 2000 Certificate

2003

Established OuLiya(Shanghai) Industry Co.,Ltd

## Growing Trend



## Strategy

Provide Chinese Membrane Switch for Global Customers

OLY's criteria of value: customer affinity , Core competence: sustainable innovation , quick response.

We can not only open new products and reliable solutions according to customer's request ,also provide reliable quality ,best service and substantially lower customer's cost .



## Honor

- The Sixth Shanghai Printing Competition Silver
- The Fifth Shanghai Printing Competition Bronze
- The association of Shanghai foreign invested enterprises standing director
- The First Printing Association Cup Silver
- The Second Printing Association Cup Gold
- .....





# Certificate

This is to certify the quality management  
Systems of our company:  
**ISO9001:2008**



This is our Environment Management  
System:  
**ISO14001:2004**





## 2. Products and Solutions

## Digital Printing

OLY offers digital printing services that offer you the best option for short-turn or low-volume print jobs.

Our high-speed digital printing services increase the value and timeliness of material and can handle various forms of digital printing options including UV Ink Jet, piezo ink jet, laser, and thermal transfer. Our digital printing service deliver your materials with high revolution and vibrant colors.

The color balance is controlled by expert operators.



## Roll to Roll Screen Printing

OLY offers high quality roll to roll screen printing services that is designed for unprecedented throughput in screen printing technology.

Our roll to roll screen printing technology is used in membrane switch assemblies, flexible circuits, RFID antennas, and other electronic products.

Our printing presses are fully automatic and incorporation of sophisticated electronic controls lessens the need of manual adjustments. This in turn helps reduce time and increase accuracy.





## Embossing

OLY offers embossing services for plastic products. In our embossing process, we raise the surface of a plastic material so as to produce various characters.

Our embossing services are done within a quick turn around time and can handle large production runs.

We can transfer your design requirements accurately to any plastic surface.

Our manufacturing capabilities include: die cutting, laser cutting laminating, rotary die cutting, slitting, sheeting, fabrication and contract assembly.



## Equipment

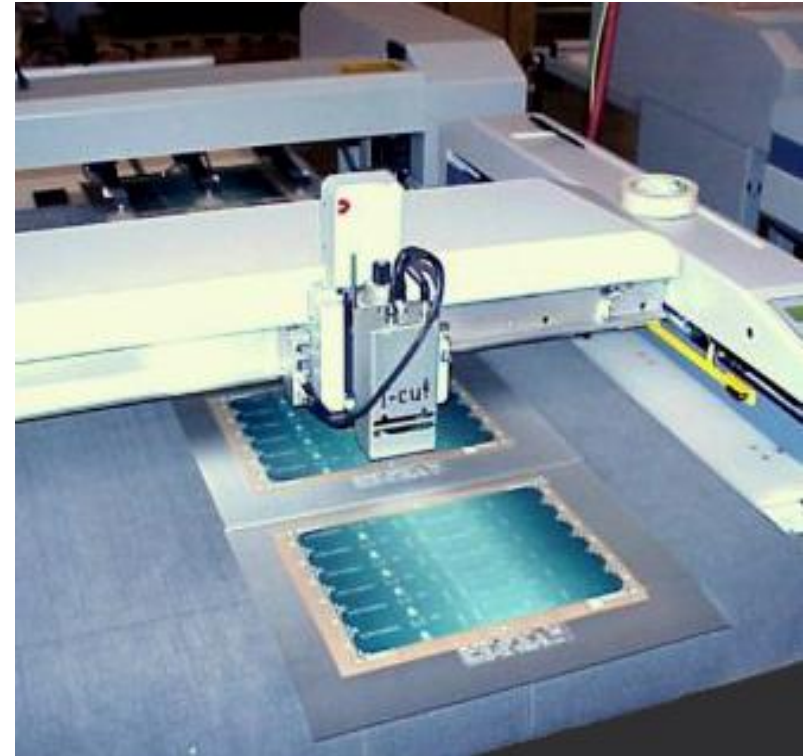
### Laser Cutting

OLY offers laser cutting services for quickly and economically cutting intricate designs.

Laser cutting has established itself as the most cost-effective cutting technology for many applications.

The judicious combination of smooth edges, highly accurate and high repeatability makes laser cutting a cost effective and attractive alternative to other cutting technologies.

In our laser cutting process, the focused laser beam removes very little material enabling closer nesting and intricate cutting



## Equipment



### Peel strength tester

We can test the peel strength of adhesive .



### Embossed Height Meter

This is our embossed height tester, we can use it to test the height of embossed.



### Key Force Meter

This is our key pressure tester to test the strength of the keys, the keys of our products are good at the factory.



## 2.5 dimensional Measuring System

The dimensional measuring instrument has a motion-locking capability and a backlash gap technique in the design, which completely eliminates these errors and improves motion smoothness and measurement accuracy.



## Membrane switch life tester

We can test the membrane switch life, how long it can be used.

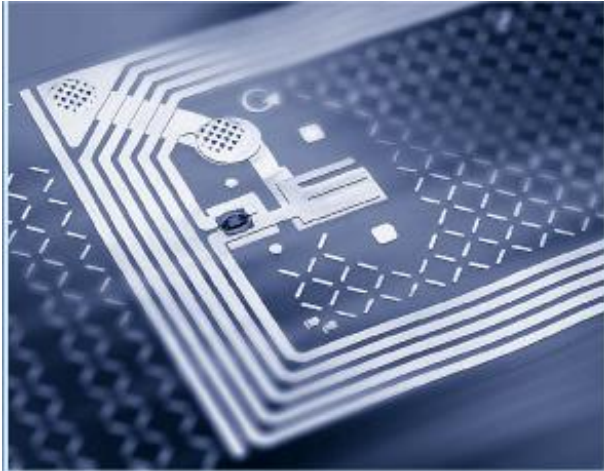


## Resistance and key function test system

We can test the resistances and key function is useful or not by this system.



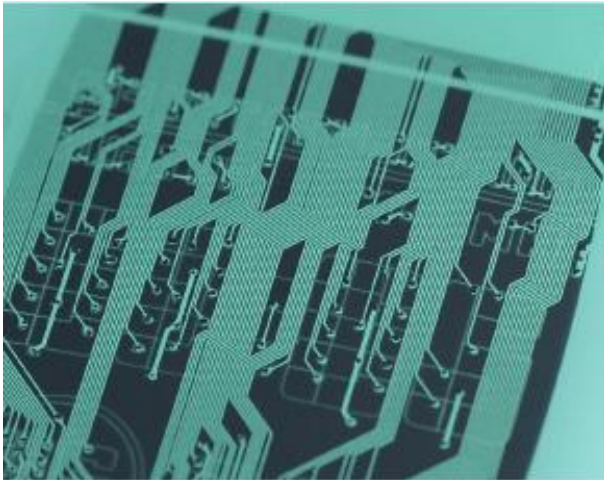
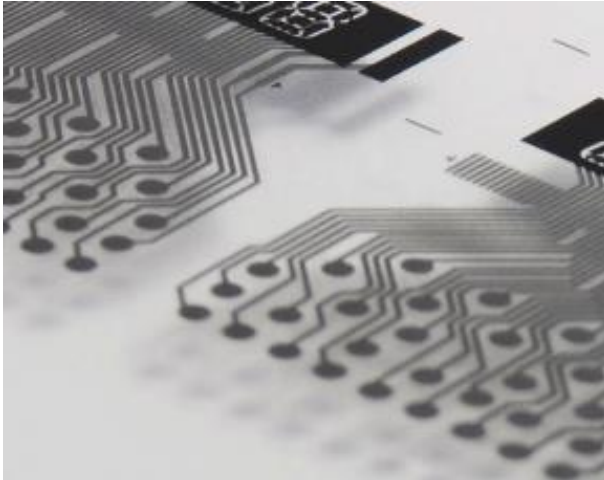
## Membrane Circuit



### RFID & NFC Antenna

- 1, Silver paste print circuit ,UV insulation ink protect finished
- 2, Can chose PET/paper base material
- 3, Roll to Roll printing and reliable production process control ,can reduce customer's cost and offer convenience for STM die placement in later period .

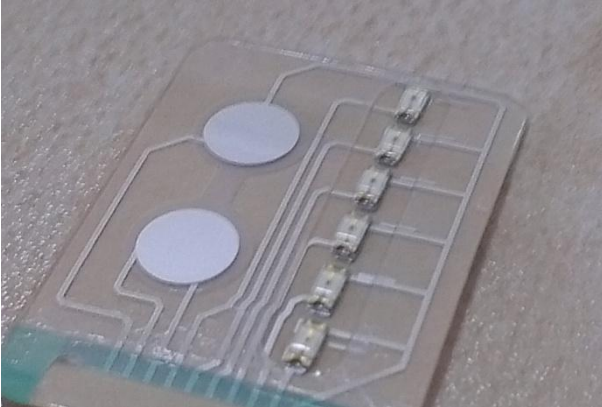
## Membrane Circuit



### E-paper displays the circuit of back board

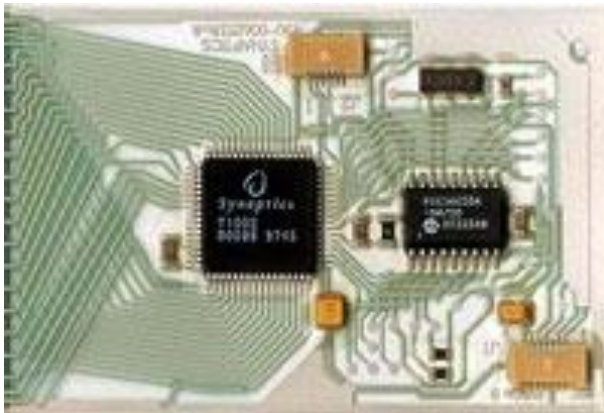
- 1, Silver paste/Carbon ink/Silver mixed with Carbon printing circuit
- 2, PET base material thickness: 0.075mm, 0.1mm, 0.125mm, 0.188mm
- 3, Double-side printing circuit, connect positive and negative circuit by tiny hole conduct
- 4, Min line width: 0.15mm
- 5, Min space: 0.15mm
- 6, Min hole diameter: 0.2mm

# Membrane Circuit



## Membrane circuit with SMD components

- 1, Silver paste print circuit ,UV insulation ink protect finished
- 2, Can chose PET/paper base material
- 3, Can chose double-side printing circuit, so will leave more space for SMD placement
- 4, Assemble components by using reliable low temperature conductive splice
- 5, SMD components type: Diode, Resistor, Capacitance, IR Sensor and so on



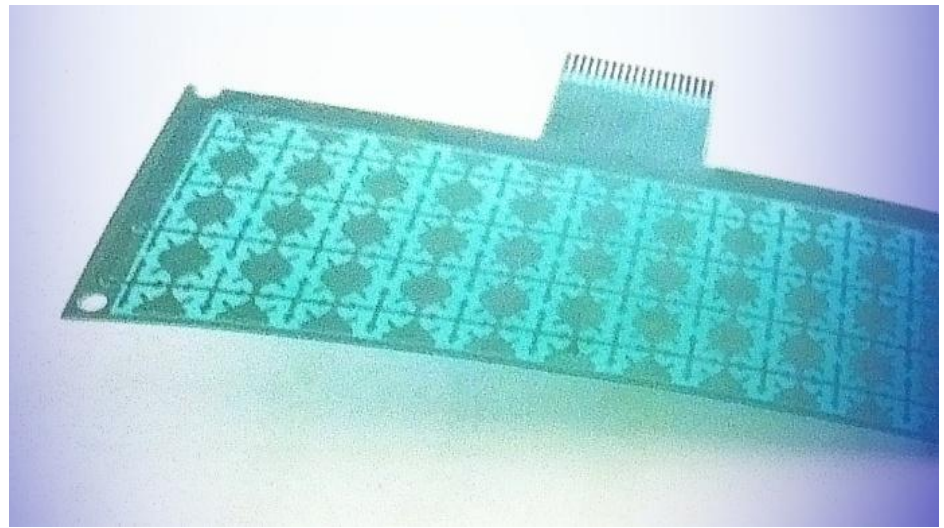
# Membrane Circuit

## Capacitive touch screen membrane circuit

1, Silver paste print circuit ,UV insulation ink protect finished

2, Can chose PET/paper base material

3, Using double-side printing , X-Y in the both side of membrane, positive and negative circuit using tiny hole break over (the min diameter of hole is 0.2mm)



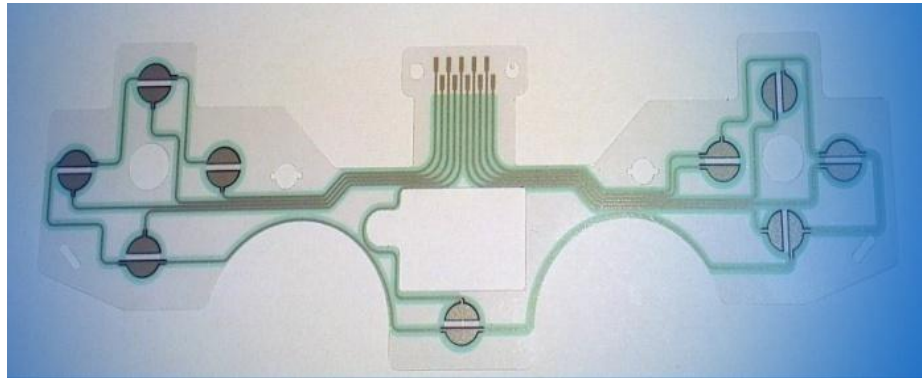
4, Reliable anti-electromagnetic protection design, maximum protect low rate of circuit from wrong operation when use .

5、 100% test before leave factory ,include connection test, short circuit test and sensitivity test (can set the sensitivity according to request when test) ,Make sure the defective rate below 500ppm .

# Membrane Circuit

## Various game console controller membrane circuit

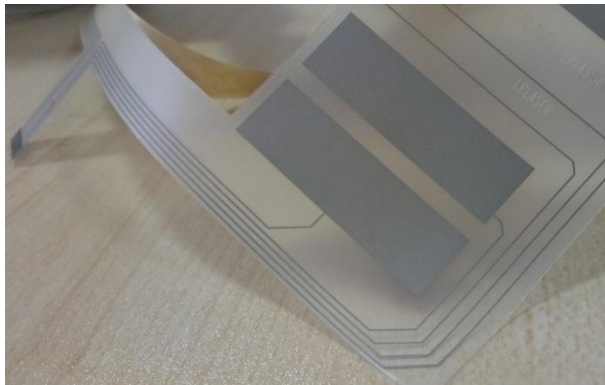
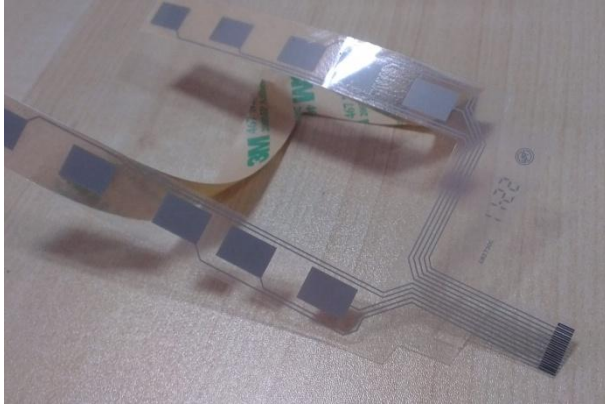
- 1, Silver paste print circuit ,
- 2, UV insulation ink protect finished
- 3, Can chose PET/paper base material



- 4, Can set key's resistance according to design (High resistance) .Resistance can control within +/-10%
- 5, Unique high resistance carbon ink control craft.
- 6, 100% test conduction, short circuit and resistance before leave factory . High speed multi-imposition automatic test system ( resistance, key function, defective mark) solved bottlenecks in the process of testing production



## Membrane Circuit



### Capacitive keyboard membrane circuit for home appliance

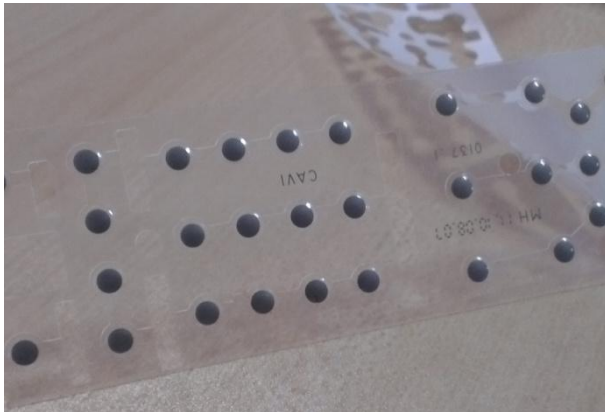
**1, Silver paste print circuit ,UV insulation ink protect finished**

**2, Transparent PET base material**

**3, We use transparent conductive ink (a little light blue), with this ink can effectively ensure the rate of light transmittance above 85%. Compared with the transparent circuit produced by etch, it has enormous advantage for environmental protection, low resistance and save cost**

**4, Adopt high speed (2S / pcs) adjustable sensitivity test system, 100% test ON/OFF and sensitivity, it has on-line advantage compared with other same trade who only test ON/OFF**

# POLY DOME



## POLY-DOME Membrane Circuit

- 1, Silver paste print circuit ,UV insulation ink protect finished
- 2, Transparent PET base material
- 3, High speed roll to roll printing ,make sure the stability and consistency of resistance and size when printing
- 4, High speed roll to roll embossing, eradicate the high temperature affect product because of taking material when semi-automatic embossed .
- 5, Adopt numerical control carved mold, eradicate the difference of hand feeling between keys and keys when produce with handwork cared mold

## Membrane Circuit



### Membrane circuit for writing board

- 1, Silver paste print circuit ,UV insulation ink protect finished
- 2, Transparent PET base material
- 3, can chose structure of single multi layer or double multi layer (Min dia of hole is 0.2mm)
- 4, Min line distance 0.3mm, thickness line space 0.18mm
- 5, Adopt numerical control carved mold, eradicate the difference of hand feeling between keys and keys when produce with handwork carved mold



## Graphic Overlay



### **Stereoscopic printing effect surface**

**1,UV/heat-set color ink printing**

**2,Transparent PET/PC base material**

**3,Glue printing (water/oil )**

**4,Products are suitable for high temperature,  
high humidity and other bad environment  
(Soybean Milk Maker, microwave oven, air  
conditioning, coffee machine, etc.)**

## Graphic Overlay

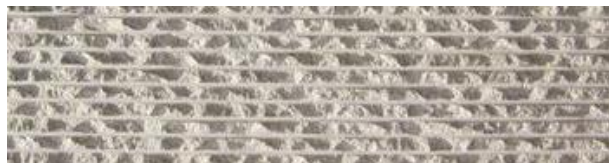


**Double color gradient/the combination of dot printing effect**

- 1,UV/heat-set color ink printing**
- 2,Transparent PET/PC base material**
- 3,Glue printing (water/oil)**
- 4,Products are suitable for high temperature, high humidity and other bad environment  
(Soybean Milk Maker, microwave oven, air conditioning, coffee machine, etc.)**



## Value-added processing



### Value-added processing for graphic overlay

1, Embossed various of shapes (Front embossment, concave circular, square, triangle and other irregular geometrical shapes)

2, PU drop at a designated spot (crystal effect)

3, All kinds of different color mirror finish (imitation plating finish)

4, Imitation stainless steel wiredrawing grain, leather grain, wood grain and other texture effect

5, Window with smoking, color changing, transparent effect

6, Window against Newton's ring finish

## Valued-add Processing



### Valued-add processing for membrane circuit

**1,Circuit Embossed (height 1.2mm ,the change rate of circuit resistance below 20% after embossing ,apply to POST device safeguarding).**

**2.The thickness of material:0.075mm,0.1mm,0.125mm**

**3.Min line distance 0.4mm(line width 0.2mm/line space 0.2mm)**



## Value-added processing



## Other value-add processing

**1、 SMT stainless steel,aluminum,bronze,FR4 and other different stereoplasm adhesive on the back of membrane switch**

**2,Swap membrane switch, Using one same product can apply to many different devices**

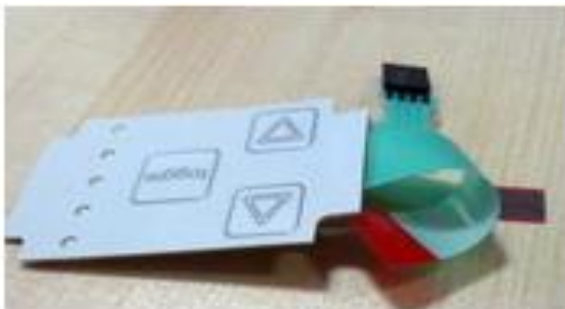
**3,Various shapes, various force press, various clad layer metal dome**

**4、 Riveting connectors from different brands and structure**

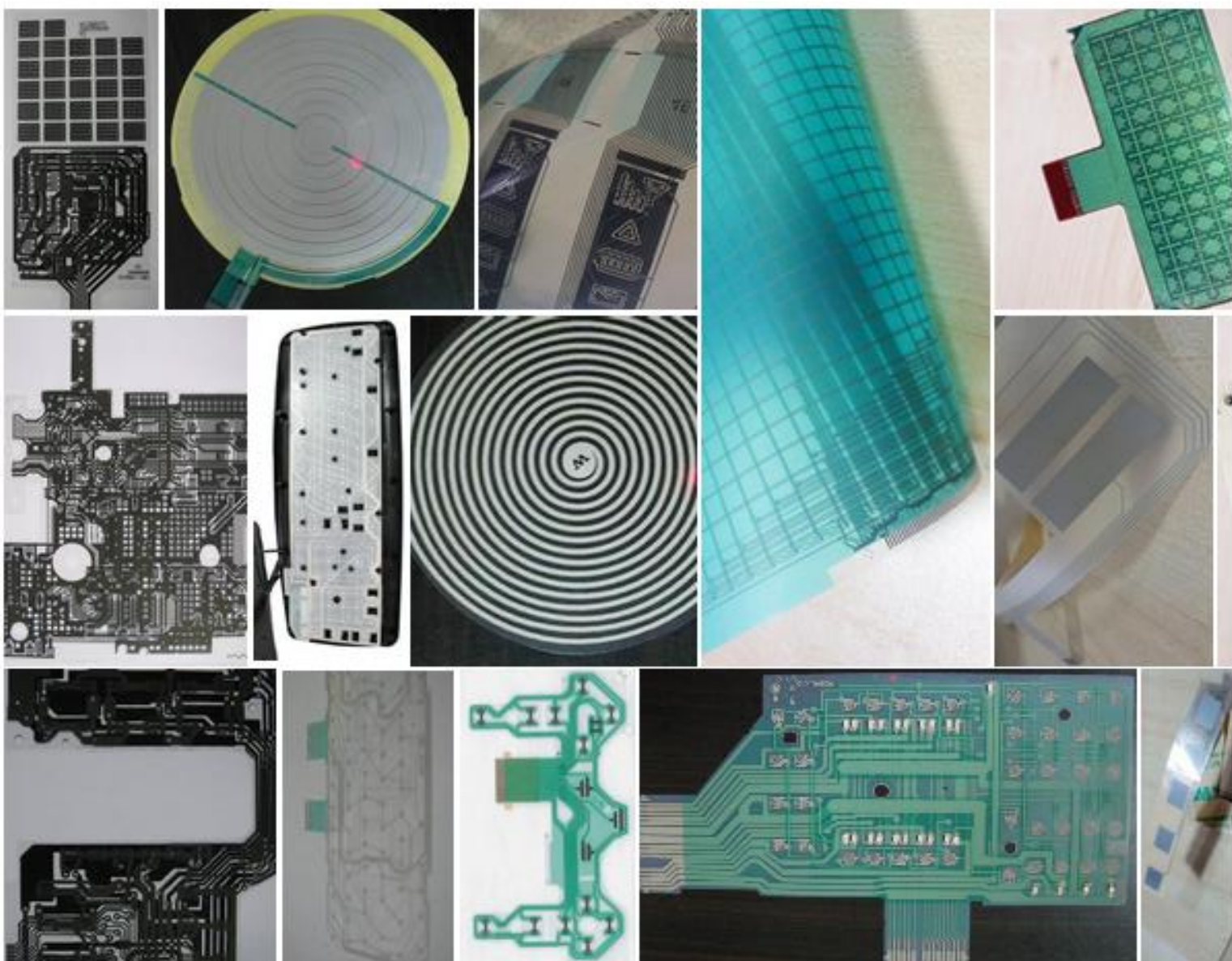




Product  
Show



Product  
Show



## Application



POS



Home Appliances



Business



Smart bathroom



Game Pad



Industry Equipment

computer and device





## 3、 R&D \* Production \* Marketing

## R&D inputs



We bring in leading technology ,equipment and combine high-tech talents to ensure our company develop stability and keep long-term competitive advantage

Innovation is the life of a enterprise . OLY pursue sustainable development ,especially pay attention to the research and innovation

All products adopt leading global quality system to make customer obtain greater quality and safety

**Every year , we invest 5% of sales to research and development and process improvement**

## R&D inputs



- Advocate the idea of “zero defect” and “do right one-time” .

Produce in strict accordance with ISO9001 quality management standard.

- Produce、marketing、material and other production activity all use enterprise source planning system and paperless management.

- Fast and effective logistics, stream of people, stream of information.

## Typical Customer

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## 4. Culture

## Culture

- Pay attention to every partner , respect staff , care staff , improve staff.
- Through various colorful activities , created a good enterprise culture atmosphere. OLY and all staff are co-construction ,sharing and common well-being.





**Shanghai Ouliya Industry Co. , Ltd.**

A Professional Membrane Switch Manufacturer



**Focus Customer  
Growing Together**



**Shanghai Ouliya Industry Co. , Ltd.**

A Professional Membrane Switch Manufacturer

**Thank you!**