



Our History.

Innoglass is our name and our name has been the byword for innovative solutions in safety glass for both architecture and automotive functions since 2004. Our glass developments and products not only provide the highest level of safety and modern aesthetics to buildings, but are also eco-friendly. Our philosophy is – 'Do the right thing. Do the thing right' – so we strive to provide our clients with not just innovative products and cost savings, but also help reduce your carbon footprint with energy efficient, environmentally-conscious glass designs. Together with you, we can build better living and working spaces for tomorrow.

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Laminated Glass

What is Laminated Glass?

Laminated Glass is produced through the combination of two or more sheets of glass with one or more plastic interlayers in between each glass sheet. The most common interlayers are made of PolyVinyl Butyral (PVB). Laminated glass provides greater sturdiness than normal glass as it may crack upon impact but the protective interlayer will cause the glass fragments to adhere rather than fall and disperse freely to cause potential injuries. Laminated glass is also a flexible material, offering great variety in terms of design and installation. It provides durability, high performance and great multifunctional benefits while preserving the smooth, modern appearance of glass.





Why choose Innoglass Flat Laminated Glass?

Glass is an indispensable material in modern architecture. Our continuous development and improvements of our properties, processing technologies, as well as the technical, aesthetical and artistic applications of Innoglass Iaminated glass products, have transformed yesterday s impossible requirements into today s dependable strengths for contemporary design. Our experience in this area is vast. Innoglass is capable of laminating various kinds of glass, like float glass, tempered glass, low-iron glass, low-E glass, reflective glass, tinted glass. The interlayers that we provide also come in various colours, which enables our clients and designers to create unique palettes suited to any taste or requirement.



Advantage of Using Laminated Safety Glass.

Safety & Standards

Laminated glass does not shatter like ordinary glass. The tough, clear interlayer absorbs impact, resists penetration and remains intact even if broken, holding glass fragments in place and lowering the risk of injury. As global building standards increasingly specify stricter safety requirements, especially for overhead glazing where any breakage could mean a major hazard from falling glass, laminated glass provides a convenient, comprehensive solution.

Sound Reduction

Noise penetrates a building easiest through glass, but laminated glass is an excellent barrier to noise due to the visco-elastic properties of the PVB interlayer that provides a dampening effect on the transmission of sound, reducing unwanted noise.

Security

Laminated glass resists intrusion because the interlayer continues to safeguard the building even after the glass itself has been broken, buying time for replacement. Laminated glazing also cannot be cut from a single side, rendering ordinary glasssuffers useless as break-in tools.

Solar Energy Control

While natural light plays a vital part in architectural design, too much sunlight will cause heat-gain inside a building, leading to high energy costs due to the increase usage of air-conditioning. Laminated glass using tinted, reflective or Low-E glass can act as a solar diffuser to reduce heat gain, control glare and lower electrical expenditure.

UV Control

Ultraviolet light is the leading cause of the deterioration and fading of furnishings, pictures, and fabrics. As laminated glass generally comes installed with UV-absorbing additives that can screen out almost all damaging UV rays without affecting visibility and light for plant growth, it is ideal for use in household environments.

Design Versatility

Laminated glass is available in a wide variety of glass types, including annealed, tempered, heat-strengthened, tinted, decorative ceramic-coated or reflective glass. It also can be manufactured in a broad spectrum of colours and textures for stylish impact and dramatic visual effect.

Durability & Ease of Use

Laminated glass retains its colour and strength long after installation. Maintenance is also easy, as laminated glass can be easily cleaned with the wipe of a cloth.

Fire Retardancy

Laminated glass does not disintegrate as easily as ordinary annealed glass, which allows for greater protection against fire and provides a longer-lasting buffer against flames, allowing more time for detection, evacuation and extinguishing.

Installation

Laminated glass using annealed glass can be cut to any size required on site and can also be drilled or notched.



Tempered Glass

Innoglass use tempering furnace with force convection. It has advantage like less distortion, more efficient and better quality for special coated glass like Low-E and reflective glass. We always believe that Quality is worth going that extra mile for.

What is Tempered Glass?

Tempered glass is also known as toughened glass. The cut-tosize glass sheets are fed into a furnace until the sheets reach approximately 650°C. The glass is then moved into a quench where it is rapidly cooled by blasting both sides of the sheet with air. The rapid quenching induces compressive stresses to the glass surface, while leaving the centre remaining in tension. The additional stresses created with the glass by the heating and quenching increases its strength by four-to-five times that of annealed glass of an equal thickness, even though the physical characteristics remain unchanged. In addition to clear sheets, tempered glass is also offered in various tints, Low-E glass, hard-coat reflective



glass and temperable soft-coat reflective glass. In the event of breakage, the panel will fracture into relatively small harmless particles. Compared to annealed glass, tempered glass has greater resistance to thermal stress, with a temperature range of 70°C to 290°C. Due to its mechanical strength, it is ideal to create a frameless or 'transparent structure' concept in all glass assemblies such as shop fronts and curtain walls. Tempered glass is also suitable for use in doors, side panels, glass balustrades, shower screens, glass walled squash courts, etc. It can also be used in automotive and furniture applications.

Innoglass Tempered Glass

Tempered Glass by Innoglass is created using a state-of-the-art tempering furnace with force convection. This provides our tempered glass with advantages such as minimum distortion, higher efficiency and greater quality for special coated glass orders using Low-E and reflective glass. Quality is a valuable commodity in today's world. And Innoglass believes that Quality is worth going that extra mile for.

Heat Strengthen Glass

Heat strengthened glass is also known as half-tempered glass. Thus manufacturing process is similar to tempered glass. For heat strengthened glass. however, the glass sheet is guenched at a slower rate, over a longer period of time. This results in a glass sheet with lower compressive stress, increasing the strength to twice that of annealed glass of equal thickness, as well as a greater resistance to thermal stress. Compared to tempered glass, teat strengthened glass has less distortions due to the slower cooling process. When broken, heat strengthened glass normally breaks into large pieces. Typical applications of heat strengthened glass are for skylights, where it is laminated with a PVB interlayer which will retain the glass fragments and prevent excess glass debris falling down, which would be the case if tempered laminated glass was used.

Heat Soak Testing

Heat soaking is a destructive test in which the glass is heated up for several hours at 290°C (\pm 10°) to speed up the Alpha-to-Beta transformation of any nickel sulphide (NiS) present in the glass. This accelerated testing process reduces the likelihood of glass breakage by a factor of 20, or 5 per 1000 panes. Identifying NiS inclusion prior to onsite installation has distinctive cost, safety and security benefits. Heat Soak Testing is therefore strongly recommended for any application of tempered glass or where the consequence of breakage could result in injury and inconveniences.





Innoglass provides curved safety glass in both tempered and laminated glass. Curved safety glass is essentially a glass pane shaped into a segmented or smooth curve for aesthetic purposes. Over the past, developments in curved glass has been stimulated by creative research, technical developments, industrial specialization and design application. It is popular with architects for advancing design choices. Large curved glass surfaces are now quickly becoming an essential part of a building's structure, making close cooperation between developers, architects and glass suppliers essential to the success of any project.

To create a curved tempered glass sheet, the sheet must be heated, the curved and cool to the required shaped and finally toughened. Modern day curved glass is manufactured using movable rollers during the quenching phase, eliminating the need for expensive press moulds. Innoglass curved glass is created with a sophisticated computer system that allows each sheet to be precisely moulded to client specifications at a cost-effective price. Curved tempered glass can only be curved at a single point and at a constant radius.

Curved laminated glass is created using a stainless steel mould for each individual size and shape required. The glass sheet is then put onto the mould and heated, softening the glass to sag onto the mould by gravitational force. Once this is completed, the curved glass sheet is then laminated. Curved laminated glass offers less distortion in comparison to curved tempered glass and offers more variety in shapes, being able to be formed in multi-direction designs and at a non-constant radius, suitable for use in creating 3D profiles.

During the pass ten years curved glass has stimulated creativity, research, technical development and industrial specialization. Glass processors turn architects ideas into reality. Large curved glass surfaces are becoming an essential structural part of buildings, making close cooperation throughout the project essential. It would increase the aesthetic when a large curved glass instead of many segmented flat glass joining together to form a curvature.



C



According to Australian Standard AS/NZS 2343-1997						
Classification of Panel	Type of Weapon	Calibre	Ammunition	Range	Number of strikes	Panel Thickness (mm)
G0	9mm Hand- gun	9mm Pa- rabellum	8.0g FMJ	3m	3	14.55
G1	0.357 Mag- num Hand- gun	0.357 Mag- num	10.2g JSP	3m	3	18.15
G2	0.44 Magnum Handgun	0.44 magnum	15.6g SWC	3m	3	26.76
R1	5.56 Rifle	5.56mm x 45	M193 3.6g FMJ	10m	3	30.15
R2	7.62 Rifle	7.62mm x 51	Nato Stand- ard 9.3g FMJ	10m	3	38.35
Abbrevation : FMJ =Full Metal Jacket, JSP=Jacketed Soft Point, SWC=Semi Wadcutter						

Bullet Resistance Glass.

Bullet resistant glass is a laminated composite of asymmetrical glass-clad polycarbonates, specifically designed to provide protection against different levels of ballistic threat, from small 9mm handgun to NATO armor piercing rifles. Bullet resistant glass is manufactured at the minimum possible thickness required to stop bullets and prevent spillage on the opposite side of the impact to ensure that persons on the protected side of the glass will not be lacerated by broken glass. Bullet resistant glass is also manufactured to have an excellent residual vision after-attack, assisting in investigations. It can also be engineered to be of different weights, allowing for use in everyday automobiles to military armoured vehicles. Typical applications includes correctional facilities, psychiatric hospitals, government buildings, jewellery stores, retails storefront and other environments where maximum security is required.

At Innoglass, we create our bullet containment glass as a laminated composite of symmetrical glassclad polycarbonate or laminated polycarbonate, specifically designed for protection against prolonged physical attack and lethal ballistic threats. Innoglass also offers a blast-resistant glass grade, a laminated composite made up of toughened glass precisely engineered to optimize the strength of the glass to withstand explosive blasts.



Double Glazing.

Double glazing is also known as an insulated glass unit(IGU), consisting of two or more panes of glass, isolated by a desiccant-filled spacer and sealed with a sealant. The main function of double glazing is to improve comfort and reduced heating and cooling costs by reducing the external-internal flow of heat, depending on the climate. The insulation value (U-value) is dependent on the configuration, which includes criteria such as glass type, glass thickness and spacer width. Double glazing glass units incorporating solar control products such as Low-E, Solar Low-E and reflective glass can also significantly reduce solar heat gain, glare control, reduced air-conditioning costs, improved noise reduction, and increased security.

Shading Coefficient

The ratio of solar heat gain through a window to the solar heat gain through a single light of 3mm clear glass under the same set of conditions. Dimensionless and varying between 0 and 1, the smaller the number, the better the window is at stopping the entry of solar heat.

SHGC = Sun's direct transmission energy +

Re-radiated heat

Solar Heat Gain Coefficient(SHGC)

The fraction of incident solar radiation which enters a building as heat. It is based on the sum of the solar energy transmittance plus the inwardly flowing fraction of absorbed solar energy on all lites of the glazing(This measure equates to the Sun's direct transmittance energy plus the part of this energy absorbed by the glass and re-radiated inside). Dimensionless and varying between 0 and 1, the smaller the number, the better the glazing is at preventing solar gain. 3mm clear float has a SHGC of 0.86. It is preferred over the shading coefficient since it can be used for solar incidence angles other than normal to the glass surface. SHGC can also be calculated as 86% of the Shading Coefficient.

U-Value

The heat flow rate through a given construction is expressed in W/m²/°C. The lower the U-Value, the less heat is transmitted through the glazing material. Values given for summer calculated for outside air temperature at 32°C, outside air velocity at 2.8 m/s, and inside air temperature of 24°C, and a solar intensity of 783 W/m². Winter night time U-Values are calculated for outside air temperature at -18°C, outside air velocity at 5.5 m/s, and a solar intensity of 0 W/m2.

Insulation Comparison U-value W/m ²			
Single pane	5.60-6.20		
Single pane low-E	3.80-4.20		
Standard IGU	2.40-2.70		
Low-E IGU	1.60-2.10		
Low-E/Argon gas IGU	1.50-2.00		
Low-E/Argon gas/Triple Glaze	0.25-0.33		

Relative-Heat Gain (RHG)

The total amount of heat gain through a glazing system specified summer conditions, incorporating the U-Value and the Solar Heat Gain Coefficient. The conditions are 783 W/m² outdoor temperature of 32°C indoor temperature of 24°C and 2.8 m/s wind.

RHG = U_{summer} x (32-24) + SHGC x (783) Expressed in terms of W/m²



U-value vs. SHGC

Conduction, convection and radiation are measured by the U-value where direct transmittance energy from the Sun is measured by the SHGC. Why use both measures?

In general terms where buildings are artificially cooled or heated in any climate, glass with a lower U-value will reduce energy costs. However, for warm climates when we combine the SHGC and U-value into one total heat gain number RHG on an unshaded glazing, the SHGC which becomes more relevant. The Sun's direct heat (measured by SHGC) controls a much larger percentage of the total heat gain when compared to other heat flows (as measured by U-value). For warm climate unshaded windows, control of the Sun's direct energy with a glass that has a lower SHGC is the first important step in design.

As previously mentioned, a lower U-value will further assist in heat gain reduction and lower energy costs. Improving the U-value will further improve and lower the total heat gain impact on the building. By using glass with a lower U-value provides both benefit to daytime shaded windows and during warm nightime conditions. It is often the surroundings of the building including objects, the ground, other buildings etc which absorb heat and re-radiate it (long wave radiation) towards the window. These objects may continue to release this energy throughout the day and into the night. Energy use can thus be reduced through selection of glass with lower U-values. Preferred glazing solutions for warm climates are low SHGC glass with an integral low-E coating or low SHGC low-E coated glass combined in IGU's.

Acoustics

The acoustical performance of windows and doors is affected by:

- Glass size
- Glass thickness
- Airspace gap
- Presence of laminated products
- Framing members
- Gaskets, sealants, weather stripping
- Window design

Sound transmission class (STC) measured in decibels (dB) is the standard method for rating sound attenuation characteristics of glass products and window assemblies. The higher the STC rating, the higher the sound attenuation properties of the window.

Double glazing is also useful in regulating temperature. When air with excess water vapour come into contact with a colder surface, condensation will form on the surface (the temperature at which the condensation occurs is the 'dew point'). Double glazing can provide a thermal barrier between the inside and the outside, minimizing the occurrence of condensation, regulating temperature and preventing water damage to surrounding areas. Double glazing is widely used in applications such as curtain walls, windows and industrial units such as freezers and coolers

Acoustic Properties			
Baseline unit construction: STC Rating 28 3mm Glass / 6.5mm Airspace / 3mm Glass			
Property	Change in STC Rat- ing (dB)		
Increase air space thick- ness			
6.5mm to 13.0mm	+2dB		
13.0mm to 25.0mm	+3dB		
Change Glass Thickness	One pane	Two panes	
3mm to 6mm	+2dB	+4dB	
6mm to 12mm	+2dB	+5dB	
3mm to 2.2mm	-2dB	-3dB	
Mismatch glass thick- ness increased from 2:1 to 3:1	+1dB		
PVB laminate addition of 0.76mm	+4dB		
Increase PVB Thickness from 0.76 to 1.52mm	+2dB		
Replace air with Argon gas	no change		

glare reduction

Reducing annoying glare can be achieved through controlling the amount of daylight that passes through the glass. Though it should also be noted that glare is subject to individual perception. Some situations may require other methods to control glare such as external barriers, blinds, ceramic fritted patterns or matrixes on the glass itself or removing the cause of the glare.

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Product	Glass thickness (mm)	Width x Height (mm)	Remarks	
	65	Max 980 x 1500	Standard Colour : Milky White	
Duit of an Class	0.5	Min 210 x 297		
Privacy Glass	10.5/ 12.5	Max 1500 x 3000		
		Min 210 x 297		

	Mada	Tech Data	
Environmental	Storage & Operation	Mode	-20°C to 60 °C
	On eration Made	ON	Transparent
	Operation Mode	OFF	Opaque
Optical Properties	Davallal light Tus page itter as	ON	75±3%
	Parallel light transmittance	OFF	10±1%
	Cuplight Transmittance	ON	80±1%
	Sunight transmittance	OFF	60±1%
	llana	ON	2±1%
	Haze	OFF	80±3%
	UV blocking		More Than 98%
Electrical Properties	Operating Voltage		110VAC
	Frequency Range		50 or 60 Hz
	Power Consumption		7 W/m ² (for 110V)
	Switching Speed		Tr. 100ms Td. 400ms



Testing Parameters				
No.	Test Item Test Condition		Result	
1	Switching	On (1 sec) ↔ Off (1 sec), 220 VAC. 3 Million Times	ок	
2	High Temperature	70º / 14 Days	OK	
3	High Temperature/ High Humid	50° / 95%RH 14 Days	ОК	
4	Low Temperature	-20º / 14 Days	OK	
5	Heat Cycle	-20° ↔ 70° (2 Hrs/Cycle) / 200 Cycles	ОК	
6	Weathering	KS L 2004	Passed	
7	Heat Resistance	KS L 2004	Passed	
8	Freefall Sphere	KS L 2004	Passed	
9	Shot Bag	KS L 2004	Passed	

Privacy Glass.

The point of windows is to allow you to see as well as be seen. But what if you want to be shielded from prying eyes? Innoglass privacy glasses offers this optional, creating a private space at the flick of the switch. Our Polymer Assembled Liquid Crystal (PA-LC) technology allows clients to transform an ordinary, normal-looking pane of clear glass into an opaque, translucent window, ensuring optimal vision control and putting the choice of your privacy in your hands. All it takes is a simple electrical switch to activate the transparent polymers embedded into the glass to ensure that your privacy is respected.

Benefits of using Innoglass Privacy Glass

- Improves comfort and privacy
- Ease of use
- Protects furniture, appliances and valuable items from UV damage
- Operates on ordinary AC voltages
- Requires very little power (< 7.0 Watts per square metre)





Suitable for use in:

- Architectural windows
- Skylights
- Interior partitions
- Glass-covered products





Privacy Glass as a rear projection screen

The window can be a innovative and dynamic advertising board. The interior can be open during working hours by turning the window transparent. And the window can be a dynamic advertising board by turning the window off When this switching function can be operated automatically by timer or sensor.

Benefits

ON

- High resolution
- Large viewing angle
- Projection equipment is hidden behind the screen (rear projection)
- High acoustic performance : avoid noise from the projector side
- Eyecatcher screen : transparency at will (ON)
- Safety and security : laminated glass
- Easy to clean
- Cost-effectiveness relative to other display media

Application

- Front shop
- Façade
- Conference Rooms
- Control Rooms
- TV studio
- Exhibitions
- Showrooms
- Boardrooms



Ceramic Frit Glass.

Ceramic Fritted Glass is produced to meet the architectural and industrial standards and demands. Produced by screening one layer of ceramic enamel over flat glass, and treated by high temperatures, the ceramic will then fuse onto the glass surface firmly. This ceramic is chemical resistance, scratch resistance, high opacity and hardly fade.

A variety of colours and patterns are available to create a distinctive visual effect of the building. Designer normally have a customize design and colours of the pattern as an identity of the building. The ceramic enamel absorbs and reflects solar energy and cleans easily.



InnoShield.

Innoshield, a special polymeric resin, provides the protection. It reacts chemically with the glass at a molecular level to modify its surface properties. Innoshield follows the contours of the glass and is less than a micron thick. It is also important to note that Innoshield will not bond to any surface other than vitreous. It washes off other surfaces with normal cleaning methods, such as soap and warm water.

Unprotected, high-maintenance glass is now converted into Innoshield 'Nonstick' glass. The surface of Innoshield glass is totally inert when cured. The Innoshield surface therefore acts as a barrier against the bonding of contaminants, and is more resistant than ordinary glass against the attack of moisture and alkalinity. The result is greater ease of cleaning and a durable resistance to staining. Innoshield glass also effectively resist microbial adhesion for a higher hygiene.





Characteristic of InnoShield

Hydrophobic glass (water repelling) has a higher contact angle compared to unprotected glass. The contact angle of greater than 90° indicates hydrophobicity. InnoShield is a polymeric resin that will make the surface of the glass more hydrophobic. Typically, the Contact angle on the surface of InnoShield Glass can be measured at 104°

Resist to microbial

An experience was devised to study attachment and desorption of a strain of Staphylococcus Aureus, a common and strongly adhering bacterium. In conclusion the results clearly show that InnoShield firstly impeded adherence of bacteria and secondly encouraged desorption by washing.









Eco-friendly solution

Excellent Chemical Resistance

Anti microbial

 Bacillus, Aeruginosa,

 Staphylococcus

 Aureus, MRSA

 Performance test result

 / Start
 24 hour

 1 3.6 × 10⁵
 <10¹

 5.5 × 10⁵
 <10¹

 2.7 × 10⁴
 0

 6.3 × 10⁵
 50

 Test Organization

 Foundation of Japan Food

 Research Center

Excellent Weathering Resistance

Heat Resistance Fire burn up to 600 C

Performance test result No correspond Test Organization Aichi prefecture industrial technology laboratory

Easy cleaning

Form of hydrophilic membrane for easy cleaning Performance test result Use wet cloth and easy wipe without detergent

Anti Fungus

Inorganic salt nutrient 1 over 100 density test Performance test result Cannot recognize the growth of fungus

Test Organization Foundation of Japan Food Research Center



Institute Over 9H (Mohr's hardness 4.5) Test Organization Aichi prefecture Industrial Research Institute

Performance

Features



What is innoShield -

An Eco-friendly Ceramic Coating with it's main composition of SiO₂ (silicone dioxide) and Al₂O₃ (aluminium oxide), it is 100% inorganic and does not produces VOC (volatile organic compounds). Innoshield Plus forms a hydrophilic surface while hydrophilic molecules attract water molecules when they blend together; transforming a water droplet into a thin sheeting layer on top of the coating, which enables an oil spot or dirt to rinse away. As for exterior use, rainwater will spread on the coating surfaces and leave no water streak, which is also an excellent defogger. The coated surface is moist most time and thereby making the coated surface anti-static.

Innoshield plus coating also enrich with TiO₂ (Titanium Dioxide). The irradiation of TiO2 with UV light produces the hydroxyl radical, hydrogen peroxide and superoxide anions. These reactive oxygen species can damage the structure and disrupt the biochemistry of bacteria and fungus.



Easy Cleaning

Inorganic coating has better resistance to adhere dust or stain. Our environment contain abundance of organic substance. Once the surface of the coating are adhere with organic stain, we can use water without any detergent to clean or wipe of easily. Innoshield will be hydrophilic and form a water membrane and penetrate underneath of the organic stain and lift it off, like a peeling effect. Then we can use running water or a damp cloth to clean it.

Reliable and Durable Coating

Since Innoshield Plus is an inorganic coating, thus it has excellent resistance properties against acid/alkaline and organic solvent. Further, most organic paints have hardness of less than 3H whilst Innoshield Plus has a hardness of over 9H, which is of a high scratch resistance level. The bonding strength of Si-O and Si-OH in the coating, required energy higher than Infrared to break down, thus it is more durable and suitable for outdoor purposes. The ceramic particle in the coating also facilitates to withstand a temperature up to 600°C making inorganic paints outlast organic paints by decades!

Having design versatility and never compromise safety.

Lamiart is a decorative laminated glass brings revolutionary design expression in interior of architectural glass, creating visual texture, manipulating light and visual effects. Lamiart consist of a special decorative ornament Fitted between 2 sheet of glass or polycarbonate panel permanently bonded by a special adhesive interlayer. The lamiart exhibits the characteristics of a safety glass and enhance security. The decorative ornament are a wide variety of items such as pattern PET film, shoji paper, wire mesh, sheet metal, dried leaves, dried glass, fabrics, fibers and etc.

Please visit www.innoglass.com. my for the complete collections of all kind of decorative ornaments and colours.

Lamiart"



Wrinkle wire-mesh



Wrinkle Fabrics



Dried lalang



Fibre optics



Iridescent nets



Dried fern



Pattern fiber



Green wires



Green matrix



Nyatoh Ribbon



Dried flower

Sepia linen



Dried leaves



Pose on fibre-optics



Bamboo leaf linen



Gold checkered fabrics



Automotive Glass.

Innoglass is one of the leader in Malaysia producing automotive glass for buses and trucks. The contemporary automotive design which has a modern structure characterized by glass. We engineered and produce windscreen that meet the stringent safety requirement and quality. We also customize ceramic pattern and colour-tinted for OEM coach manufacturers.





INOLED

Consisting of two sheets of glass with LEDs encapsulated between, InnoLED is a transparent Innoglass product that shines brightly. Simple and spectacular, the LEDs are connected via an invisible circuit board connected to an external power source. Produced using laminated glass, InnoLED can be used for decorative indoor applications or for external use as a curtain wall or a skylight. It also comes with optional modules, including a flash or remote controller used to manage and manipulate the visualisation.



Innosolar



High Efficiency BIPV glass/glass solar module

Innosolar panels are Innoglass' semi-trasnsparent solar modules, acting as photovoltaic plates to generate solar energy. Created by sandwiching efficient solar cells between sheets of low-iron tempered glass using PVB, Innosolar panels can be used to harness the power of the sun during daylight, as well as act as cover for sun shade and the elements. Combining profitable, environmentally-friendly energy production with attractive design, Innosolar replaces conventional façade materials, eventually paying for itself by helping clients save energy bill costs.

Innosolar panels are customizable, giving architects and designers a choice between light transmission and power intensity by varying the distance and number of solar cells per Innosolar panel. The transparent PVB layer also makes is a sturdy, safe glass that also reduces noise and increase security. There are very few limits to the application of Innoglass, which has been used from overhead glazing in external areas to forming the semi-transparent glass façade of a building

More cells per m² increased the output generated and improve the solar protection





Low energy - High transparency

High energy Low transparency



GLASS

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