Clear Float Glass
透明浮法玻璃

透明浮法玻璃是玻璃膏經控制閘門進入錫槽，由於地心引力及本身表面張力作用浮於熔融錫表面上後，再進入徐冷槽，使玻璃兩面平滑均勻，波紋消失而製成。

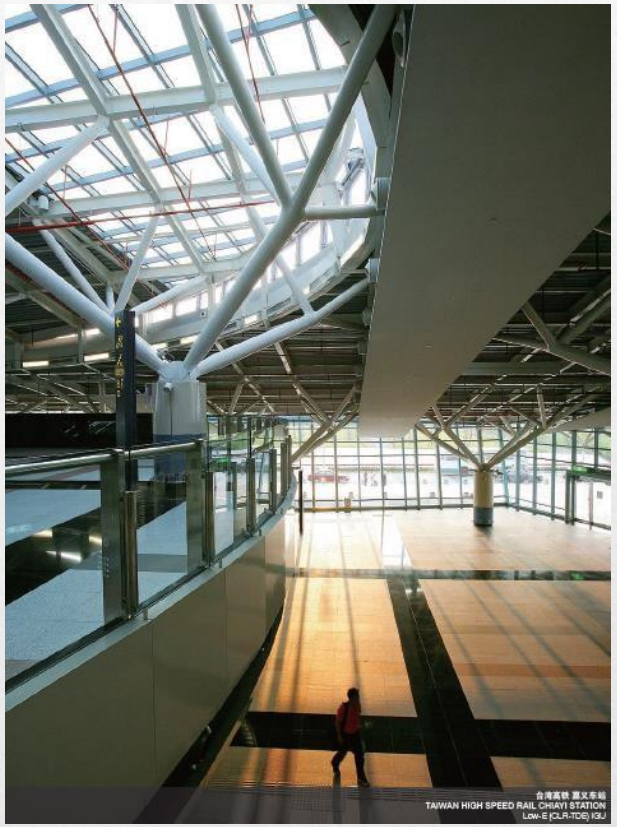
Clear float glass is made of molten glass which flows through tweel to tin bath and then to lehr.
While floating through the molten tin, the glass under the works of gravity and surface tension becomes smooth and flat at both sides.

※特性
■表面平滑無波紋，透視性佳。
■規格可做彈性配合，減少切片損失。
■可提供製造各種加工層次的素材。

※用途
■建築用
■鏡板
■家具、裝飾用
■光學儀器用
■車輛用

※Benefits
■Smooth and flat surface, and good vision.
■Flexible size specifications to minimize cutting loss.
■Substrate for each level of glass processing.

※Applications
■Architecture
■Mirror
■Furniture and decoration
■Optical instrument
■Automobile



Tempered Glass
鋼化玻璃

鋼化玻璃是將平板玻璃加熱接近軟化點時，在玻璃表面急速冷卻，使壓縮應力分佈在玻璃表面，而引張應力則在中心層。因有強大的壓縮應力，使外壓所產生的引張應力，被玻璃的強大壓縮應力所抵消，增加玻璃使用的安全度。

Tempered glass is made by heating flat glass to just below its softening temperature and suddenly chilling it with jets of cold air. It results the outer skins under powerful compressive stress and the interior with severe tensile stress. In consequence, the impact applied to the glass will be overcome by the compressional stress on the surfaces to assure safety of use.

※特性
■採用水平鋼化，故沒有吊孔。
■鋼化玻璃的強度約為普通玻璃的5倍。
■當玻璃被外力破壞時，成為豆粒大的顆粒減少對人體的傷害。
■可耐溫度的急速變化，(例5mm鋼化玻璃，約可耐攝氏200度的溫差變化）。
■鋼化玻璃因有瞬間破裂的風險，應再作熱浸處理（Heat Soak Test），確保使用上更安全

※用途
■汽車、火車、船舶。
■建築、家具、自動門、電扶梯、壁爐等。

※規格
■厚度：3.8~19mm
■最大尺寸: 118" ×315"（3000mm×8000 mm）

※Benefits
■No tong marks on the glass as TG adopts the horizontal tempering process.
■5 times stronger than annealed glass.
■Once breakage occurs, the glass disintegrates into small cubical fragments

which are relatively harmless to human body.
■It withstands abrupt change of temperature.For example,a piece of 5mm tolerates the temperature variations within the range of 200.
■Tempered glass should undergo heat soak test to improve safety in use.

※Applications
■Automobile,train,vessel.
■Architecture,furnIture, automatic door, escalator, fireplace,etc.

※Specification
■Thickness: 3.8 ~ 19mm
■Max.size: 118" ×315" (3000mm×8000 mm)

Bent Tempered Glass 彎曲鋼化玻璃

彎曲鋼化玻璃是建築外觀建材的新趨勢，在全球市場的需求正快速的成長，因應建築物外觀日趨典雅的造型及對熱彎造形更大尺寸的需求，特別引進芬蘭Glassrobots 公司所設計新一代的水平彎曲鋼化玻璃 加工系統，定名為“彩虹製造者”的專利生產設備，採用特殊調整熱 彎半徑的控制技術，可塑造特殊圓弧的玻璃形狀，玻璃在加工爐中經 由精確的溫度加熱控制，可達到正確的加工溫度，這項方法能減少玻 璃因過度加熱而產生的不整波紋，保障優良的品質。

Bent tempered architectural glass Represents trend in construction and facade materials and has seen rapid growth in worldwide demand . In response to an increase in architectural glass applications in sophiscated facades and the need for lager curved glass surfaces.Introduced Rainbowmaker TSF CombiTM Bending &Tempering System, a horizontal bending and tempering glass processor designed by Glassrobots, Finland.
Exceptional technology adjusts the bending radius and control system parameters to achieve cylindrical and curved glass shapes. The glass is heated to the correct temperature in the precisely controlled furnace, which eliminates glass waviness as a result of
overheating and ensures an outstanding glass quality.

※特性
■彎曲鋼化玻璃的強度為一般熱彎玻璃 的3－5倍。
■玻璃四周邊沒有吊孔。
■採用水平熱彎鋼化，品質穩定。
■凹凸兩面均可達到相同良好的品質，尤其在應用於熱反射玻璃熱彎情形時
，更顯
出清晰的視覺品質。

※用途
■可加工成熱彎鋼化中空玻璃。
■波浪型、彎曲型建築物玻璃帷幕牆。如：辦公大樓、購物中心、航空站、音樂廳。
■弧形旋轉大門、景觀電梯外罩。
■弧形樓梯、扶手、天窗、通道天篷。
■弧形魚缸、展示櫥櫃、造型傢俱。
■弧形辦公室隔間。

※規格
■彎曲鋼化玻璃
■厚度：6mm~15mm
■最大尺寸：
8mm&10mm: 87"×138"（2200mm×3500mm）
6mm&12mm: 79"×138"（2000mm×3500mm） 15mm: 60" ×99"（ 1500mm×2500mm ）
■最小尺寸：9"×17"（220mm×430mm）
■彎曲半鋼化玻璃
■厚度：5mm~8mm
■最大尺寸：87"×138"（2200mm×3500mm）
■最小尺寸：9"×17"（220mm×430mm）
■弧深度：500mm以下
■彎曲角度：1/4圓以下

※Benefits
■3~5times harder than ordinary bent glass.
■No tong marks on the glass.
■Horizontal bending and tempering method ensures stable product quality.
■Both sides of the curved glass surfaces can achieve outstanding quality.
Exceptional optical quality is especially prominent in bent tempered
reflective glass.

※Applications
■Bent tempered glass can be processed into bent tempered insulating glass.
■Wavelike and curved curtain wall panels for offices, shopping centers,
airports and concert halls.
■External walls of revolving doors and exposed elevators.
■Curved or revolving stairs, handrails, skylights and arcade roofing.
■Curved aquariums, display shelves and form-oriented furniture.
■Curved partitions inside offices.

※Specification
■Bent Tempered Glass
■Thickness:6mm~15mm
■Max.size:
8mm&10mm: 87"×138" (2200mm×3500mm)
6mm&12mm: 79"×138" (2000mm×3500mm)
15mm: 60"×99" (1500mm×2500mm)
■Min.size: 9"×17" (220mm×430mm)
■Bent Heat Strengthened Glass
■Thickness: 5mm~8mm
■Max.size: 87"×138" (2200mm×3500mm)
■Min.size: 9"×17" (220mm×430mm)
■Curve depth:up to 500mm
■Bending angle:up to 90°

Heat Soak Test
熱浸處理

引進芬蘭TAMGLASS 熱浸爐，將鋼化玻璃中偶然存在的硫化鎳（Nis）雜質，在持溫的熱浸爐內嚴格控制，由於硫化鎳（Nis）會由高溫的α-Nis 轉換成低溫的β-Nis 的狀態。轉換會伴隨2-4% 體積擴張，若其位置正好在張力層，則會在熱浸爐內先爆開，以達降低鋼化玻璃安裝後瞬間破裂機率的目的。熱浸爐操作的流程及溫度的變化圖：以適當的時間（T2）約2~8 小時，控制溫度在290℃±10℃，之後再降溫至常溫。

Employs the heat soak testing system from Finland's Tamglass to detect the occasional occurrence of nickel sulfide (Nis) inclusions in tempered glass. Under strictly controlled temperatures, high-temperature β-Nis converts to low-temperature β-Nis which accompanies a 2-4% expansion in volume and causes the glass to break if the inclusion is located at a tensile stress. The test reduces the frequency of spontaneous breakage of tempered glass after installation.Tempered glass is heat soaked for 2-8 hours (t2) at a constant temperature of 290℃±10℃and then allowed to return to room temperature over a specified time.

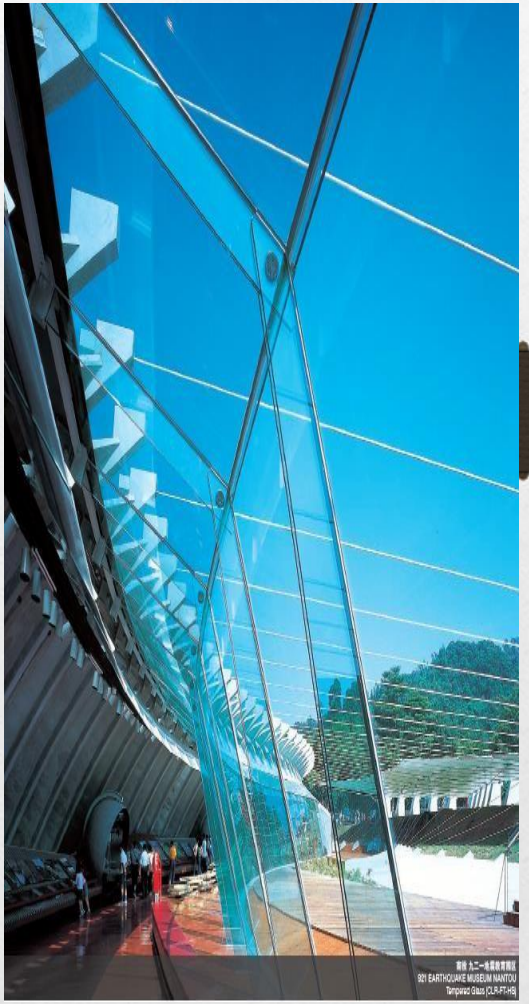
※特性
■電腦控管，品質保障
■全世界最知名的電腦全自動控制系統，品質有保障。
■降低鋼化玻璃瞬間破裂的機率
■強度及安全並重
鋼化玻璃為普通玻璃強度的3-5 倍，理應很安全才是，
但偶發生鋼化玻璃已經安裝後甚至使用很多年後，在
不明原因情況下瞬間破裂，造成車輛、人員等的傷害，
為使兩者可以兼顧的情形下，設計時指定鋼化玻璃加
熱浸（Heat Soak Test）為必要的條件。
※建議
■鋼化玻璃有必要做熱浸處理
※規格
■3mm － 19mm
※尺寸
■最大尺寸：118"x315"（3000mm×8000 mm）
■最小尺寸：12"x12"（305mm×305mm）

※Benefits
■Computerized control system, guaranteed quality.
■The Tamglass fully-automated computerized control system is internationally recognized and offers guaranteed quality.
■Reduces risks of spontaneous breakage of tempered glass.
■Increases strength and safety.
Tempered glass is 3-5 times stronger than annealed glass and is very safe.However, after installation, tempered glass may shatter spontaneously for no apparent reason, sometimes even after being
used for many years. These rare incidences of breakage cause damage to cars and people. To reduce the frequency of such instances, tempered glass should specify the heat soak test during design.

※Applications
■All tempered glass should undergo heat soak test

※Specification
■3mm-19mm

※Heat Soak Size
■Max. Size: 118"×315" (3000mm×8000 mm)
■Min. Size: 12"×12" (305mm×305mm)



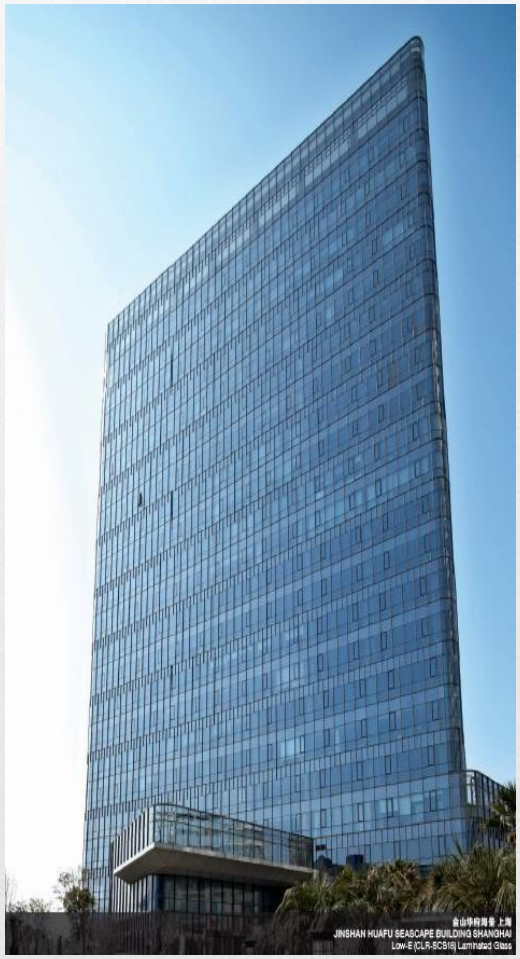
Laminated Glass
夾膠玻璃

夾膠玻璃是利用高溫高壓,在兩片玻璃間夾入強韌而富熱可塑性的樹脂中間膜（例如PVB）而製成。

Laminated glass is formed as sandwich of 2 sheets of glass, between which is bonded together with a tough and thermoplastic polyvinyl butyral (Such as PVB) interlayer under heat and pressure.

※規格
■最大尺寸：
建築用 118"×236"（3000×6000mm）
車輛用 39"×86 1/2"（991mm×2197mm）
※特性
■安全性極高的建材
因中間夾著強韌而富粘著力的中間膜，所以不易在受衝擊力下被貫穿，且破損後
其玻璃片不易飛散，因此比其它種類玻璃具較高之安全性，如防盜、防爆及防彈等。
■高效率節能建材
中間膜有減輕太陽光中的紅外線（熱線）機能，可節省冷氣設備及電量，增加生
活環境舒適度。
■提升建築物外觀的美感
使用有色中間膜的夾膠玻璃，最易調和建築物周圍的景色及滿足設計師需求。
■隔音性
中間膜隔音效果甚佳
■隔離紫外線
中間膜有隔離紫外線的效果，所以可防止室內家具、織物、陳設品和壁紙等受損。
※用途
■建築用。
■汽車前擋風玻璃用。
■防爆、防彈用。
■家具用。

※Specification
■Max. size:
For architecture: 118" ×236" (3000×6000mm) For automobile: 39" ×86 1/2" (991mm×2197mm)
※Benefits
■Extremely high safety
The PVB interlayer withstands penetration from impact .Even if the glass
cracks, splinters will adhere to the interlayer and not scatter. In comparison
with other higher strength to resist shock, burglary, burst and bullets.
■Energy-saving building materials
PVB interlayer impedes the transmission of solar heat and reduces cooling
loads.
■Create aesthetic sense to buildings
Laminated glass with a tinted interlayer will beautify the buildings and
harmonize their appearances with surrounding views which meet the
demand of architects.
■Sound control
PVB interlayer is an effective absorber of sound.
■Ultraviolet screening
The interlayer filters out ultraviolet rays and prevents the furniture and
curtains from fading effects.
※Applications
■Architecture.
■Automotive windshield.
■Bullet/burst-proof purpose (can be designed for individual project).
■furniture.



Mirror Glass
鏡板玻璃

鏡板玻璃是採用表面平滑的浮法平板玻璃在其背面塗上銀膜、銅膜，以及二層防水保護漆等三重加工程序而製成。
該產品運用無銅膜製程，兩層防水保護漆而原料不添加鉛，可避免銅、鉛等重金屬污染。

※特性
■影像清晰、精準。
■背漆耐酸、耐濕。
※用途
■裝飾、傢俱用。
■汽車後視鏡。
※規格
■厚度：1.3~10mm
■最大尺寸：103"x144"（2610mmx3660mm）
■貼膜安全鏡板
厚度：1.3~6mm
最大尺寸：48"x144"（1219mmx3658mm）

Mirror glass is produced by coating a silver film, a copper film and two layers of waterproof paint on the back of flat and parallel float glass.
The product which uses noncopper film process and two layers of waterproof paint can prevent metal contamination with copper and lead by adopting non-lead materials.

※Benefits
■Clear and exact images.
■The backing paint resists acid and moisture.
※Applications
■Decoration and furniture.
■Rearview mirror for automobile.
※Specification
■Thickness: 1.3~10mm
■Max.size: 103"x144"(2610mmx3660mm)
■Safety mirror with vinyl back Thickness 1.3~6mm
Max.size: (1219mmx3658mm)

磨邊玻璃
Edged Glass

类别	加工边形		厚度 mm	尺寸 mm	备注
	不抛光	抛光			
	直边 (FE)	直边 (FE+P)	3 ~19	小: 150X150 最大: 高 2440 每片重 ≤150kg	意大利 SCHIATTI 设备
	斜边 (BE)	斜边 (BE+P)	4 ~ 19	最小: 150X150 最大: 高 2440 每片重 ≤150kg	意大利 BOTTERO 设备
	圆弧边 (RE)	圆弧边 (RE+P)	5 ~ 16	长边 / 短边 ≤2 最小: Φ500 (对角线) 最大: Φ1500 (对角线)	加工种类: 圆形、椭圆及方圆形玻璃
	鸭嘴边 (OG)	鸭嘴边 (OG+P)	5 ~ 16	长边 / 短边 ≤2 最小: Φ500 (对角线) 最大: Φ1500 (对角线)	加工种类: 圆形、椭圆及方圆形玻璃
	双边 (DE)	双边 (DE+P)	5 ~ 16 常用 3 ~ 18	最小: 160 155 最大: 1524 1270	意大利 SCHIATTI 设备

Low-E Glass
低幅射玻璃

※產品種類
■單銀低輻射玻璃（SLE）
■雙銀低輻射玻璃（TDE）
■三銀低輻射玻璃（TTE）
■熱控單銀低輻射玻璃（LES）
■可鋼單銀低輻射玻璃（PLE）
■可鋼雙銀低輻射玻璃（PDE）
■可鋼三銀低輻射玻璃（PTE）

※Types of Product
■Single Low-E Glass (SLE)
■Double Low-E Glass (TDE)
■Triple Low-E Glass (TTE)
■Low-E-SUN Layer Glass (LES)
■Post-temperable single Low-E Glass (PLE)
■Post-temperable double Low-E Glass (PDE)
■Post-temperable triple low-e Glass (PTE)

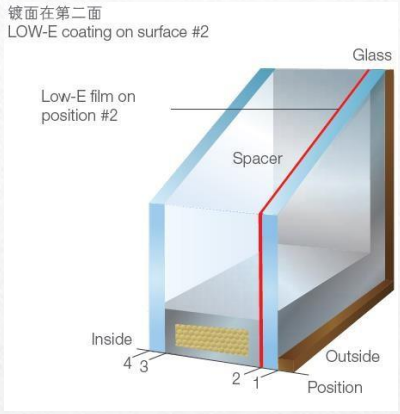
※規格
■厚度：3~19mm
■最大尺寸：130" x 236"（3300 mm×6000 mm）
■最小尺寸：12" ×39"（305 mm×991 mm）
■Low-E 中空玻璃最大尺寸：126"×236（" 3200mm×6000mm）

※Specifications
■Thickness:3~19mm
■Max. size: 130"×236" (3300 mm×6000 mm)
■Min. size:12"×39" (305 mm×991 mm)
■Low-E insulating glass max. size: 126"×236" (3200mm×6000mm

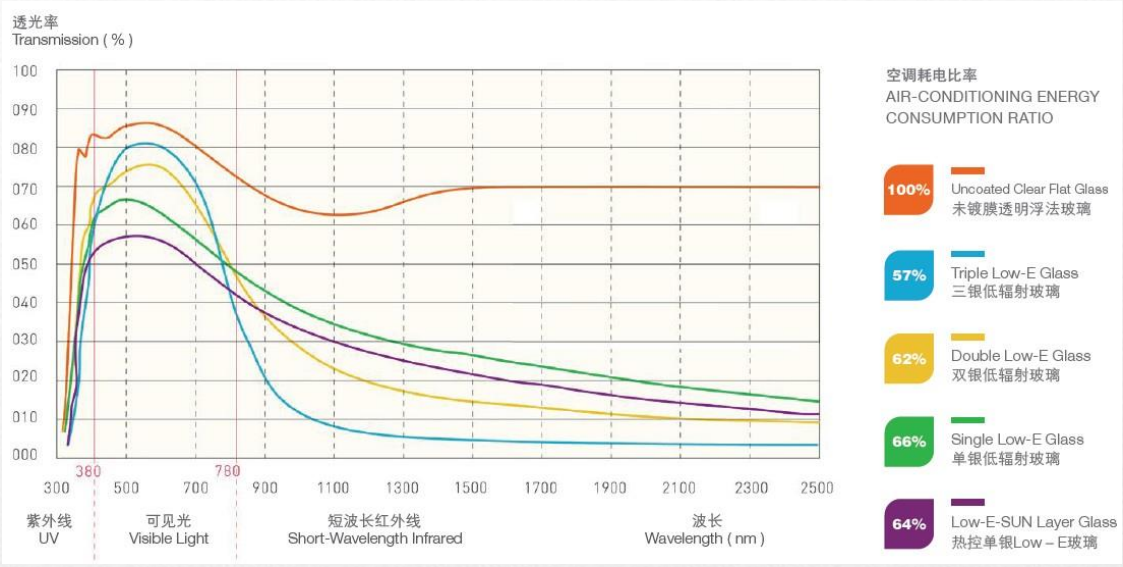
※特性
■接近玻璃的自然原色
■對波長 380nm 至 780nm 的可見光波段具有高透視率，不致
因玻璃對可視光的高反射率而產生嚴重的反眩光公害。
■太陽光中可見光透入室內多，且顏色自然，採光佳，減少室內燈
具的使用、節省能源。
■對紅外線光有較高的反射率（波長780-2500nm），尤其是對
長波長的紅外線（波長 2500nm 以上），幾乎是全反射，阻斷
大量熱源進入，使室內保持涼爽，達到冬暖夏涼的效果。

※Benefits
■Approaches the natural color of glass.
■Highly transparent to visible light (wavelength 380nm~780nm); will not produce significant glare problems caused by high reflectance of visible light.
■Allows most sunlight in the visible range to enter without altering its natural color. Provides excellent natural illumination and saves energy by reducing the need for artificial lighting.
■Relatively high reflectance of infrared radiation (wavelength780nm~2,500nm). In particular, reflects nearly all long-wave infrared (wavelength greater than 2,500nm). Blocks the entrance of large amounts of heat, and leaves interior comfortably cool in summer and warm in winter.

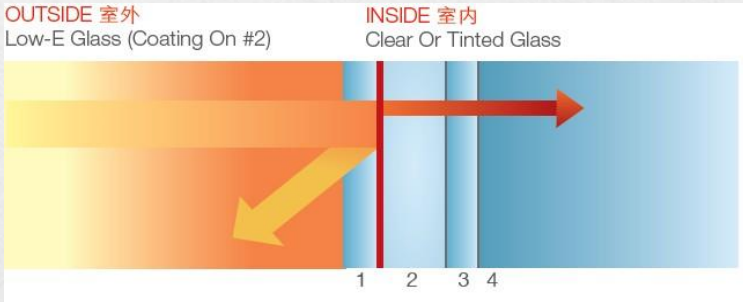
Low-E Glass
低幅射玻璃



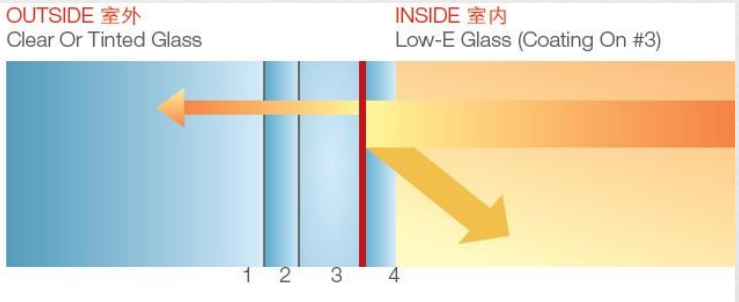
低輻射中空玻璃構造圖
CONSTRUCTION OF LOW-E INSULATING GLASS



不同鍍膜在太陽光譜中透射率的比較
SPECTRUM FOR DIFFERENT COATING GLASS TRANSMISSION



適用（亞）熱帶型氣候組合（鍍面在＃2 面）
apply (sub) tropical zone assembly (coating on surface#2) 阻斷大量輻射熱能的穿透，僅少數熱能進入使室內保持涼爽。



適用（寒）溫帶型氣候組合（鍍面在＃3 面）
apply (frigid) temperate zone assembly (coating on surface#3) 室內的熱能因Low-E 中空玻璃的阻斷而不易輻射至室外而能保暖。

Low-E Glass
低幅射玻璃

※設計及施工的注意事項

■因Low-E 金屬鍍膜接觸大氣易引起不良反應而必須於極短時間內密封或加工為中空玻璃，不建議單片使用。

■Low-E 玻璃的輻射率為 0.02-0.15，一般未鍍膜玻璃輻射率為 0.84。

■亞熱帶、熱帶區域鍍膜面安裝於 #2面可隔熱（由建築物外側往內數）；寒帶區域使用鍍膜面安裝於#3 面可保溫（由建築物外側往內數），如18 頁圖4。

■金屬框的設計排水性要良好，避免因積水而導致玻璃變質起霧。

■設計 Low-E 鍍膜作夾膠玻璃時，其U 值（熱傳導率）較大，熱絕緣效果差。

■要辨明Low-E鍍膜面，除了本公司在 Low-E 玻璃上會有標記外，檢驗Low-E 玻璃，可用打火機測出鍍膜位置，一般玻璃表面層反射的 火焰呈黃色，而 Low-E 玻璃鍍膜的表面反射的火焰呈粉紅色或藍色，由此可簡易找出鍍膜的位置，避免造成錯誤的安裝，而影響隔熱效果。

※使用及維護的注意事項

■Low-E 中空玻璃表面勿貼隔熱紙，避免熱割裂現象發生。

■在海拔1000 公尺以上高地使用時，因內部壓力有調整的必要性，事前請洽本公司做個案討論。

※Notes on Design and Glazing

■You'd better not use Low-E glass as a single glazing and must be sealed or processed into insulating glass unit within a very short time as the metallic oxide coating is prone to undesirable reactions once exposed to air.

■The emissivity of Low-E glass is 0.02~0.15, while that of ordinary uncoated glass is 0.84.

■In tropical or subtropical areas, the Low-E coating should be positioned on #2 surface for heat insulation (facing inward from outside the building), while positioned on #3surface for keeping interior warm in temperate areas; as shown in Page 18.Fig.4.

■To avoid deterioration and fogging of the glass due to water accumulation, the metal holding frames must be well drained.

■Low-E glass designed for laminated glass unit will be under a greater U-value and poorer thermal insulating capability.

■To identify the coating surface of Low-E glass, aside from looking for the TG mark, use a cigarette lighter to inspect the surface of the glass. Reflection of the flame on ordinary glass surface will be yellow, while pink or blue on Low-E glass surface.

※Maintenance Guidelines

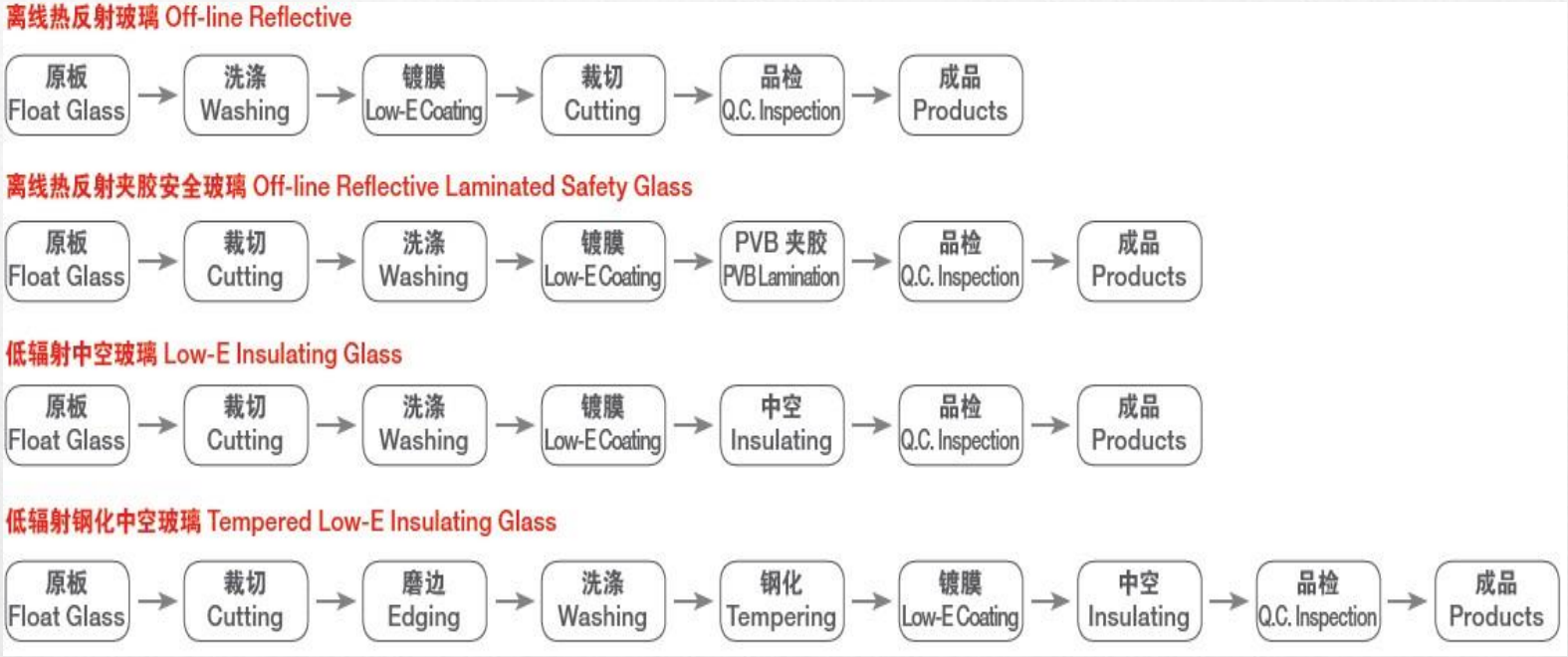
■To avoid thermal fracture, do not attach insulating paper to the surface of Low- Einsulating glass.

■Because of the necessity of adjusting the interior pressure when using this product at an altitude of 1,000 meters or more, please contact us to discuss the specific details of your project.

Low-E Glass
低幅射玻璃

建築用鍍膜玻璃加工流程
COATING GLASS PROCESSING FLOW

加工流程 Processing Flow (Off-Line Coating 離線鍍膜)



Thermo Plastic Spacer (TPS) 熱塑性隔條

TPS 是一種新型的中空玻璃暖邊系統，它是以特殊丁基膠為輔材，填入分子篩的熱塑性隔條。
TPS refers to Thermo Plastic Spacer. It is a new type of Warm Edge System of IGU which made by a special kind of butyl included with integrated desiccant.

※特性
■在中空玻璃生產中，完全代替金屬間隔條。
■不含金屬嵌入物，有效提高玻璃邊緣的熱阻隔性，降 低邊緣傳熱係數。
■有效均衡玻璃各表面的溫度，降低露點。
■對異形玻璃全自動打膠，使玻璃設計變得更為靈活。
■良好的氣密性可有效延長中空玻璃的使用壽命。

※Benefits
■To be adopted during IGU production as replacement of metal spacer.
■To lower heat transfer coefficient of glass edge by improving its thermal barrier with no metal.
■To lower dew point by balancing the surface temperature of each pane.
■To lead design more flexible by automatically glue special-shaped glass.
■To extend IGU durability by good air-tightness.

※用途
■建築玻璃、汽車玻璃、火車、高鐵等行業用密封劑。

※規格
■打膠厚度：6~20mm
■最大尺寸：2700mm×4000mm

※注意事項
■在恆溫條件下完成生產。
■安裝玻璃時用中性粘結劑為佳。

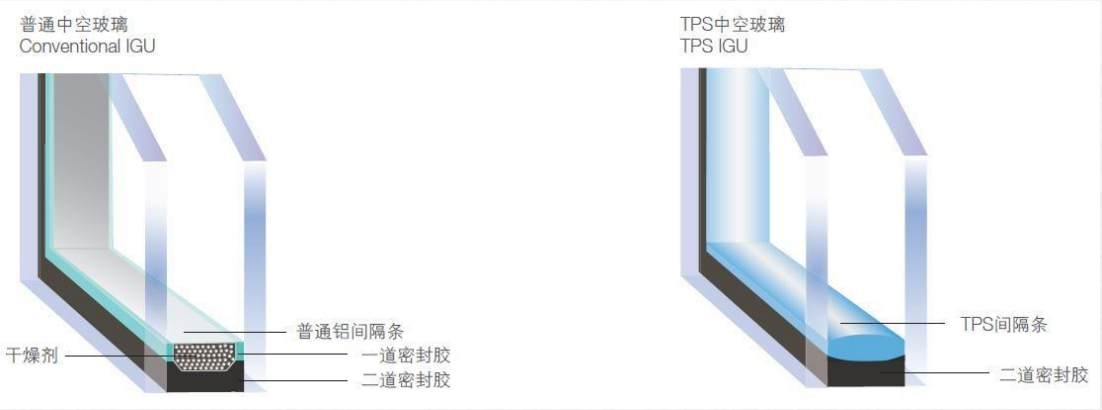
※Applications
■To be adopted as architectural glass, automotive glass, train glass, high speed train and sealant in other industries.

※Specification
■Thickness: 6~20mm
■Max.Size: 2700mm×4000mm

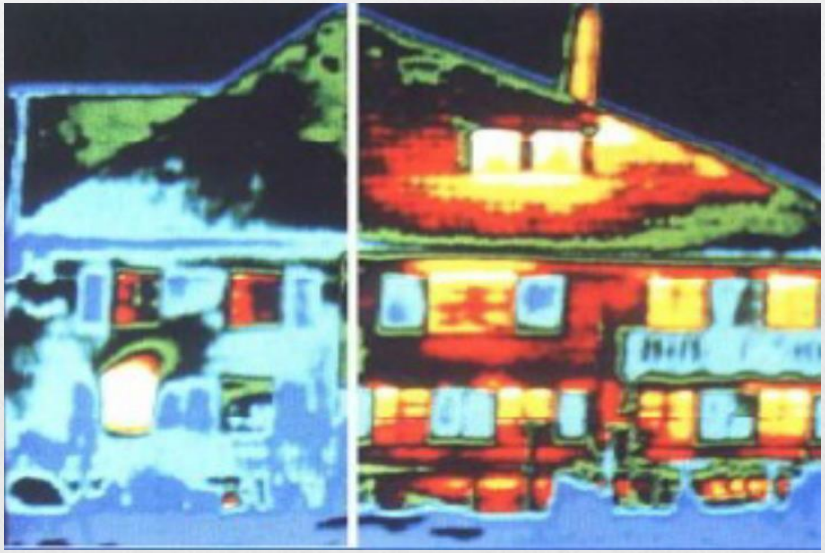
※Notice
■It should be produced at constant temperature.
■Neutral adhesive is recommended when glass installation.

Thermo Plastic Spacer (TPS) 熱塑性隔條

傳統中空玻璃及TPS 中空玻璃系統比較
SYSTEM COMPARISON



紅外線熱成像下的房屋熱散失
HEAT LOSING THROUGH THE INFRARED THERMAL IMAGING



■TPS 和 Low-E的中空玻璃 TPS IGU

■普通的中空玻璃 Conventional IGU

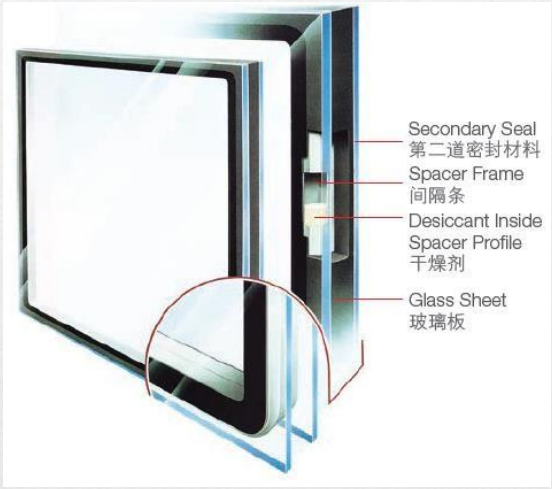
Insulating Glass
中空玻璃

中空玻璃是指兩片或多片玻璃以有效支撐均勻隔開並周邊粘接密封，使玻璃層間形成有乾燥氣體空間的製品。
Insulating glass is made by fusing together 2 panes of glass spaced by dry air, argon or other inert gases.

※特性
■隔熱效果特佳，是理想的節約能源建材。
■因中間層是乾燥氣層，所以有防霧效果。
■若充入氬氣等惰性氣體，隔熱效果更佳。
※用途
■建築、火車車窗、冰櫃等。
※規格
■中間空距有：6mm、9mm、12mm、15mm、16mm
■最大尺寸：118"×236"（3000×6000mm）

※Features
■Its excellent efficiency in solar heat insulation, greatly reduces cooling loads.
■The dry air inside the enclosure renders the surface free from misting .
■More excellent efficiency will be if fill in argon or other inert gases.
※Applications
■Architecture, train window, refrigerator, etc.
※Specification
■Air space gap: 6mm, 9mm, 12mm, 15mm, 16mm
■Max.Size: 118"×236" (3000×6000mm)

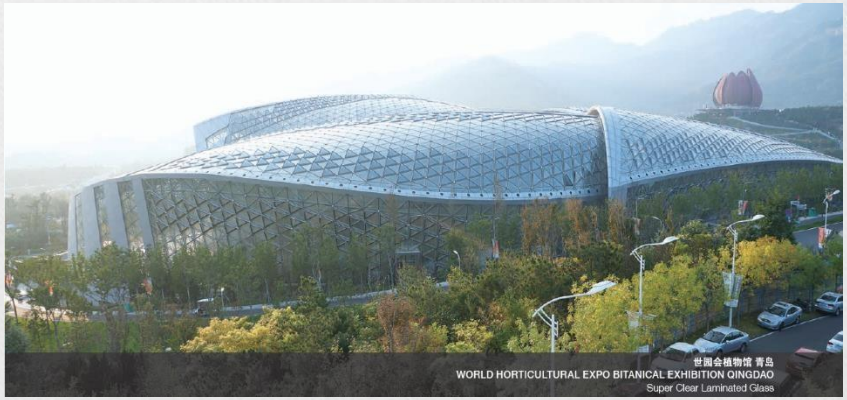
卓越的中空玻璃技術
DISTINQUISHED TECHNIQUE
FOR INSULATING GLASS PRODUCTION



Super Clear Glass
超白玻璃

超白玻璃是由透明浮法玻璃，去除微量的雜色，降低玻璃中的鐵含量所製造出清澈透明的玻璃。
超白玻璃可再經由鋼化、夾膠、中空、鍍膜、熱彎等加工，除了可以廣泛應用於建築物的外牆以外，高度的潔淨感更適合使用於汽車車窗及室內，如鏡板玻璃、文物展示櫃、彩釉玻璃、相框玻璃、家具、桌板玻璃等加強原創及原色的顯現。
而現今全球石油短缺價格持續高漲，環保意識抬頭，大氣層溫室效應及減碳問題日趨嚴重，除節能玻璃外，利用太陽能源生電玻璃的運用也成為最重要最迫切的能源產業。超白玻璃的低鐵含量，使其具有比明板玻璃更優越的光學性能，及更高的可見光透過率，大大的提升太陽熱能透過率，科學家及科技產業莫不積極投入研發高轉換發電效率的光電玻璃，以拯救地球未來因石油資源枯竭對人類所產生的浩劫

Super Clear Glass is made up of clear float glass by reducing its green tint and iron content to achieve optimum clarity and vision. Super Clear Glass can be further processed, such as tempering, laminating, insulating, coating, bending and so on. In addition to widely used on the building facade, the high level of transparency is more suitable for car windows and the interior of the house, for example mirror, display
cabinet, ceramic silkscreen glass, picture frame, glass furniture and table tops.
Currently the global oil shortage and rising prices, the environmental awareness, the greenhouse effect and the problem of carbon emission reduction, other than energy saving glass, the application of photovoltaic glass products has become the most important and urgent priority
for energy industry. The low iron content enables Super Clear Glass possess better optical performance and higher visible light transmittance than ordinary clear glass, greatly enhances solar heat transmittance. Both scientists and the tech industry do their best to research and develop
photovoltaic glass with best efficiency, with the aim to save our planet from catastrophe due to oil resource depletion.



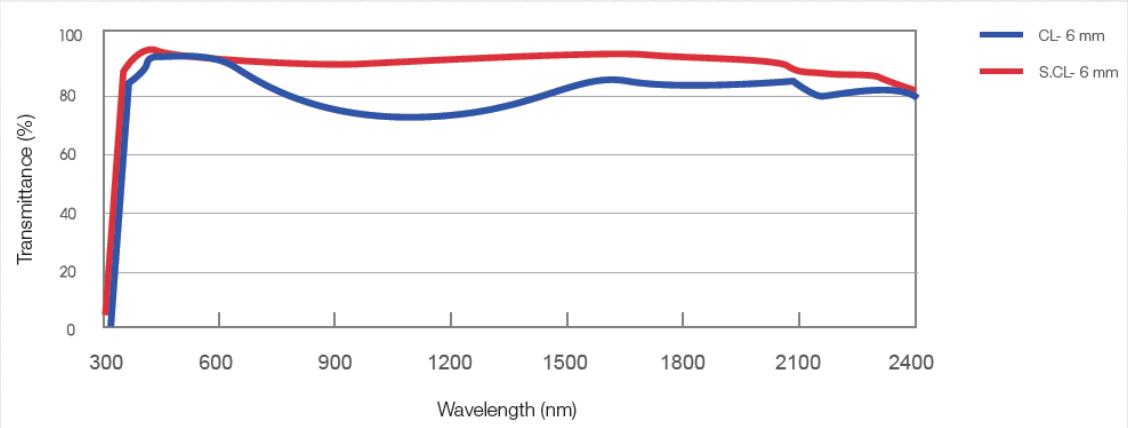
Super Clear Glass
超白玻璃

超白玻璃性能數據
TGI FLOAT GLASS OF SUPER CLEAN PERFORMANCE DATA

品名 Product Name	可视光 Visible Light		紫外线 透过率 UV Trans. (%)	太阳热能 Solar Heat							U 值 U-Value		遮蔽系数 Shading Coefficient
	透过率 Trans. (%)	室外 反射率 Outdoor Reflect. (%)		反射率 Reflect. (%)	吸收率 Absort. (%)			直接 透过率 Direct Trans. (%)	总透过率 Total Heat Trans. (%)	总热 透过量 Relative Heat Gain W/M^2	冬 夜 Winter Nightime W/M^{2}K	夏 日 Summer Daytime W/M^{2}K	
					吸收 Absort.	再辐射到室外 Rerad. to Outdoor	再辐射到室内 Rerad. to Indoor						
S.CL-2mm	91.5	8	87	8	1	1	0	91	91	704	5.95	5.36	1.05
S.CL-3.2mm	91	8	85	8	2	1	1	90	91	698	5.91	5.33	1.04
S.CL-4mm	91	8	84	8	3	2	1	89	90	692	5.87	5.29	1.03
S.CL-5mm	91	8	83	8	3	2	1	89	90	690	5.83	5.26	1.03
S.CL-6mm	91	8	82	8	4	3	1	88	89	688	5.79	5.23	1.03
S.CL-8mm	91	8	80	8	4	3	1	88	89	685	5.72	5.17	1.02
S.CL-10mm	90	8	78	7	6	4	2	87	89	682	5.65	5.11	1.02
S.CL-12mm	90	8	77	7	7	5	2	86	88	680	5.57	5.04	1.02
S.CL-15mm	90	8	76	7	8	5	3	85	88	674	5.47	4.95	1.01
S.CL-19mm	90	8	75	7	10	7	3	83	86	665	5.34	4.85	0.99

1 W/M^2 = 0.317 BTU / ft^{2}hr
1 W/M^{2}K = 0.176 BTU / ft^{2}hr°F

光譜比較圖



Photovoltaic Cover Glass 超白光伏玻璃

為符合現今節能與環保的世界潮流，開始朝向高科技玻璃產品邁進，其中一項為「太陽能光伏玻璃」(Photovoltaic Glass)。
超白光伏玻璃主要用於晶體矽太陽電池板的蓋板玻璃，它具有低含鐵量、高透光率、高平整度、高機械強度、低自爆率、抗風化、抗衝擊等優異特點。

To fulfill the current global trend towards energy-saving and environmental protection, It is striding into the f ield of hightechnology glass products, among which is the "Photovoltaic Glass". Photovoltaic Glass is mainly used as the cover glass of solar module and has the merits of low iron, high transmittance, small thickness difference, tempered easily, low self-cracking, efflorescence resistance, hailstones resistance and impact resistance.

※產品規格
■厚度：3.2mm & 4mm
■尺寸（原片）：最寬2200mm
■尺寸（鋼化 / 鍍）：定制尺寸
■標 準 尺 寸 ：
986mm×1634mm；
986mm×1644mm；
■花紋樣式：絨面 布紋

※產品性能參數
■含鐵量：≤ 120PPM
■透光率：≥ 91.5%

※Specification
■Thickness : 3.2mm & 4mm
■Size (Annealed) : Width Max.2200mm
■Size (Tempered/Coating) : Customized Sizes
■Standard Size : 986mm×1634mm; 986mm×1644mm
■Pattern : Prismatic/Mat (P/M) & Mat/Mat (M/M)

※Performance parameter
■Iron content: ≤ 120 PPM
■Transmittance: ≥ 91.5%