

應用範例 NIL※用可撓式模具

Application: Flexible Mold for NIL※

以往的NIL使用樹脂薄膜作為中間基材(可撓式模具)。但其缺點是,因溫度及濕度的變化,樹脂會大幅的膨脹及收縮,而難以達成高精度化。由本公司開發、融合G-Leaf™的Lamion™[可撓式]不僅能維持可撓性,還可抑制樹脂伸縮、實現數十乃至於百倍的高精度化。相較薄玻璃單體,有不易破損、易於移除的優點。

In the conventional NIL, PET film has been used as an intermediate substrate (flexible mold).

However, there are several problems that the expansion and the contraction caused by the change of temperature and humidity are large and it is difficult to achieve higher accuracy.

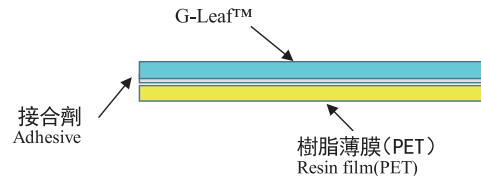
Lamion™ [Flexible Type], a hybrid material which consists of G-Leaf™ and resin enveloped by Nippon Electric Glass Co., Ltd., maintains flexibility. It can suppress the expansion and the contraction of resin, and can achieve several tens to a hundred times higher accuracy.

Compared with thin glass, it is hard to be broken and easy to remove.

※奈米壓印/Nanoimprint Lithography

Lamion™【可撓式】
Lamion™ [Flexible Type]

NIL工序
NIL Process



- 1) 將主膜轉移至Lamion™(可撓式), 製作可撓式模具
1) Transfer master mold to Lamion™ [Flexible Type] and make flexible mold.



- 2) 將可撓式模具上的結構壓印至基板, 進行產品生產
2) Imprint the structure of flexible mold on the substrate and produce the product.