



SILICONE RUBBER KEYPAD



Introduction

Founded in 1986, You Eal (H.K.) Ltd. specializes in manufacturing mobile phone keypad and silicone keypad. We have earned a reputation for providing high quality products and services and improvisation is an ongoing process to meet with our customer's growing requirements.

In 1994, our silicone keypad production facility was established in Shenzhen, China and moved to Hui Yang, China in 2008 to cater to the increasing demand for the same. In 2007, IMF production was set up in Guan Lan, China to meet the market trend. With R&D base in Korea, You Eal gives you an easy access to Korean keypad technology. Our core expertise is in designing, engineering and producing simple to complex keypads hence we get involved from design stage until full implementation of the project. Backed up by high-precision machinery and under the quality management of ISO9001 & ISO14001 certifications, and GMP conformance our products are made with cutting-edge technology and best quality.

You Eal have been nominated as a "Caring Company" for more than ten years by the Hong Kong Council of Social Service in recognition of our support for community affairs and corporate citizenship.

公司簡介

唯一電子有限公司於1986年成立，作為生產矽膠按鍵產品的開發先鋒，以秉承優良品質，客戶至上的宗旨，在市場上建立了良好的信譽，公司規模逐年擴大，專業技術水平日益提高。為保證客戶得到最佳的服務與產品，唯一電子採用精密先進的生產設備及品質檢驗儀器，並一直以訂貨量最具彈性，品質高檔且穩定，出產效率高，交貨準時而深受客戶歡迎。

唯一電子於1994年在中國深圳開設生產工廠，並於2008年遷往惠陽；模內鑲件注塑生產線亦於2007年在觀瀾開設。為提供一站式的生產開發，韓國設有研發中心，以韓國最新的按鍵技術配合生產。我們的技術團隊由設計、工程開發至完成生產製造都會緊密跟進。

唯一電子除了獲ISO9001、ISO14001及GMP認證外，超過10年獲香港社會服務聯會頒授「商界展關懷」標誌，表揚我們對社區事務的支持及履行企業公民責任。

SILICONE RUBBER KEYPAD

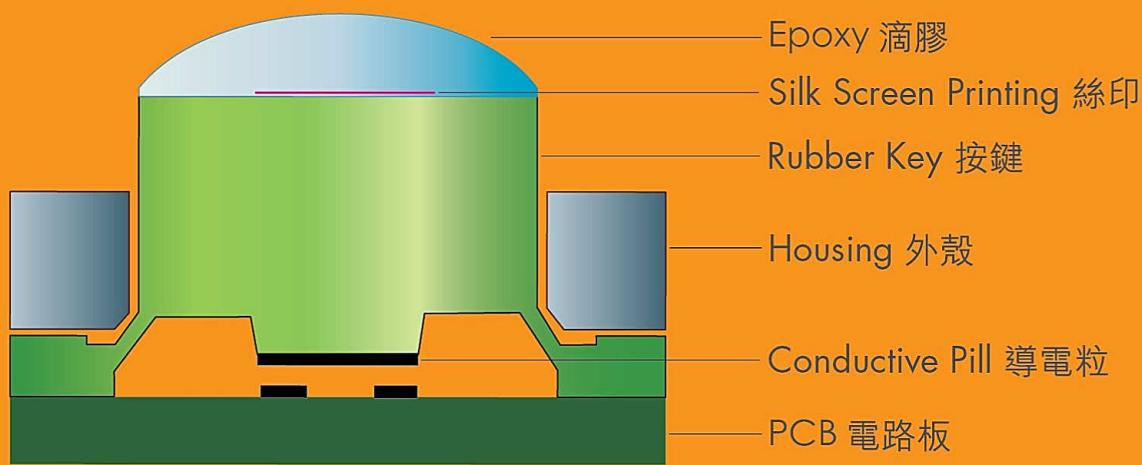
矽膠按鍵



Epoxy Coated Keypad 滴膠按鍵

Silicone keypad with Epoxy coating will give it a plastic appearance, as well as enhance the durability of surface.

矽膠按鍵配以滴膠塗層，令按鍵看似塑膠制品。使用較厚和有光澤塗層可使按鍵更為耐用。



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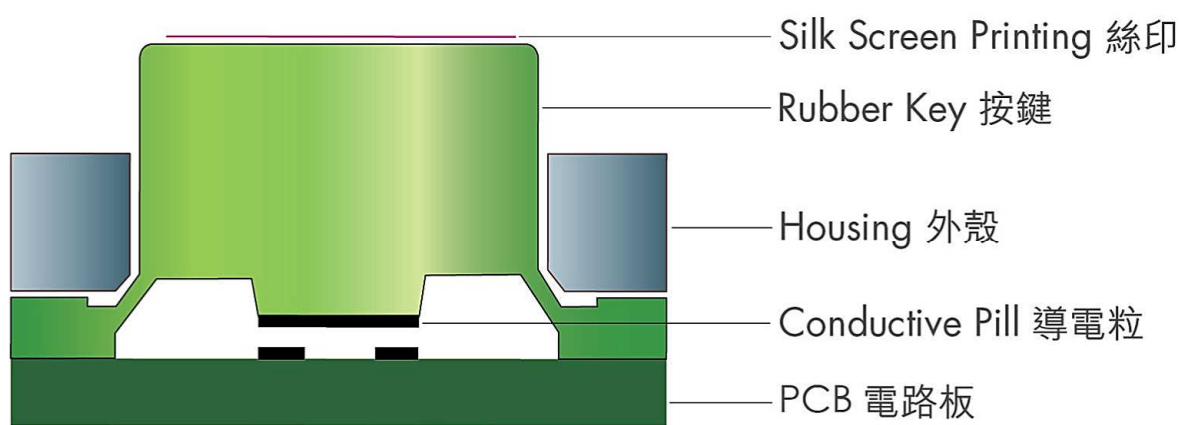
矽膠按鍵



Silk Screen Printed Keypad 絲印按鍵

Due to the complexity of embossing/engraving legends on the toolsurface, Silk Screen Printing is an option by printing the legends onto the keypad surface. Any colour can be mixed and printed with custom designed printing jig and fixture.

由於浮雕或雕刻的模具結構複雜，所以在設計上有所限制。因此，可以選擇絲網印刷，將不同顏色的圖案打印到按鍵表面。任何顏色均可以調配，需輔以印刷夾具和網板。



SILICONE RUBBER KEYPAD

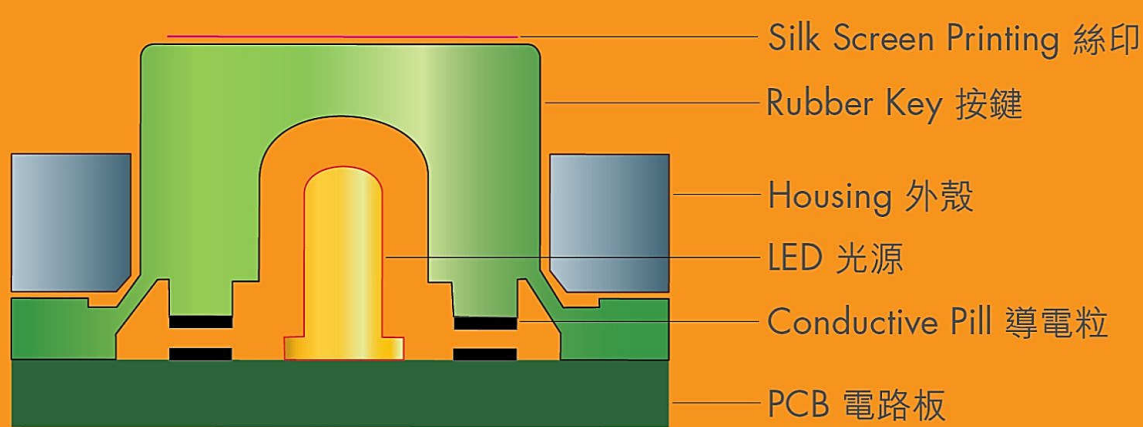
矽膠按鍵



Translucent Keypad 透光按鍵

This type is applicable to product with backlighting. Translucent Keypad tends to turn yellowish over a period of time and our special treatment helps to maintain the original tinge.

此類按鍵適用於透光的產品。為求達到最佳作效果，在生產的過程中，材料的要求及特別處理均有利於顏色的穩定。



SILICONE RUBBER KEYPAD

矽膠按鍵

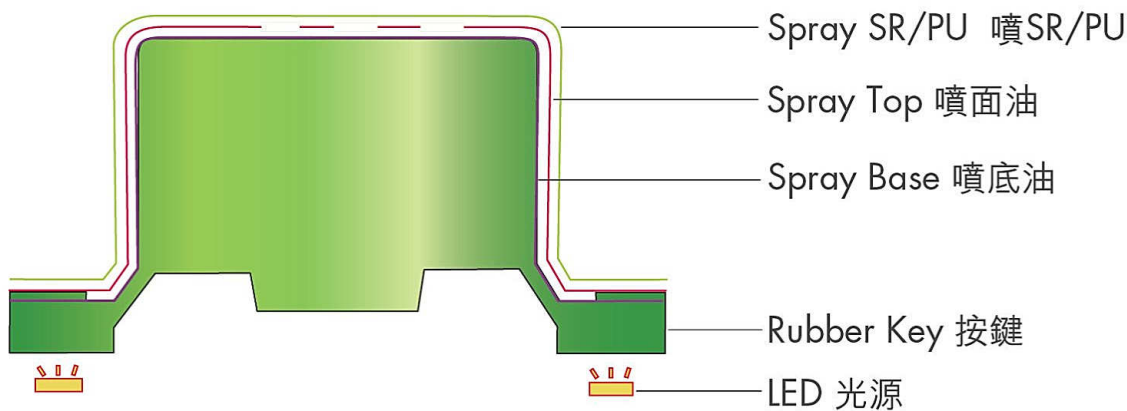


Laser Etched Keypad 激光雕刻按鍵

Laser etching allows to create the legend for keypad with backlight application. It gives a high design flexibility and saves costs for plastics.

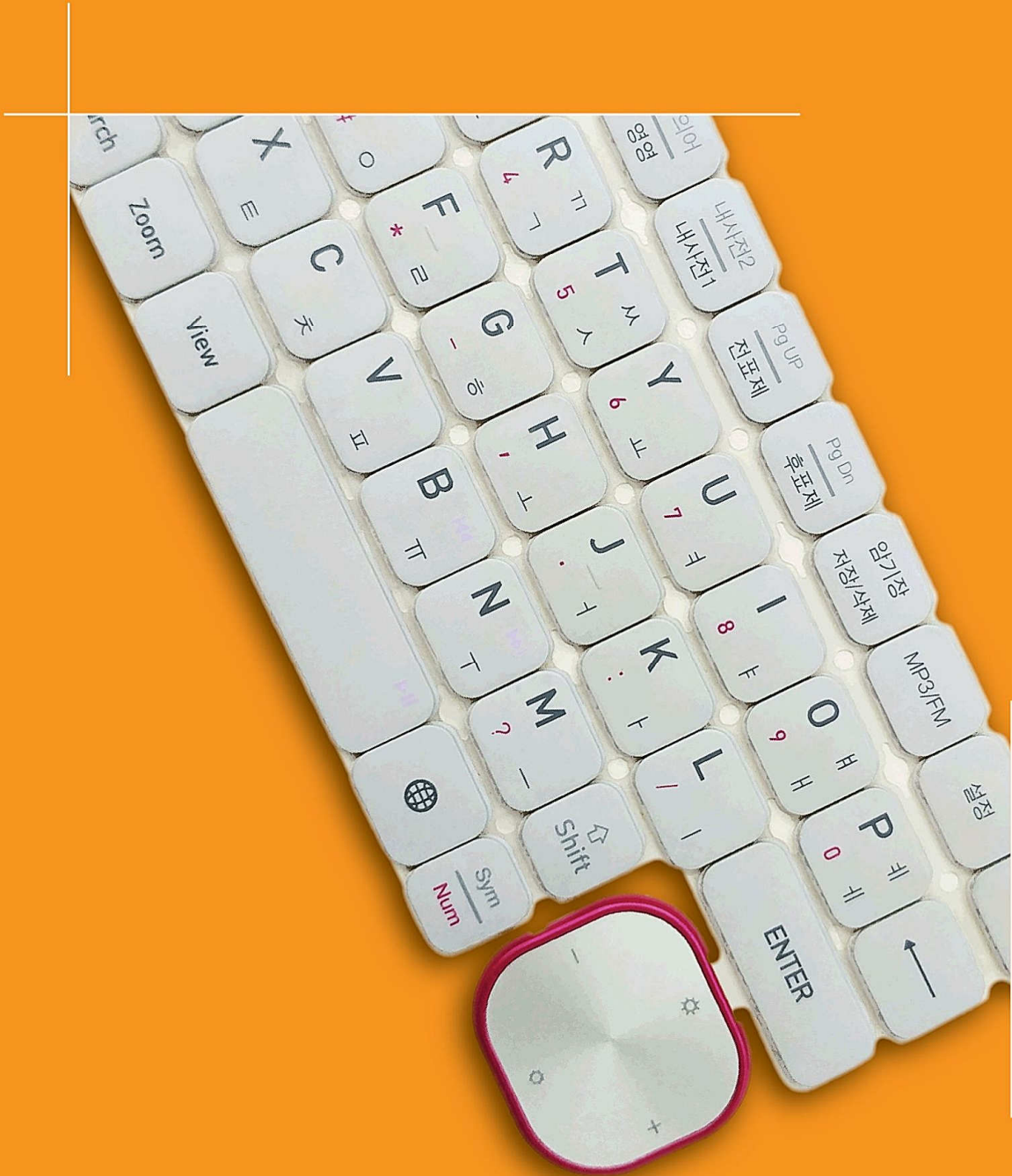
Laser Etched Keypad requires PU or Silicone coating to enhance the lifespan of the legend. Suggested to have the PU coating which is optimal performance.

激光雕刻適用於需要背光的按鍵。它提供了高度的設計靈活性，並節省了塑料生產的成本。生產激光雕刻按鍵，是需要添加保護性塗層，以確保按鍵上的雕刻能有較長的使用週期。並建議用保護質量好和可靠性高的PU塗層。

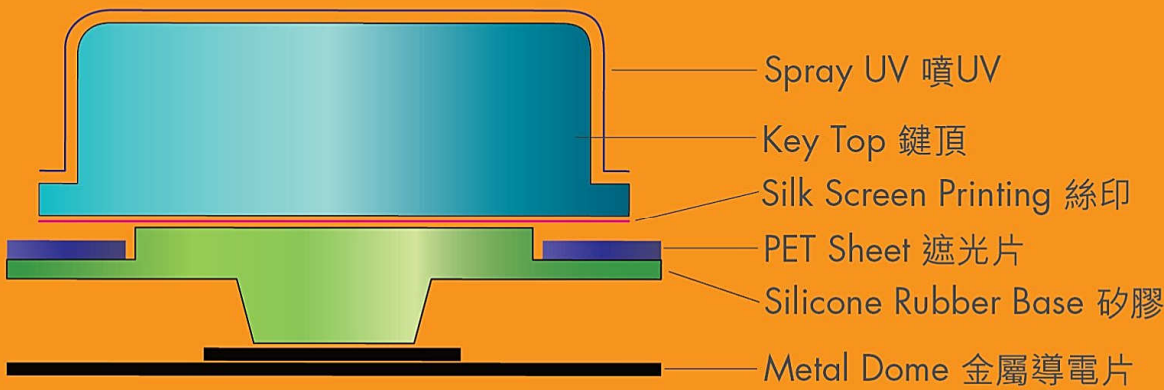


PLASTIC & RUBBER (P+R) KEYPAD

P+R 按鍵



Key Top Type 鍵頂類型



PLASTIC & RUBBER (P+R) KEYPAD

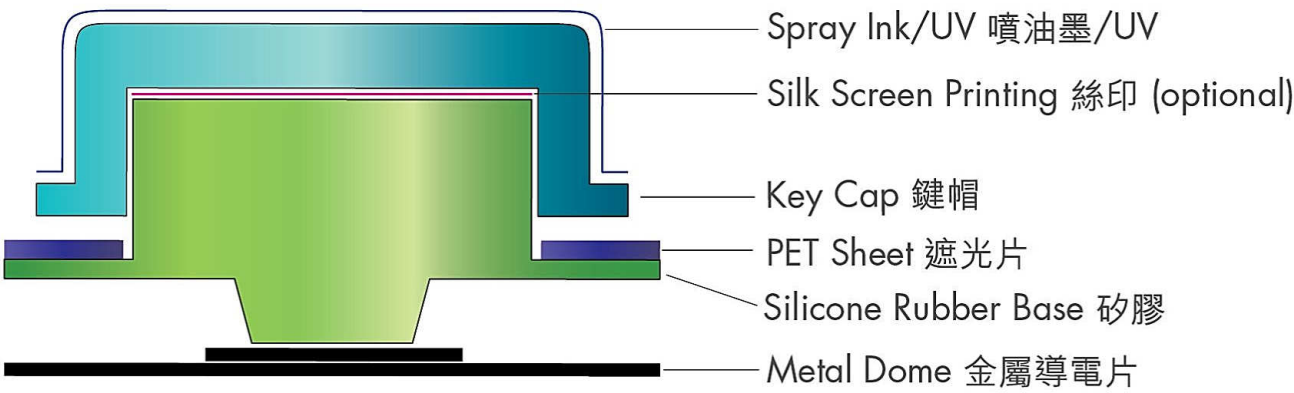
P+R 按鍵



Plastic & Rubber Keypad (P+R Keypad) mainly consists of plastic key top / key cap in combination with silicone keypad to form sub-assembly, combination the benefit of plastic keycap with the elastomeric and properties of the silicone rubber. It is available for high-polished, chrome plated, printed, UV-coated, electroplated for the surface of the plastic, depends by the product application and usage.

P+R 按鍵是將矽膠的彈性和特性組合塑料鍵帽而成的按鍵。可適合用於不同產品的需要，例如：高拋光，鍍鉻，印刷，紫外塗層，電鍍塑料的按鍵表面上。

Key Cap Type 鍵帽類型



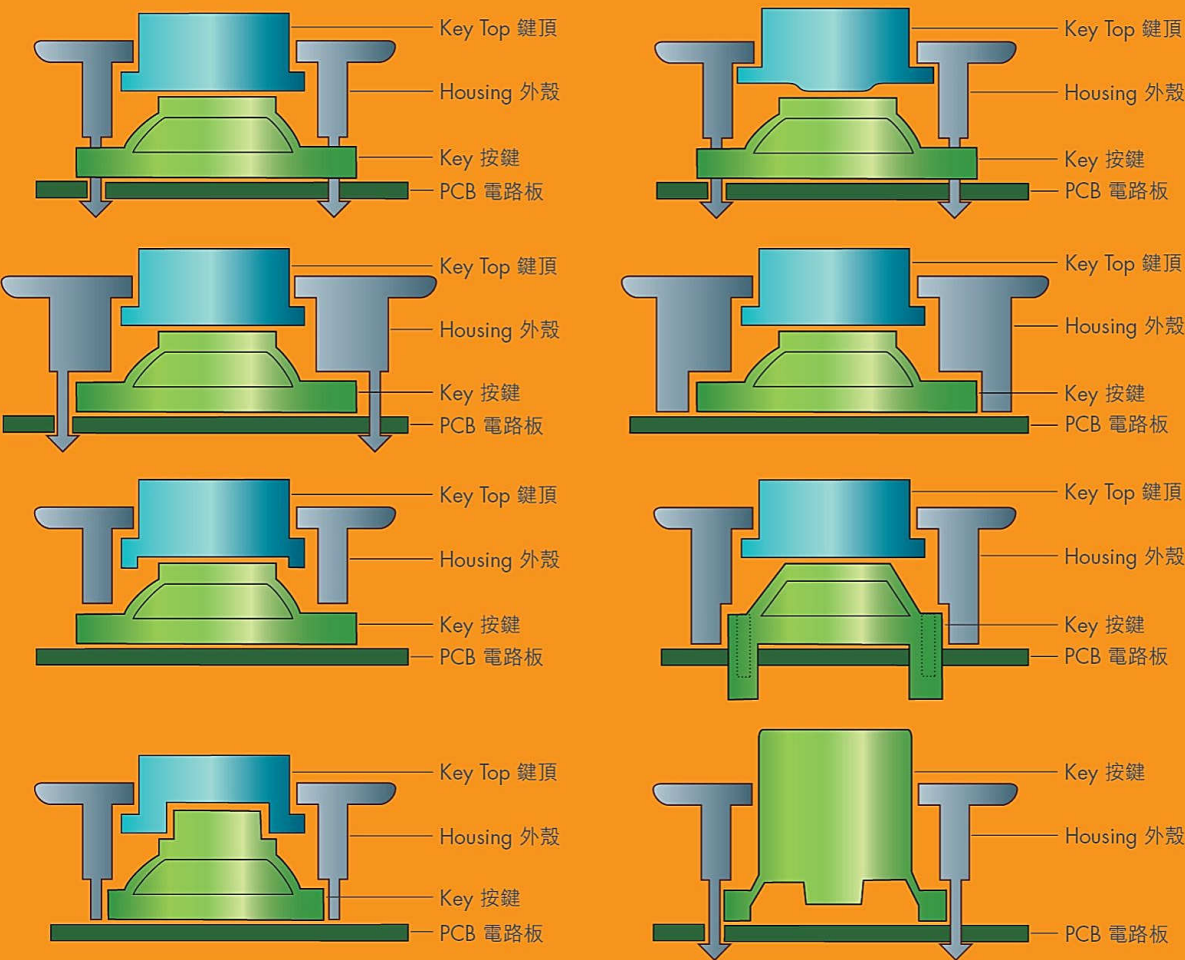
SILICONE RUBBER BUTTON 矽膠按鈕



Silicone Rubber Button can be used in multifarious applications. In order to facilitate the customers a wide range of standard tools of varying Silicone Rubber Button specifications are available to choose from. This way, we can submit evaluation samples promptly while doing away with the need to invest on custom tool. The special key force/colour requirement shall be supported.

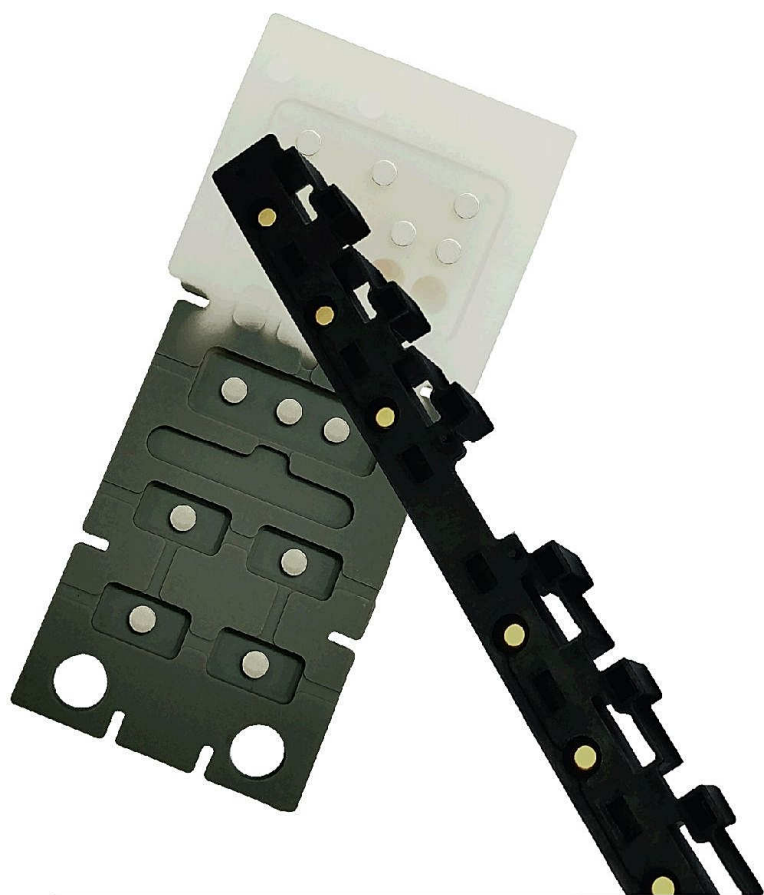
矽膠按鈕適用於多方面的產品設計上，由於不需要開發模具及生產週期短，應用上非常方便。我們已備有不同規格的常用按鈕模具以供客戶選擇，且有不同的顏色分辨荷重，以配合客戶特別規格需要。

Assembly Drawings 裝配圖



Conductive Contact

導電接觸點

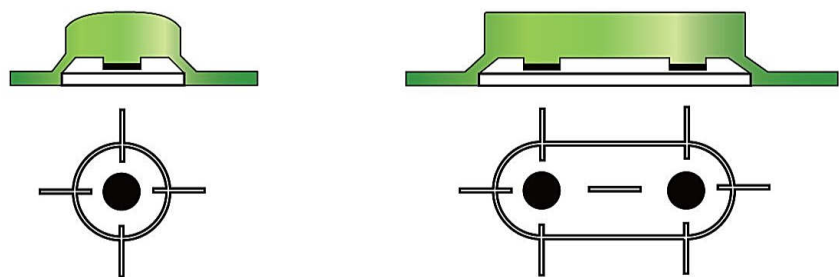


Metal Conductive Pill 金屬導電粒

In order to support extremely low contact resistance requirement for electrical appliances and medical/health care products, we offer metal conductive pills as well. Metal conductive pills can also be applied to products with voltage as high as 24 volts.

由於很多電器和醫療產品皆要求極低的電阻，我們能提供金屬導電粒，而且金屬導電粒亦可適用於高電壓(24 volt)產品。

Patterns of Metal Conductive Designs 金屬導電設計圖案



Standard Sizes of Metal Conductive Pill 金屬導電粒的標準尺寸
Round 圓形 Ø2, Ø2.5, Ø3, Ø3.5, Ø4, Ø4.5, Ø5, Ø6, Ø8, Ø10(mm)

Conductive Pill Resistance	<1Ω with 100 grams loading
Life	~30,000,000
導電粒電阻值	施加 100g 力之下小於1Ω
壽命	~30,000,000

Conductive Contact

導電接觸點

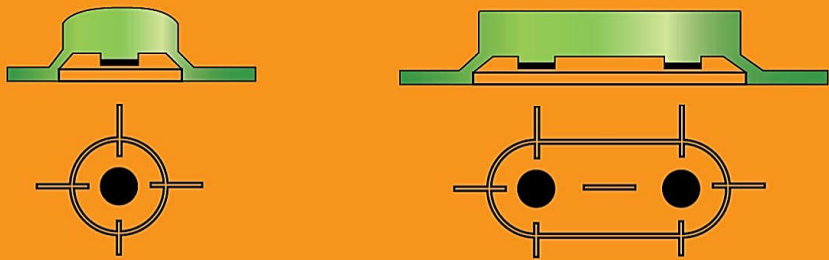


Carbon Conductive Pill 碳導電粒

Carbon Conductive Pill is common round shape in standard sizes between 2mm to 8mm diameter of which the resistance normally is around 200 ohm (Ω) with 100 grams loading.

碳導電粒的常見形狀標準尺寸在2mm至8mm直徑之間，電阻通常為約200歐姆及有100克負載。

Patterns of Carbon Conductive Pill Designs 炭導電粒設計圖案



Standard Sizes of Conductive Pill 碳導電粒的標準尺寸
Round 圓形 Ø2, Ø2.5, Ø3, Ø3.5, Ø4, Ø4.5, Ø5, Ø6, Ø7, Ø8(mm)

Conductive Pill Resistance	<200 Ω with 100 grams loading
Life	~30,000,000
導電粒電阻值	施加100g 力之下小於 200 Ω
壽命	~30,000,000

Conductive Contact

導電接觸點

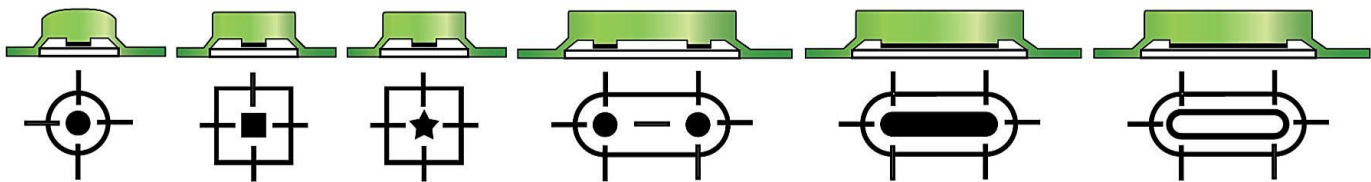


Carbon Conductive Printing 碳導電印刷

Carbon Conductive Printing can be applied to any shape of carbon contact, say round, square, oval etc. For product resistance requirement, the resistance will be ranged from 500 ohm (Ω) to 800 ohm (Ω).

碳導電印刷可應用於任何形狀的碳接觸，例如圓形，方形，橢圓形等。對於產品電阻要求，電阻將在500歐姆至800歐姆的範圍內。

Patterns of Carbon Conductive Printing Designs 炭導電印刷設計圖案

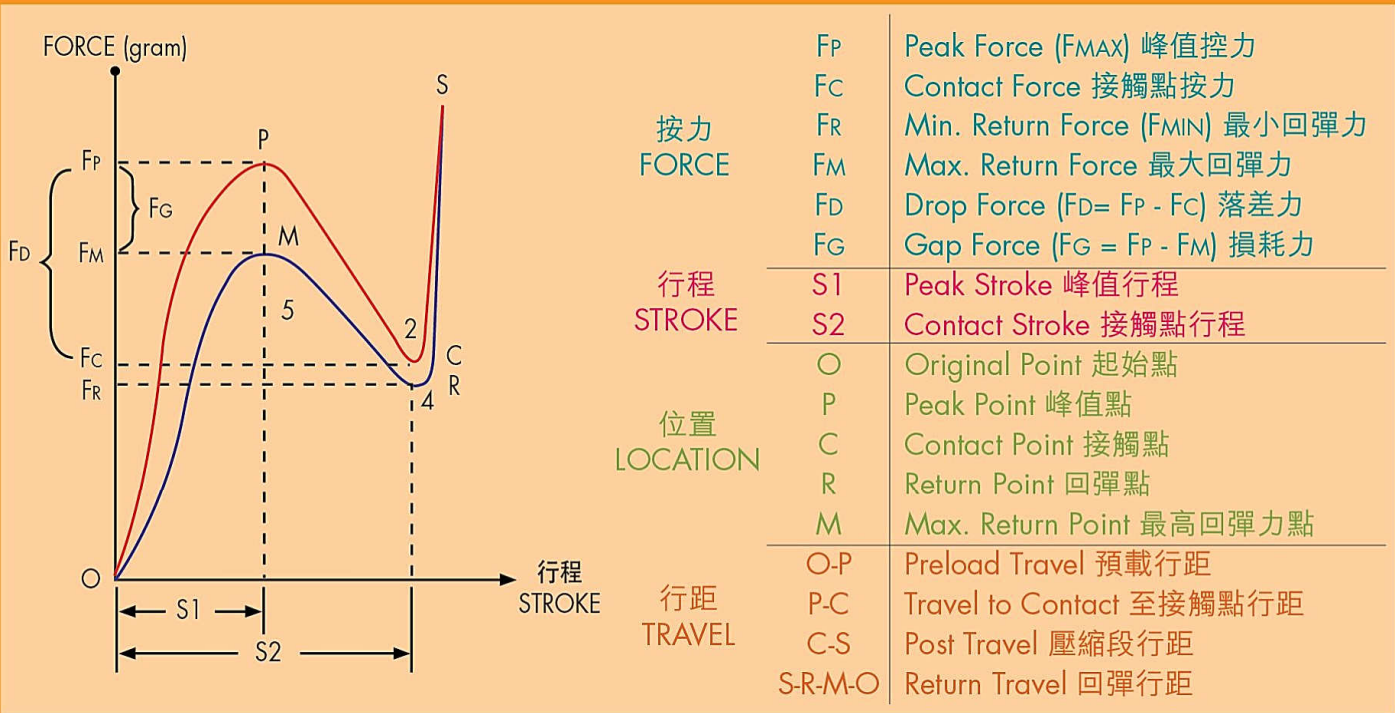


Type of Conductive Printing 碳導電印刷的類型

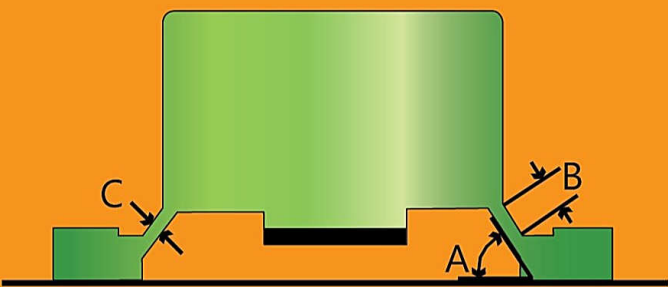
Round 圓形	Ø2, Ø2.5, Ø3, Ø3.5, Ø4, Ø4.5, Ø5, Ø6, Ø7, Ø8(mm)
Square 方形	Conductive ink printing contact is recommended.
Oval 橢圓形	Size is flexible 適宜做絲印導電油墨，尺寸不受限制

Print Type Resistance	<800 Ω with 150 grams loading
Life	$\sim 1 \times 10^6$
印刷型電阻值	施加150g力之下小於800 Ω
壽命	$\sim 1 \times 10^6$

Force-Stroke Curve of Rubber Keypad 矽橡膠按鍵行程曲線圖

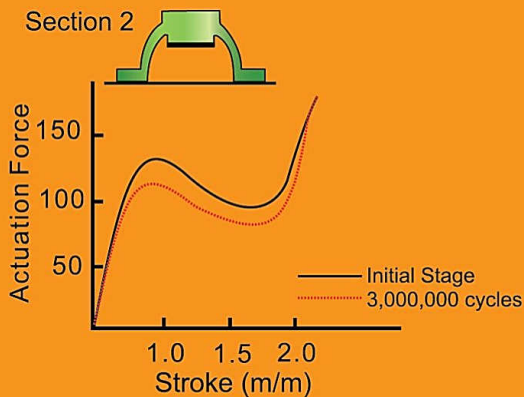
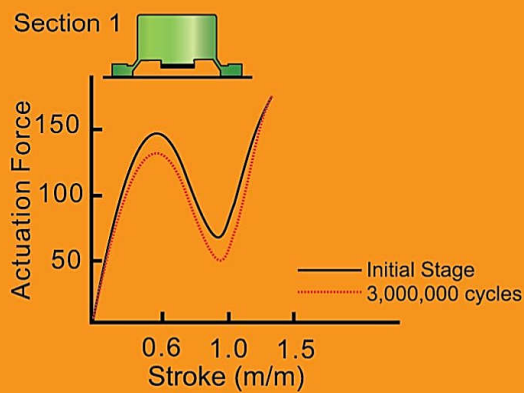


Life Test 壽命測試



Life Depends Mostly On:

- Material Hardness... 50 Shore A is preferred.
- Low Stroke... Less than 1 mm.
- Angle (As part A illustrated above)... 40 - Degree is recommended.
- Length of side - wall (As part B illustrated above)... As longer as better.
- Thickness of side - wall (As part C illustrated above)... Determined by key structure. The thicker the longer life, the thicker the higher force.



Standard Dimensional Tolerances 標準尺寸公差

0.0 - 10.0 mm	+ / - 0.10 mm
10.1 - 20.0 mm	+ / - 0.15 mm
20.1 - 30.0 mm	+ / - 0.20 mm
30.1 - 40.0 mm	+ / - 0.25 mm
40.1 - 50.0 mm	+ / - 0.30 mm
50.1 - 100.0 mm	+ / - 0.35 mm
100.1 mm and more	+ / - 0.5%





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