

Complete Guidance of Custom Architectural Glass (2022)



There are so many types of architectural glass nowadays. Most of us might not even have heard of them before. But the architectural glass world is amazing and full of fantasy. Let's explore the construction glass world here with [Shenzhen Dragon Glass](#)!

1, Float Glass

Float glass is also called **annealed glass**, **flat glass**, etc. The process of float glass production is completed in a tin bath within protective gas. The molten glass flows continuously from the pool kiln and floats on the surface of the dense tin liquid. Under the action of gravity and surface tension, the glass liquid spreads and spreads on the tin liquid surface and forms a smooth surface. During the transition of glass, it is under the annealed process and continues cooling down to room temperature.

Clear float glass is most commonly used. Others such as ultra clear(low iron), tinted glass, reflective coated glass are also available.

Applications of float glass: glass doors and windows, railings, partition walls, glass office, glass shopfront, etc. Providing wind protection and heat preservation.

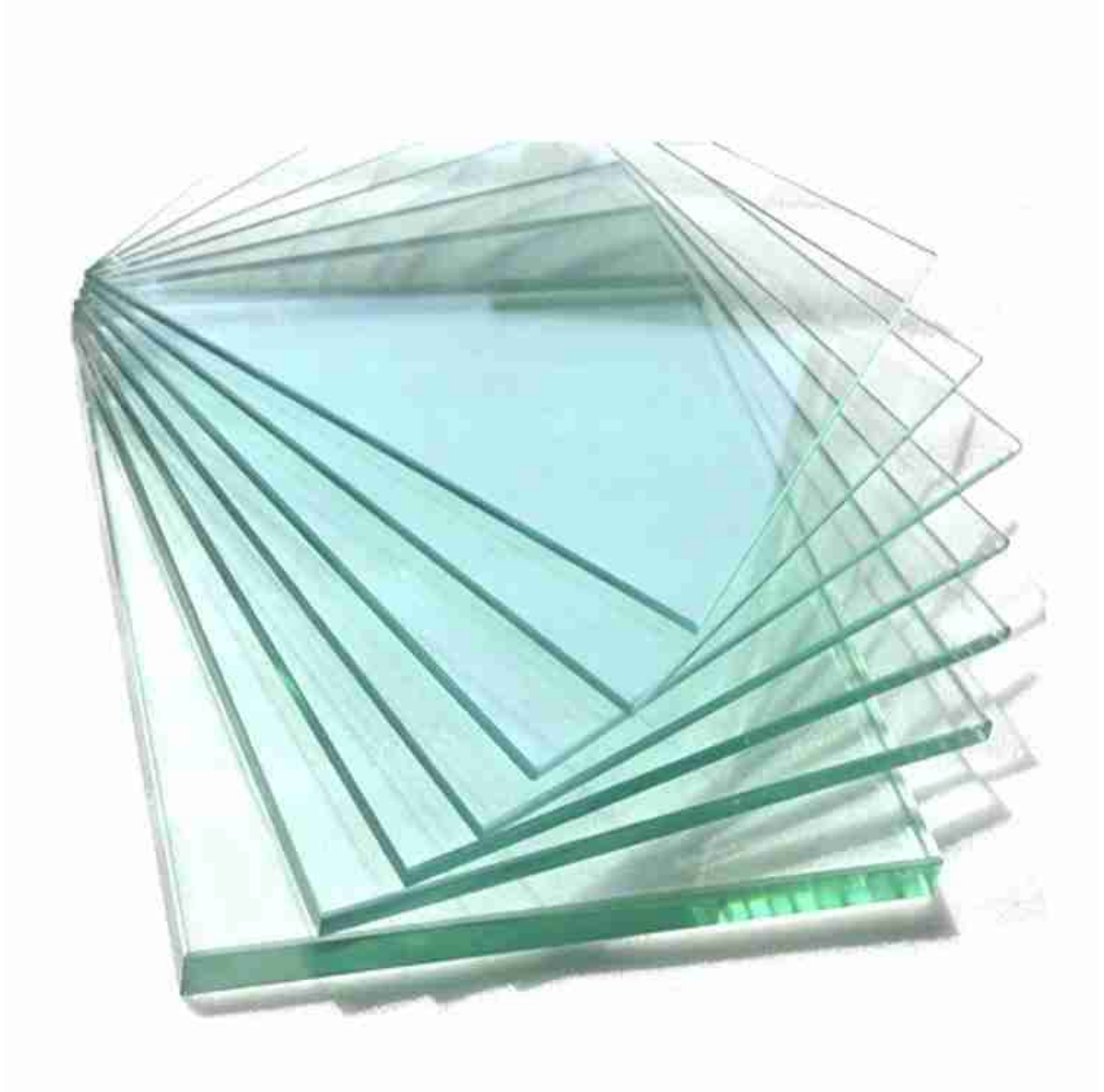
Good quality float glass has no bubbles no chips no scratches with a super smooth surface.

We offer super high quality float glass for sale:

The thickness of float glass: 1.8~25mm.

Color of float glass: low iron, clear, grey, blue, green, bronze, pink, etc.

Size: 2140*3300, 2140*3660, 2440*3300, 2440*3660, etc customized glass size available too.



2, Tempered glass

Tempered glass is also called toughened glass, tampered glass in different areas or different countries. It is produced by heating the glass to a temperature around 650 degrees, and then cooling down the glass rapidly by a strong wind jet to form compression stress on the glass surface whereas the interior is still in tension stat. It has good mechanical properties and high thermal resistance.

Tempered glass panels have **5 times higher strength** than normal

annealed glass panels. It can withstand a very high impact without breaking. Even if it is broken due to extremely high impact, the whole piece of glass is broken into small obtuse angle small particles, which will not harm humans, so it is also called safety glass.

[REDACTED]. The glass needs to be cut to size before tempering.

[Tempered float glass](#) panels are widely used as glass doors, architectural glass curtain walls, escalator glass fences, glass display cabinets, glass railing, [glass pool fencing](#), glass windows, etc.

If you are seeking where to buy tempered glass, contact us for the best tempered glass price here!

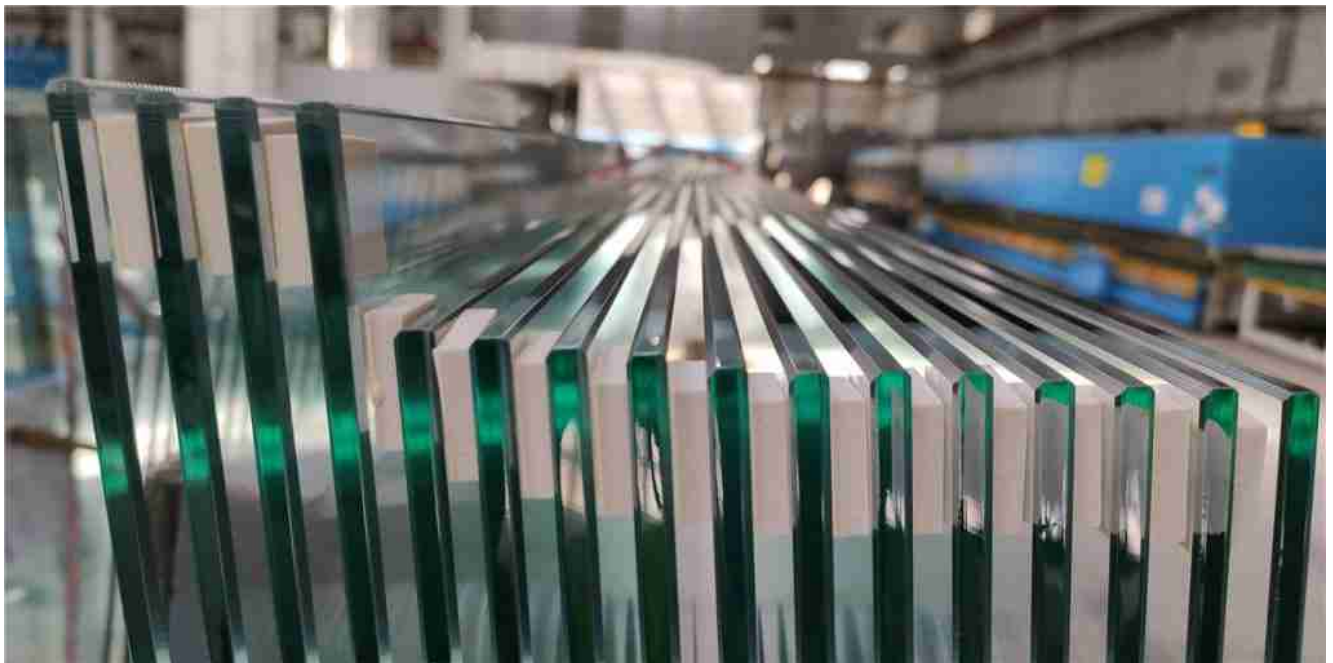


Custom tempered glass

3, Heat strengthened glass (Half tempered glass)

Heat strengthened glass is also called semi-tempered glass or half tempered glass, it is produced

After float glass is cut to custom sizes, it will be edged and drilled and later transferred to a tempering machine, by heating to around 700 degrees and later cool down rapidly by the strong wind jet. The difference between heat strengthened glass production vs tempered glass production is that the cooling down speed of heat strengthened glass is much slower than that of tempered glass. Therefore the heat strengthened glass is only 2 times strength higher than normal annealed glass. But the advantage of heat strengthened glass is that the surface of it is much flatter and more spotless than tempered glass. Half tempered glass is widely used where less strength & better flatness is required such as laminated curtain wall, low rise windows, etc. The semi-tempered glass



Cut to size heat strengthened glass

4, Hot bending glass



The original piece of glass is heated in a hot bending furnace to the glass softening point and later cools down slowly to room temperature. During the cooling process, it will form a specific shape according to the mold by its weight.

Two pieces of hot bending glass can be further compounded into a hot bending laminated glass.

Application of hot bending glass: Architectural arc curtain walls, doors, and windows glass, artistic table tops, etc.

Thickness: 3mm~15mm, etc.

5, Frosted glass:

There are generally **two types of frosted glass**.

Sandblasted glass

Sandblasted glass is also called sandblasting glass, it is using a strong wind jet to blow sand or other metal materials on the surface of the glass to form certain

patterns, which can have an obscure glass effect. Sandblasted glass is widely used as partition glass walls, windows, shower rooms to achieve privacy functions.

Before the production of sandblasted glass, we can adhere to some stripes on the glass to form different shapes, patterns of the sandblasting glass. Later transfer the glass to the sandblasting machine to form different sandblasted glass designs! Here are pictures for reference:

Acid etched glass

Acid-etched glass is the other type of frosted glass, it is produced by using chemical material such as Hydrofluoric acid to make the glass surface rough and form an obscure effect. Mostly acid etched glass is used in glass offices, glass partition walls, shower room glass, etc where privacy is required.

Advantages:

- 1, compared to sandblasted glass, acid etched glass has a smoother surface which can provide soft-touch feelings and no fingerprint.
- 2, Multiple patterns are available for decorations.
- 3, easy to clean.



Acid etched glass provides elegant designs and good touching feelings.

6, Laminated glass

Laminated glass is made by combining two or more pieces of glass “sandwiched” with pvb or sgp or eva interlayer, under high temperature(>130℃)& high pressure in an autoclave processed for over 2~6 hours and later form a permanent combination between the glass and the interlayer materials. Laminated glass has a higher strength than a single tempered glass panel. Even if the glass breaks, the broken fragments will still adhere to the pvb or sgp or eva interlayer, completely no harm to human beings. Moreover, laminated glass has an excellent soundproof function. Which makes it popular as an application for crowded places.

Applications of laminated glass: glass roofs, glass curtain walls, glass skylights, glass shopfronts, glass floors, glass railings, and other areas.



Digital printed glass patterns laminated glass

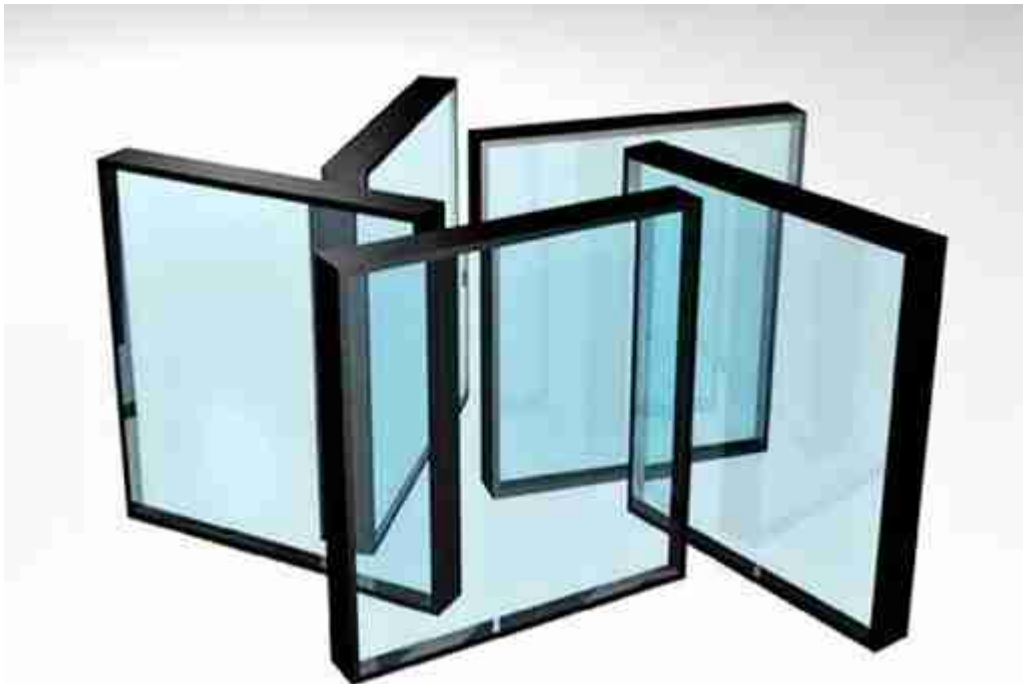
7, Insulated glass

Insulated glass is also called double glazed glass, it is composed of two or more layers of glass panels separated by an aluminum spacer and sealed with butyl sealant and later structural sealant. Insulated glass is used where good thermal performance and soundproofing functions are required as necessary. Sometimes argon gas will be adopted to enhance the heat & sound isolation performance.

Low-e coating insulated glass can have an [REDACTED]. In some cold areas or countries, the triple insulated low-e glass will be a good choice as the U-value will be lower than 0.6 W/m²K.

Other types of insulated glass such as ceramic frit insulated glass, digital printed insulated glass, PDLC insulated glass, solar reflective insulated glass, etc are all available.

Insulated glass is widely used as curtain walls, windows, doors, partitions, glass walls, etc.



Custom insulated glass with super high performance.

8, Ceramic frit glass

Ceramic frit glass is also called **silk screen printed glass**. It is produced by printing frit on the glass and later heated until the frit melts so that the frit layer and glass are firmly combined. It has good chemical stability and decoration effect and is suitable for exterior wall decoration of buildings.



Ceramic frit glass with gradient color designs

9, Digital printed glass

Digital printed glass technology uses a digital printing method to print inorganic high-temperature ink directly on the glass. After tempering, it has unparalleled acid and alkali resistance, corrosion resistance, and weather resistance.

Digital printed glass features:

Easy to implement

Any digital printed patterns, digital printed glass designs, and colors are accurately printed.

Durability and precision

The ink melts into the glass and has super great scratch resistance, acid resistance, UV resistance and weather resistance.

Brand new media for artistic expression

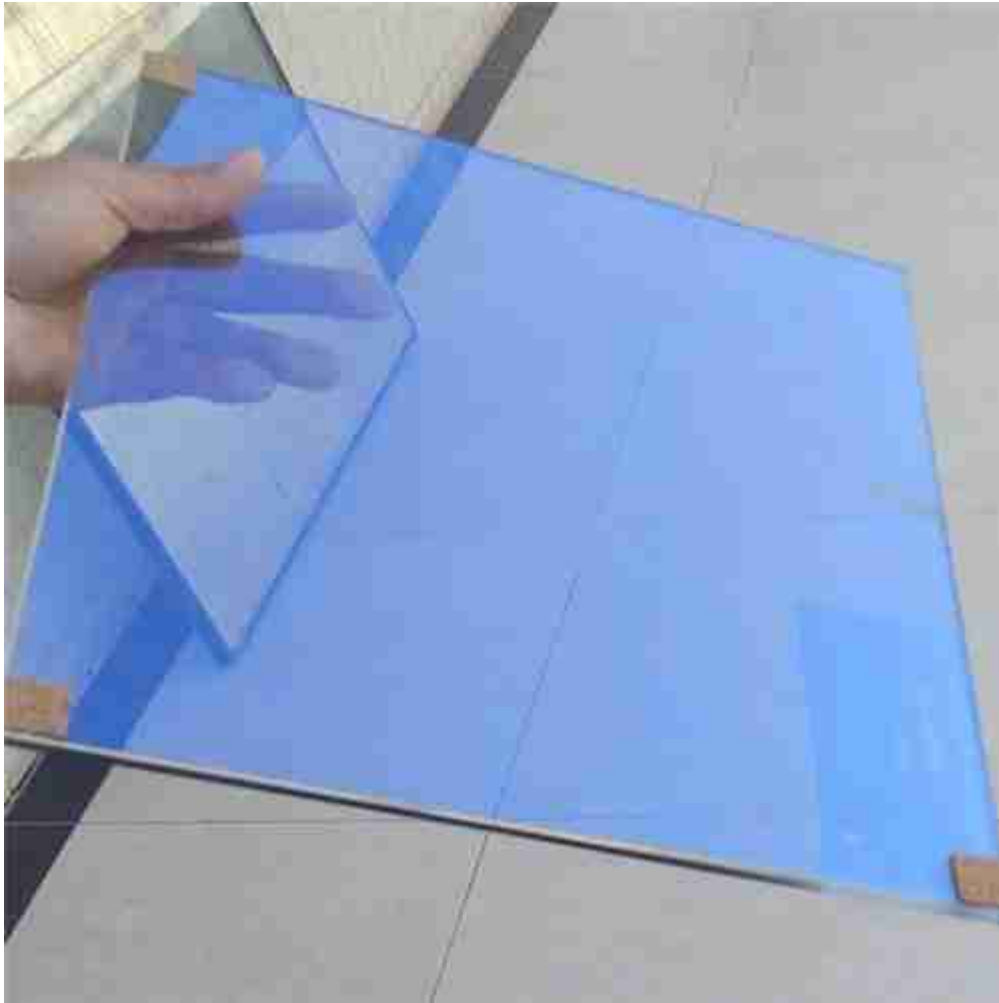
Digital printed glass panel is making art design and imagination without any limitations.



Digital printed glass patterns design

10, Anti-heat coating glass

[Heat reflective glass](#) is also called solar heat reflective coating glass, it is generally coated with one or more film layers composed of metals such as chromium, titanium, or their compounds on the surface of the glass by using high vacuum magnetic sputtering method(PVD), which makes the product appear rich in color, has appropriate transmittance for visible light, and has a high reflectivity of the solar light. It also has a high absorption rate for ultraviolet rays, so it is also called solar control coating glass, which is mainly used in buildings and glass curtain walls.



Blue color heat reflective coating glass



golden color heat reflective coating glass

11, Low-e glass

[Low-e glass](#) is short for low emissivity glass, is composed of multiple layers of silver, copper or tin, or other metals or their compounds on the surface of the glass. The Low-e glass product has a high transmittance for visible light whereas a high reflectivity for infrared rays and good heat insulation performance. Low e glass can help you have a cool environment in the hot summer and a good warm room in the cold winter.

Low e glass shall be applied in insulated glass configuration to prevent its silver layer from oxidizing. The quality of insulated glass is the key to the long lifespan of low e glass.

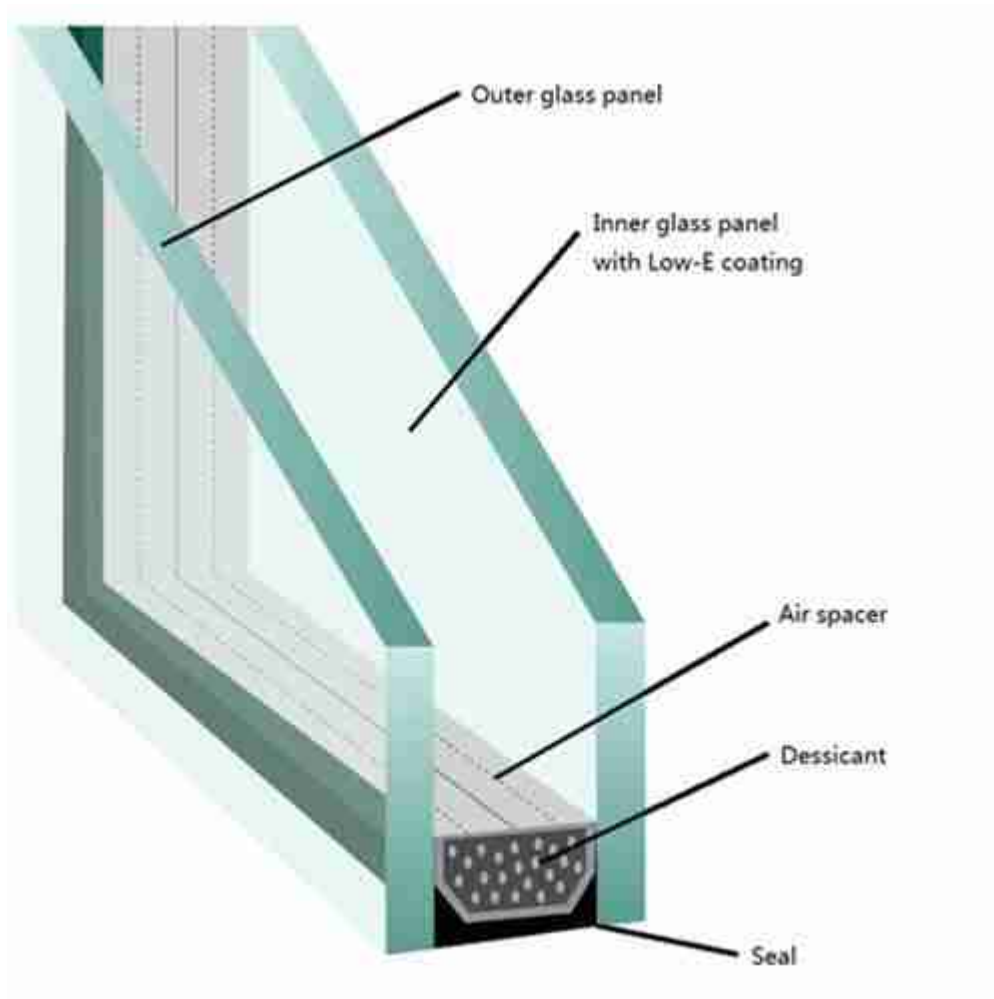
Generally, there are 3 types of low e glass on the building glass market now: single silver low e glass; double silver low e glass, triple silver low e glass.

For energy saving functions performance are as below:

Single low e glass<double low e glass<triple low e glass;

Low-e glass is mainly used for facades, windows, glass walls, etc.





12, U-channel Glass

U shaped glass is a new type of building energy-saving wall profile glass. It has good light transmittance, excellent thermal insulation, soundproofing function, and high mechanical strength. The shape is a banner type, which provides modern design, clean and smooth lines, has a unique decorative effect. The installation is super convenient and the overall cost is low.

Thickness: 7mm U channel glass;

Glass color: ultra clear, clear, other tinted glass colors are available too;

Glass surface: smooth, frosted, etc;

U channel glass applications: glass wall, glass curtain wall, glass facade, etc;



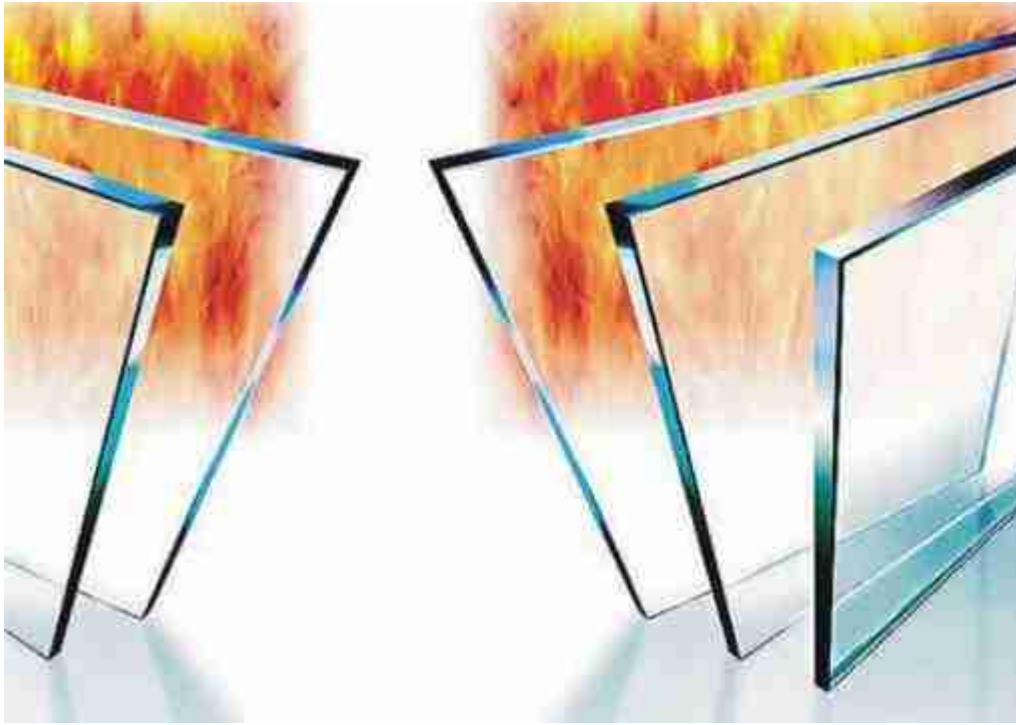
U channel glass with excellent design and performance

13, Fire resistant glass

Fire resistant glass is also called fireproof glass. Generally speaking, there are [REDACTED]

Single fire resistant glass panel:

The single piece of cesium potassium fireproof glass is ion-exchanged for more than 20 hours at high temperature through special chemical treatment, replacing the metallic sodium on the glass surface to form a chemically tempered stress layer, and after physical treatment, the glass surface forms a high-strength pressure. The stress greatly improves the impact strength. When the glass is broken, it shows a state of tiny particles, reducing the harm to the human body! The strength of the single piece of cesium potassium fireproof glass is 6-12 times that of ordinary glass and 1.5-3 times that of tempered glass! Single fire resistant glass panels can be further processed as fire resistant laminated glass, fire resistant insulated glass, etc to enhance soundproofing or energy saving functions.



Single fire resistant glass panel

Composite fire resistant glass:

The production process of traditional composite fireproof glass generally adopts a grouting method, and the expansion flame retardant binder is used between three or more pieces of glass. The layer becomes opaque and plays the role of fire, and heat insulation.

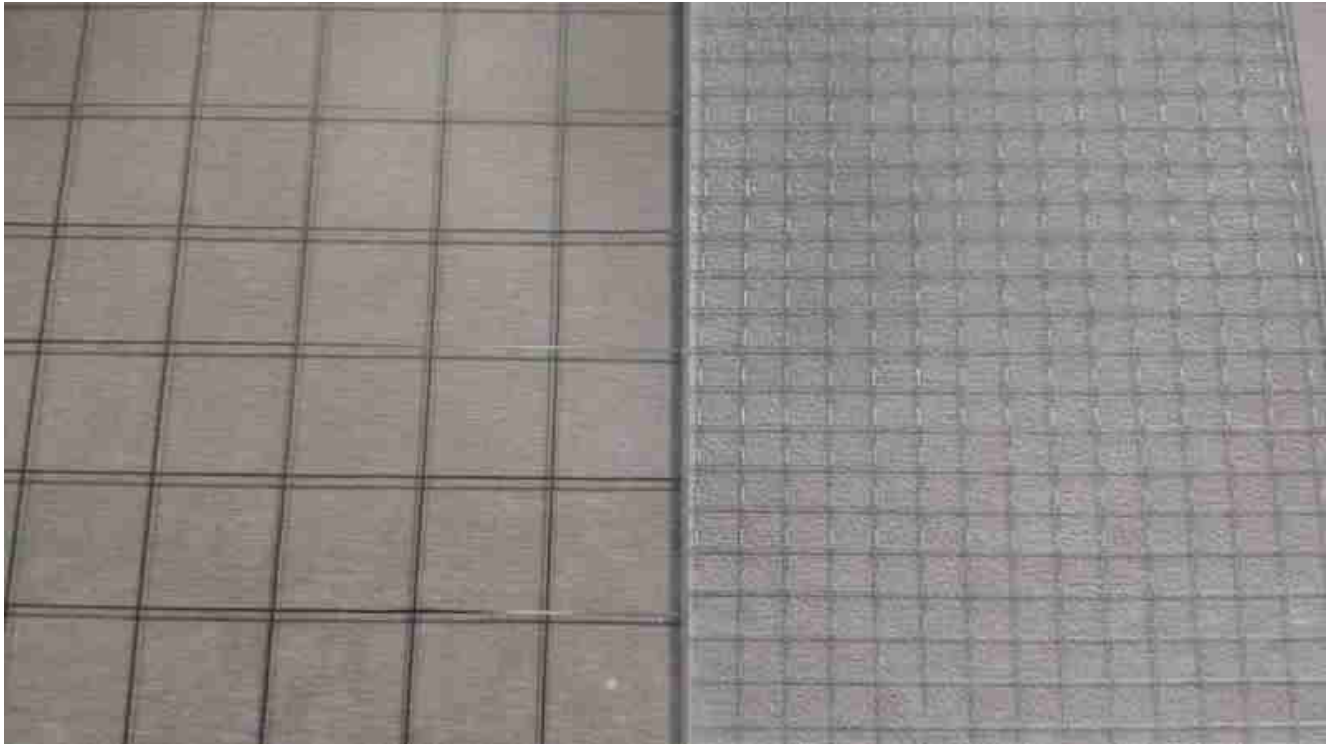
The production process is: firstly cut multiple pieces of glass to the same size, seal them around with a strip, leave a grout, and wait for the bonding between the border and the glass to be firm Afterwards, the fireproof liquid is poured from the grout, after solidification and sealing. This type of fireproof glass has a different fire retardant formula and structure, and the general fireproof time is between 30-90 minutes. Most of the fireproof glass produced by grouting can Meet the three performance indicators of fire integrity, radiation, and heat insulation.



Composite fire resistant glass

Wired fireproof glass:

Wired glass is a common flat glass produced by the calendering method. When the glass ribbon is formed between the calender rolls, the heated steel wires are placed on the glass plate. Wired fireproof glass can play the role of fire prevention and anti-theft function. When a fire occurs, the wire glass is heated and cracked, but the glass fragments remain on the metal mesh and do not fall off. The whole glass maintains integrity at a certain time. The wired fireproof glass prevents flame penetration and plays a role in preventing the spread of fire.



Wired fireproof glass

14, PDLC glass

PDLC glass is also called magic glass, switchable glass, smart glass, intelligent glass, etc. The difference between PDLC glass and ordinary glass is that it can adjust the transparency.

The glass will turn obscure and transparent with only a click of the electricity power.

PDLC glass is widely used in glass partition walls, glass offices, toilet glass partitions, windows, facade, etc.

15, Fused glass

Hot-melt glass is produced by setting a specific heating program and annealing curve, after heating above the glass softening point, it will be annealed after special molding and compression molding. If necessary, engraving, drilling, trimming, and other processes will be performed.



Fused glass

16, Patterned glass

Patterned glass is produced similar to fused glass. It can let the light through but is not transparent. Patterned glass has multiple options for pattern designs such as [fluted glass](#), flower glass, raindrop glass, diamond glass, etc. It is very good for interior decoration and for windows or doors applications. Can be used as a single pane tempered glass or further processed as laminated glass to enhance its safety functions or soundproofing functions, etc.

Patterned glass panels applications: shower doors, partition

walls, windows, doors, etc.



Patterned glass designs.

17, One-way mirror

One way mirror uses a special coating that can reflect most of the light. It is usually used in the interrogation room or school psychological consultation room or some residential house where privacy is extremely needed. when using a one-way mirror, the reflection surface must be the light-facing surface facing the outdoor. When the outdoor is brighter than

the indoor, the one-way mirror glass is similar to the ordinary mirror, and the interior side cannot be seen from outdoors, but the indoor can see the outdoor scene clearly. When the outdoor is darker than the indoor, the outdoor scene can be seen from indoor, and the indoor scene can also be seen outdoor, the degree of clarity depends on the outdoor lightness. The one-way glass is mainly suitable for glass windows, glass walls, etc. This product can be used in special places such as public security bureaus, detention centers, prisons, courts, karaoke, offices, kindergartens, psychiatric hospitals, public toilets, etc.



One-way mirror applications

18, Bulletproof glass

Bulletproof glass is produced by several annealed glass panels laminated with multiple PVB or SGP interlayers. There are 25mm, 32mm, 36mm, 40mm, 50mm, etc thickness options. Sometimes, toughened glass is adopted to enhance the strength of bulletproof glass.

Bulletproof glass is widely used as bulletproof windows or

bulletproof glass walls, etc to protect the VIP or in bank or luxury villas where super high safety is required.



Bulletproof glass

Of all the custom architectural glass mentioned above, which one is your favorite? If you like this article, welcome to click the share button below.

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