



S *o l u c e*
specialty glass

S o l u c e s p e c i a l t y g l a s s

Soluce Corp offers a complete line of specialty glass products, including transparent heat blocking glass(energy saving glass), burglar resistant glass, hurricane resistant glass, bullet resistant glass, fire resistant glass, heated glass, switchable glass, translucent rear projection screen glass and transparent holographic projection screen glass. Soluce Corp has the product and solution to meet all of your design challenges. Our products meet specifications for a wide variety of applications.

*Window Glazing for energy saving

*Transportation

*Skylight

*Laminated Glass for structural glass wall systems

*Laminated Glass for blast mitigation

*Insulated/Laminated Glass for fire protective glazing with additional radiant heat protection

*Screen for custom home theater

*Information Display



Transparent Heat Blocking Glass

Soluçe-HB

The cutting edge technology turns normal glass into a heat blocking glass while maintaining high transparency. It intrinsically reduces the transmission of infra-red ray, so that it **blocks incoming solar heat**. It also **shields intense ultra-violet ray** in summer and decreases the tendency to decolorize the interior goods in living space, and **reduces noise** from outside while it provides **safety** function with **laminated structure**.

Application :

Windows, Skylight, Roof windows, Sunroofs, and Transportation

Heat Blocking Glass Laminates

Soluçe-HB	Max. Sizes (mm)	Shading Coefficient	Transmission (%)		
			UV	Visible	Infra-red
HB70	2,400 x 4,000	0.61 ~ 0.71	0	70 ~ 75	18 ~ 39
HB60	2,400 x 4,000	0.52 ~ 0.62	0	60 ~ 65	15 ~ 25
HB50	2,400 x 4,000	0.43 ~ 0.54	0	50 ~ 55	12 ~ 21
HB40	2,400 x 4,000	0.35 ~ 0.46	0	40 ~ 45	6 ~ 9
HB30	2,400 x 4,000	0.29 ~ 0.38	0	30 ~ 35	3 ~ 5

Available in virtually any custom architectural make-up: insulated, tinted, and more.
Standard thickness is 7 mm.



Transparent Heat Blocking Glass

UV Transmission: 0%

Visible Transmission: 72%

IR Transmission: 18%

Shading Coefficient 0.62



Low-E glass (KCC product)

UV Transmission: 44%

Visible Transmission: 80%

IR Transmission: 64%

Shading Coefficient 0.86

Impact Resistant Glass

Soluce-BR / Soluce-HR / Soluce-HR+

Soluce Corp provides a range of laminated glass products for **burglary** and **hurricane resistance**. Soluce-BR, Soluce-HR and Soluce-HR+ products are high performance glazing products that uses heat-strengthened glass (or tempered glass), special polymer panes, and special adhesives for prolonged physical impact resistance and hurricane resistance.

Burglar Resistant Glass Laminates

Soluce-BR	Max. Sizes (mm)	Thickness (mm)	Weight (Kg/sq. ft.)	Visible Transmission (%)	Shading Coefficient
Level 1	1,200 x 2,400	13 ~ 15	2.3 ~ 3.0	80 ~ 85	0.70 ~ 0.79
Level 2	1,200 x 2,400	20 ~ 22	3.7 ~ 4.4	80 ~ 85	0.60 ~ 0.69
Level 3	1,200 x 2,400	25 ~ 26	4.5 ~ 5.2	75 ~ 80	0.50 ~ 0.59

Hurricane Resistant Glass Laminates

Soluce-HR	Max. Sizes (mm)	Thickness (mm)	Weight (Kg/sq. ft.)	Protection Level
Level 1	2,400 x 4,000	13.0 ~ 13.5	2.7 ~ 2.8	ANSI Z97.1-1984 National Safety Glazing Standard
Level 2	2,400 x 4,000	14.0 ~ 14.5	2.8 ~ 2.9	ANSI Z97.1-1984 National Safety Glazing Standard
Level 3	2,400 x 4,000	14.5 ~ 15.0	2.9 ~ 3.0	ANSI Z97.1-1984 National Safety Glazing Standard

Hurricane Resistant Plus Heat Blocking Glass Laminates

Soluce-HR+	Max. Sizes (mm)	Shading Coefficient	Transmission (%)		
			UV	Visible	Infra-red
HR+70	2,400 x 4,000	0.61 ~ 0.71	0	70 ~ 75	18 ~ 39
HR+60	2,400 x 4,000	0.52 ~ 0.62	0	60 ~ 65	15 ~ 25
HR+50	2,400 x 4,000	0.43 ~ 0.54	0	50 ~ 55	12 ~ 21
HR+40	2,400 x 4,000	0.35 ~ 0.46	0	40 ~ 45	6 ~ 9
HR+30	2,400 x 4,000	0.29 ~ 0.38	0	30 ~ 35	3 ~ 5

*All hurricane resistant products must be used in combination with a suitable glazing system to be considered a hurricane-resistant window.

*Maximum producible size does not imply that the laminate will pass hurricane testing at this size. Unit size maximum is 65 square feet for heat-treated glass and 50 square feet for annealed glass.

Bullet Resistant Glass

Soluce-BL

Soluce Corp provides Soluce-BL, a **bullet resistant** product for protection against a wide range of ballistic threat levels. Glass-Clad Plastics products combine the durability and abrasion resistance of glass on the attack side and impact resistance of special polymer panes to the witness side.

Glass-Clad Plastics Laminates

Soluce-BLGC	Max. Size (mm)	Thickness (mm)	Weight (Kg/sq. ft.)	Protection Level
Level 1	1,200 x 2,400	19 ~ 21	3.0 ~ 4.5	9mm Full Metal Copper Jacket with Lead Core
Level 2	1,200 x 2,400	26 ~ 28	4.0 ~ 5.5	0.357 Magnum Jacketed Lead Soft Point
Level 3	1,200 x 2,400	36 ~ 38	6.0 ~ 7.5	0.44 Magnum Lead Semi-Wadcutter Gas Checked
Level 4	1,200 x 2,400	37 ~ 39	6.0 ~ 8.0	0.3 Caliber Rifle lead Core Soft Point
Level 5	1,200 x 2,400	43 ~ 45	7.0 ~ 8.5	7.62 mm Rifle Lead Core Full Meal Copper Jacket, Military Ball One(1) Shot
Level 8	1,200 x 2,400	64 ~ 66	11.0 ~ 12.5	7.62 mm Rifle Lead Core Full Meal Copper Jacket, Military Ball five(5) Shots

Fire Resistant Glass

Soluce-FR

Soluce-FR is a **fire resistive** glass with **radiant heat blocking** performance. Soluce-FR products have been tested to the stringent wall standard and therefore are considered a transparent wall. All products provide additional features including **UV blocking**, **noise reduction**, and **impact resistance** while maintaining high transparency.

Proper installation methods and fire-rated frames are mandated by UL for all Soluce-FR products. For general glazing installation guidelines, refer to the Glass Association of North America (GANA) Glazing manual 2004 or latest edition.

Soluce-FR	Max. Sizes (mm)	Thickness (mm)	Weight (Kg/sq. ft.)	Light Transmission (%)	Remarks
FR-45 min.	2,000 x 3,000	18 ~ 20	3.2 ~ 3.7	85 ~ 90	radiant heat block
FR-60 min.	2,000 x 3,000	24 ~ 28	4.2 ~ 5.0	85 ~ 90	radiant heat block
FR-90 min.	2,000 x 3,000	30 ~ 36	4.8 ~ 6.2	85 ~ 90	radiant heat block
FR-120 min.	2,000 x 3,000	36 ~ 42	5.5 ~ 6.9	85 ~ 90	radiant heat block
FRN-30 min.	2,000 x 3,000	6 ~ 10	1.5 ~ 2.5	85 ~ 90	Non-heat blocking
FRN-60 min.	2,000 x 3,000	15 ~ 18	3.7 ~ 4.5	85 ~ 90	Non-heat blocking

Heated Glass

Soluce-HG

Soluce-HG is a **heated glass** which radiates warmth with adjustable temperature control. An architectural window unit with Soluce heated glass will **remain free of condensation** even in 100% humidity. Plus, it will contribute warmth and comfort to the room, rather than steal them.

In order to manufacture heated glass, Soluce uses an ordinary pane of float glass with an invisible fluoride doped tin oxide coating during the fabrication process. Two buss bars are attached to the coating on glass pane.

When the glass is turned on, an electrical current travels from one buss bar to the other across the fluoride doped tin oxide coating. Electrical resistance results in heat energy, which radiates from the glass. Since the electrical resistance is uniform across the entire glass surface, so is the glass temperature.

Soluce-HG	Max. Sizes (mm)	Thickness (mm)	Weight (Kg/sq. ft.)	Light Transmission (%)	Remarks
HG1	2,000 x 3,000	3.2 ~ 6.0	0.8 ~ 1.5	70 ~ 90	Single Pane
HG2	2,000 x 3,000	6.2 ~ 36.0	1.5 ~ 6.2	70 ~ 90	Laminated
HG3	2,000 x 3,000	12.2 ~ 42.0	1.6 ~ 6.2	70 ~ 90	insulated

Switchable Glass

Soluce-3S

Soluce-3S glass can be used as both a window and a image screen. As a simple window, 3S glass allows users to control the light transmittance, thus helping create more comfortable and pleasant mood in a room. This electrically switchable smart glass also enables viewers to enjoy the images from behind the glass.

3S glass can be switched the transparency from translucent state to transparent state.

3S glass can be used in retail stores, window displays, trade shows, restaurants, airports, banks and other high traffic areas.

Soluce-3S	Max. Sizes (mm)	Thickness (mm)	Weight (Kg/sq. ft.)	Light Transmission (%)	Appearance
3S	2,500 x 980	3.2 ~ 6.0	1.5 ~ 3.0	20 to 70	Milky white

Translucent Rear Projection Screen Glass

Soluce-R

This translucent rear-projection screen glass is a **high-contrast** diffusing screen with a **super wide viewing angle** that is made of glass or special polymer panes optionally. Soluce-R differs from conventional rear-projection screens in that:

Soluce-R screen glass products consist of glass and are thus a lot more durable. The surface can be written on - even permanent markers do not cause any lasting damage. Light diffusing layer laminated between glass panes transmits and diffuses the incident light at a translucent state. It performs high-contrast, super wide viewing angle, and sharp picture. Due to the laminated glass, breakage do not produce any problems

Color of the screen: dark grey and translucent, or white and translucent optionally

Standard sizes are 50", 60", 75", 83" und 100" in 16:9 format.

Soluce-R (16:9)	Glass Dimensions (mm)	Weight (kg)
50" glass screen	1,110 x 630	15 ~ 19
60" glass screen	1,340 x 750	22 ~ 27
75" glass screen	1,650 x 940	33 ~ 41
83" glass screen	1,840 x 1,040	42 ~ 50
100" glass screen	2,200 x 1,240	58 ~ 72

Any size that does not exceed 2.4 x 4 m can be produced in float glass according to customer preference. Soluce-R screens up to a size of 1.24 m x 2.2 m will be available in special plastic optionally.

Examples of recommended projector power for Soluce-R:

Picture size	ANSI lumen*
50"	1,000 ~ 1,500
75"	1,500 ~ 2,800
100"	2,500 ~ 4,000



[*] The indications can only be approximate values.

The brighter the ambient light is, the greater the illumination of the projector has to be.

For installation free-suspension (up to 60") or stainless steel frames (75", 83" and 100") can be used.

Horizontal visibility angle: almost 180°

Peak gain: 1.3 ~ 3.6

Resolution: only depends on the projector

Transparent Holographic Projection Screen Glass

Soluce-H

This holographic projection screen glass has advantages in that it has **brilliant colors**, **super wide viewing angle** and **sharp picture** on transparent material.

Standard sizes are 50", 60", 75", 83" und 100" in 16:9 format.

Soluce-H (16:9)	Glass Dimensions (mm)	Weight (kg)
50" glass screen	1,110 x 630	15 ~ 19
60" glass screen	1,340 x 750	22 ~ 27
75" glass screen	1,650 x 940	33 ~ 41
83" glass screen	1,840 x 1,040	42 ~ 50
100" glass screen	2,200 x 1,240	58 ~ 72

Any size that does not exceed 2.4 x 4 m can be produced in float glass according to customer preference. Soluce-H screens up to a size of 1.24 m x 2.2 m will be available in special polymer panes optionally.

Color of the screen: white transparent or dark grey optionally

Examples of recommended projector power for Soluce-H:

Picture size	ANSI lumen*
50"	2,000 ~ 2,500
75"	3,500 ~ 4,000
100"	5,000 ~ 10,000



[*] The indications can only be approximate values.

The brighter the ambient light is, the greater the illumination of the projector has to be.

Technical data

Horizontal visibility angle:	almost 180°
Vertical visibility angle:	almost 180°
Peak gain:	3.8
Resolution:	only depends on projector
Available sizes:	any size up to 100" in 4:3 format or 120" in 16:9 format

For installation free-suspension (up to 60") or stainless steel frames (75", 83" and 100") can be used.

Special projection geometries have to be considered

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