超薄玻璃—樹脂積層板

Ultra-thin Glass Laminated on Resin

Lamion™

—藉由輕量開拓玻璃的應用前景！—

Lighter than Conventional Glass!

GLASS FOR FUTURE

日本電氣硝子

使用玻璃與樹脂的複合材料，更加輕盈!

Light Hybrid Material, Combining Glass and Resin!

什麼是前所未有的複合材料Lamion™？

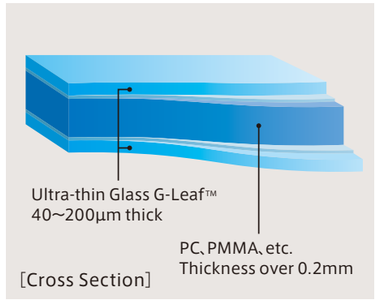
Lamion™是在樹脂的兩面貼合超薄玻璃G-Leaf™的複合材料。此複合材料將耐刮性和氣體阻隔性等“玻璃的優點”，與輕量性和柔韌性等“樹脂的優點”完美地結合。

※G-Leaf™是厚度在0.2mm(200μm)以下的“超薄玻璃”之總稱。

What is Lamion™ ?

Lamion™ is a composite material of resin with ultra-thin glass G-Leaf™ affixed to both sides. Advantages of glass such as high abrasion resistance and excellent gas-barrier performance, and the advantages of resin such as light weight and flexibility, are successfully combined in this hybrid material.

※G-Leaf™ is our ultra-thin glass which is under 0.2mm(200μm) thick.



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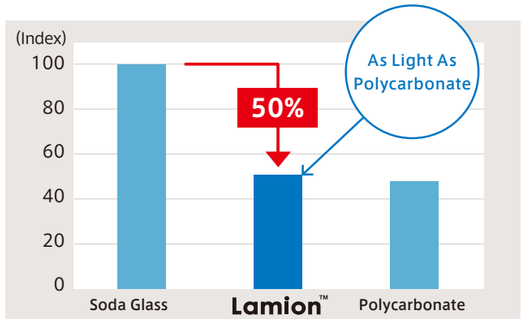
強韌、輕盈。採用Lamion™的優點



Weight Comparison

成功地比相同厚度的玻璃減輕約50%的重量，且不怕刮傷、衝擊、變色。這些優點單憑樹脂是無法達成的，因此Lamion™備受關注。

Merits of Introducing Tough and Light Lamion™

Lamion™ is successfully made about 50% lighter than other common glass with the same thickness. It is also highly resistant to scratches, shocks, and discoloration, attracting attention as a new material for purposes that were difficult to meet with resin alone.

不僅輕盈，且不怕衝擊和刮傷

因樹脂會吸收衝擊力，當受到衝擊時也不易破碎，即使破碎也不會四散。且還具有玻璃特有的抗刮強度。在防盜上也能發揮效果。

Not only Light but also Resistant to Impact Shocks and Scratches

Lamion™ is hard to break if it gets a shock because the shock is absorbed by the resin, and it will not scatter even if it does break. It is also resistant to scratches thanks to its glass-like nature. It would be able to applied to the security and the prevention of crime.

Result of Shock Test

採用獨特的積層技術創造替代樹脂的新材料

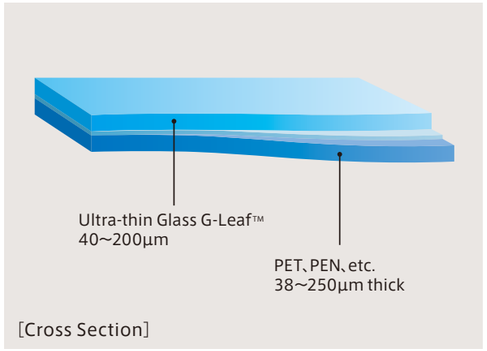
Our Unique Technique Enables the New Material to Replace Resin

柔韌可撓：Lamion™的柔韌型

亦有純單面貼合超薄玻璃G-Leaf™的Lamion™的柔韌型。這種高功能材料保有玻璃特有的氣體阻隔性、耐刮性等性質，並兼具柔韌性。

Flexibly Bendable: Lamion™ Flexible Type

We have Lamion™ Flexible Type, a sophisticated material with the ultra-thin glass G-Leaf™ affixed on just one side. This is providing both of the characteristics of glass of excellent gas barrier performance and abrasion resistance, as well as flexibility.



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日益擴大的用途 Broad uses


顯示器保護蓋
Display cover for digital signage


輕量門窗
Lightweight window and door


防盜用途櫥窗
Showcase for crime prevention


OLED照明
OLED lighting


安全圍欄
Security gate


輕量隔板
Lightweight partition

“玻璃+鍍膜”—拓展玻璃的用途和可能性

可於玻璃上塗布各類功能膜（ITO、抗反射、防眩、防污等）。
亦有遮斷紫外線或遮斷紅外線等加工，具多樣化的應用領域。
多樣的玻璃材料及形狀再加上鍍膜技術，可發揮玻璃的最大可能性，提供具有高附加價值的玻璃材料，藉以滿足各種新型態的需求。

Bare glass (Left),
Anti-Reflection coated Lamion™ (Right)

Glass Coating Technology — Pursuing Possibilities in Glass Uses

Coating with various functions (ITO, Anti-Reflection, Anti-Glare and Anti-Fingerprint) can be added to the glass. Application for various purposes, such as cutting only ultraviolet rays or infrared rays, is also available. By adding the coating technologies to an abundant range of glass materials and shapes, we will provide high value-added glass materials that can satisfy various new purposes.

■Comparison of Properties

	Lightweight	Bending rigidity	Abrasion resistance	Shock resistance, Anti-penetrability	Shatter resistance	Incombusti-bility	Weather resistance	Sound insulating	Electrostatic property	Gas barrier properties	Flexibility	Texture
Lamion™	○	○	◎	◎	◎	○	◎	◎	○	◎	○	◎
Polycar-bonate	○	—	—	◎	◎	—	—	○	—	—	◎	—
Soda glass	—	◎	○	—	—	◎	○	—	○	◎	—	◎

◎ = Excellent ○ = Good

日本電氣硝子株式会社
www.neg.co.jp/

Nippon Electric Glass Co., Ltd.
1-14, Miyahara 4-chome, Yodogawa-ku, Osaka 532-0003, Japan
Phone: (81) 6-6399-2711 Fax: (81) 6-6399-2731

Nippon Electric Glass (Korea) Co., Ltd.
68-20, 3-gil, Suchul-daero, Gumi-si, Gyeongsangbuk-do, Korea 39266
Phone: (82) 54-462-7200 Fax: (82) 54-462-7201

Paju Electric Glass Co., Ltd.
1695-35, Bangchon-ro, Munsan-eup, Paju-si, Gyeonggi-do, Korea 10816
Phone: (82) 31-934-1032 Fax: (82) 31-934-1060

台灣電氣硝子股份有限公司
台灣台中市梧棲區中港加工出口區緯六路6號
郵遞區號：43541
電話：(886) 4-2657-0099 傳真：(886) 4-2657-6202

电气硝子玻璃（上海）有限公司
中国上海市闵行区莘庄工业区颛兴路2009号
邮编：201108
电话：(86) 21-6091-0701 传真：(86) 21-6074-5999

电气硝子玻璃（广州）有限公司
中国广州市高新技术产业开发区碧达街1号
邮编：510663
电话：(86) 20-8255-7399 传真：(86) 20-8252-6762