

GUANGZHOU HUICHI GLASS TECHNICAL CO., LTD

Add: Likang Industrial zone, tancun, shitan road, shijing, baiyun district, 510430, Guangzhou.

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Guangzhou HUICHI GLASS TECHNICAL CO., LTD, which professional in manufacture and export the EVA film and EVA vacuum heating machine.

The Branch- Tech-photon(TPT) is specialized in Privacy-glass, PDLC film, and LED-glass with quality assurance and together with a wide range of choices of sizes, durable products and honest after-service.

e of T-photon are well accepted by both the domestic and international markets.

### About The Privacy Glass:

Privacy glass also calls switchable glass or Smart glass, its made by the PDLC film and the double tempered glass with high temperature and high pressure.

A simple(ON – OFF)mode switches the glass from being clear to frost .This product is simple to install just like any standard double glazed sealed unit.

This energy saving product is completely solid state requiring no maintenance or special cleaning requirements.

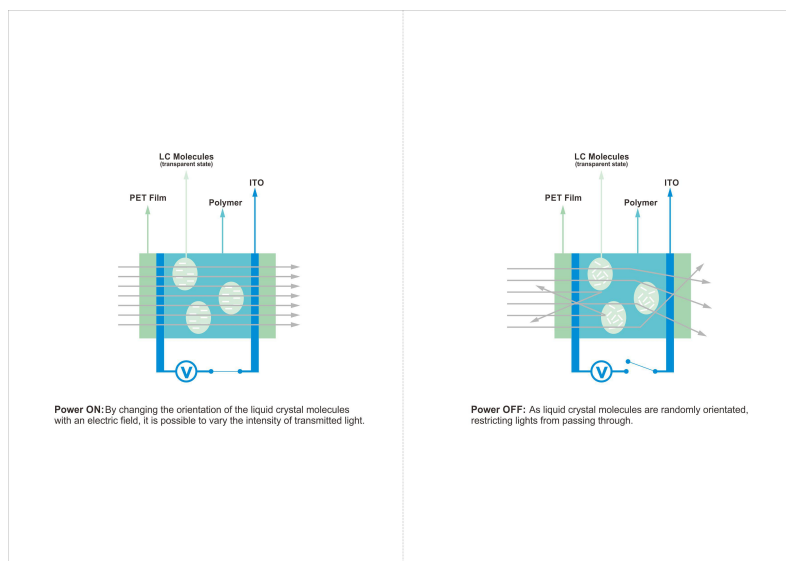
Thickness	4+4/5+5/6+6/8+8/10+10/12+12...
Maximum size	1800*3500mm
Frequency/Working voltage	50/60 Hz 60~70V
Power consumption	13w/sqm
Parallel light transmittance	On: 80% Off: 5%
Visible light transmittance	On: 78.3% Off:64.5%
Life time	>50000hours

## How does it work?

On natural condition, the arrangement of the liquid crystal inside the glass is ruleless, the refractive index of liquid crystal is lower than the polymer outside, incident light scatters on the polymer, which is milk-white, means opaque.

When power on, the liquid drop of the polymer with liquid crystal dispersion will rearrange, the liquid crystal will become ruleless arrangement to ordered arrangement, which makes the same refractive index of the liquid crystal and the polymer, so incident light can pass through completely to form transparent condition.

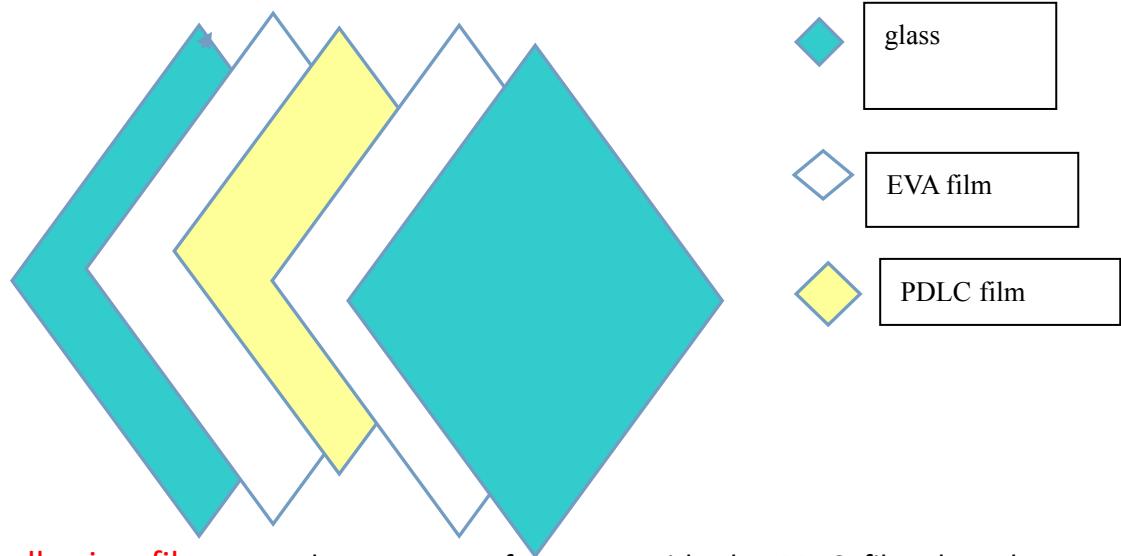
Light is scattered when passing through an optically inhomogeneous medium. PDLC (polymer dispersed liquid crystal) is a medium whose light scattering power is adjustable through applying an electric field. In their natural (uncharged) state, the PDLC droplets align randomly.



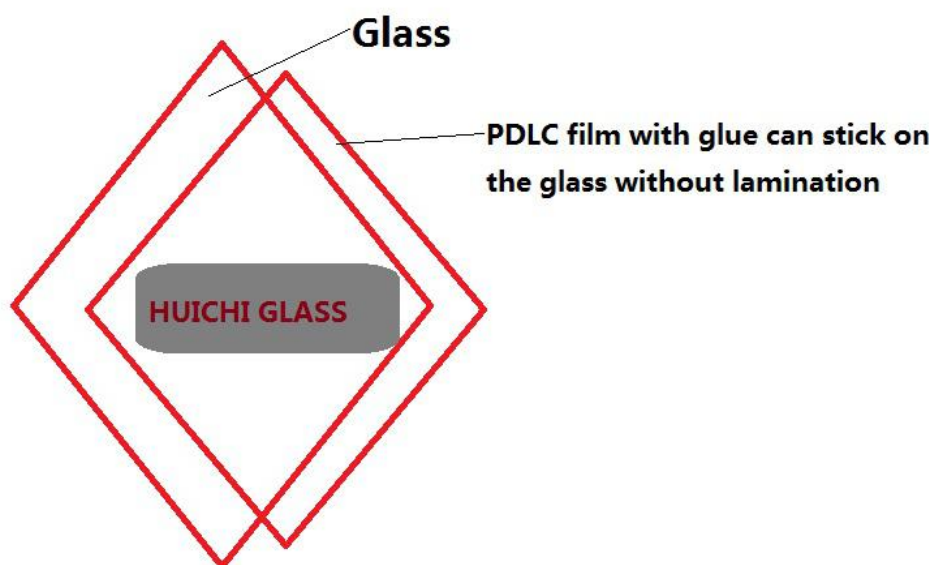
### About The PDLC-Film:

PDLC film is an intelligent film, a film that can be stick on glass, which can adjust light under electric pressure to switch between transparent and mist, and meet the requirements of glass on penetrability and privacy protection.

It is the core of the smart switchable glass.



**Self-adhesive film:** It has same performance with the PDLC film, but the self-adhesive film that you do not need EVA film for lamination, you just stick it on the glass after you clean the glasses.



## How to install the smart switchable glass?

### A Check each glass before installation

- 1) Do not install the glass if it has problems of the wrong size, breakage on the edges, scratch, abrasion or shortage.
- 2) Do not remove the label of the glass supplier unless the architect asks to do.
- 3) In compliance with instructions and drawings of the HUICHI Smart Switchable glass.

B Put the gaskets on the window frame according to the standard width and thickness.

The gaskets should be cut and sealed the edges according to the advice from the producer. Waterproof and gas-prevent seals should be provided on the corners and the joints.

C Attention to the connecting of the electrical wires during the installation.

D When using HUICHI Smart Switchable glass under humid conditions, attention should be paid to the

### Safety of circuit during the installation

Remarks:

#### 1) Installation method:

Firstly, on the place of installing the glass, make the frame around the glass according to the structure. In the middle of the groove up the frame, half width of the glass, drill hole  $\phi 15\text{mm}$ — $\phi 20\text{mm}$ . If need to install multi pieces glass, must drill hole in the same position of each piece. A pair of wires should be put outside the hole in advance, the diameter of the wire is  $\phi 0.5\text{mm}$ , the length is 2.5m, 300mm should be left inside the frame in advance, put the wire from the hole of the up frame to the centre of the frame or put them to the place of controller (need to be discussed). Make the frame must make sure the glass installation is in the same plane and vertical to the ground. Use adhesive tape to stick all around the inwall of the frame. Special attention must be paid to install one piece glass and then fix it when placing the Smart Switchable glass, which means fixing link stopper on. If install multi pieces Smart Switchable glass, need to adjust the space between the two glass 3-5mm, and it is the same to other pieces. Connect the wire of each glass to the power control box. Fix the link stopper all around and all the contacts in the inwall of the glass and the link stopper should be adhered with rubber strip. After installing, fixing the power control box and checking the power on condition of each glass, then process the entire joint-trial. Seal treatment should be done to the glass for the out decoration of the frame.

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Attention:

1. Before the glasses leave the factory, the edges have been protected with sealing material, aiming to prevent the component of the glass glue erode into the interior of the luminous glass, so it needs to be confirmed the sealing material is in a good condition before installation.

2. To get the glass sealed all around must use the dedicated glass glue provided by the factory

3. Clean

Regularly clean of the glass is necessary, but the cleanser with abraability cannot be used, especially when the glass surface is reflection coating. After using the soft, clean cloth with neuter soap or weak acid (vinegar) liquid, must clean the glass with water and dry it immediately.

4. Glass protection

After installation, architect, contractor or users must take the responsibility of protecting and cleaning the glass. Steel that is easy to rust and alkaline substances will hurt the glass surface. It absolutely cannot use the cleanser with abraability, especially when glass surface is reflection coating. Dust from installation, welding spark or anything works on the glass surface, may cause an irremediable damage

Wiring Installations

**1. Resource requirement**

1) At least 15 AMP ground wire: 120 VAC 60 Hz or 220 VAC 50 Hz

(Supplied by the installation manufacturer)

2) Switch fixed on the wall : 120 VAC 60 Hz or 220 VAC 50 Hz

(Supplied by the installation manufacturer) This switch is used to control two mode conversions.

3) HUICHI dedicated power supply

**2. Wire connection**

1) All the relative circuits of HUICHI Smart Switchable glass must be installed by qualified electrical engineer, and be complied with all applicable laws and regulations

2) Before the installation must inspect the exposed electrode piece to see the electrode and wire whether connect to a metal frame or not, so as not to damage the power and the glass. The exposure part can be covered by the insulating tape during the process of adhesive or transport.

3) Multi pieces of HUICHI Smart Switchable glass and power should be arranged parallel connection, "INPUT" of the power connects with 120VAC 60HZ or 220 VAC 50 HZ, "OUTPUT" connects with the HUICHI Smart Switchable glass, the output power is 70VAC.

4) Before turn on the power, first to check the electronic resistance between metal frame to determine

whether it is unlimited or not, otherwise must check the short-circuit place, and make the electrode of the metal frame part insulated

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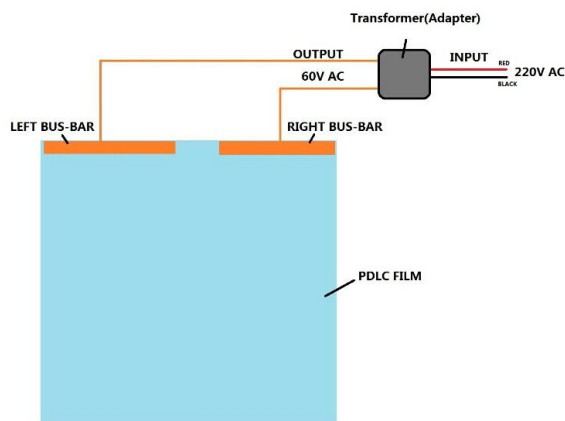
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Notice : HUICHI Smart Switchable glass must work under the voltage of the dedicated power, too high voltage and current may cause permanent damage to the glass. After service for maintenance and circuit should be provided by the professional electrical engineer after who are in fully understands of this product.

After open power , check the panel is normal work or not, if any piece or multi pieces of HUICHI Smart Switchable glass is out of work:

1. Check the current circuit breaker is normal or not, or have to reset or replace the fuse, etc
2. Inspection of the wall socket is normally electrified or not, or must be replaced
3. Check for electrical input and connection with the wall socket for electric wire is normally electrified or not.
4. Check for electrical output is normal or not, or the fuse may be burnout, must be replaced the fuse with same type and size.

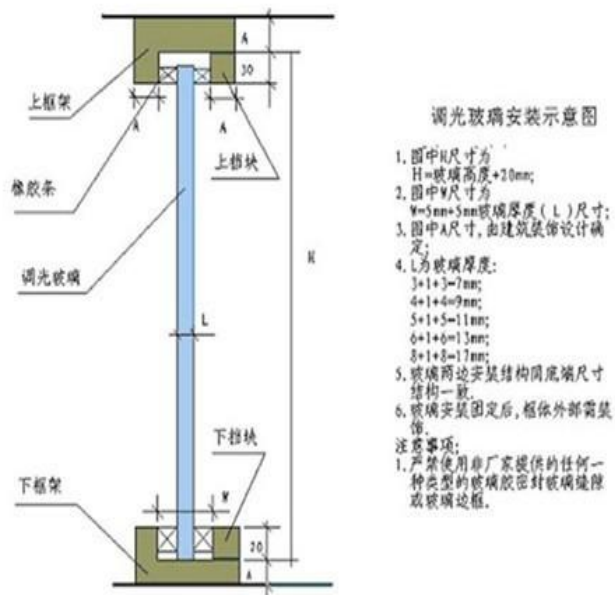


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Application:



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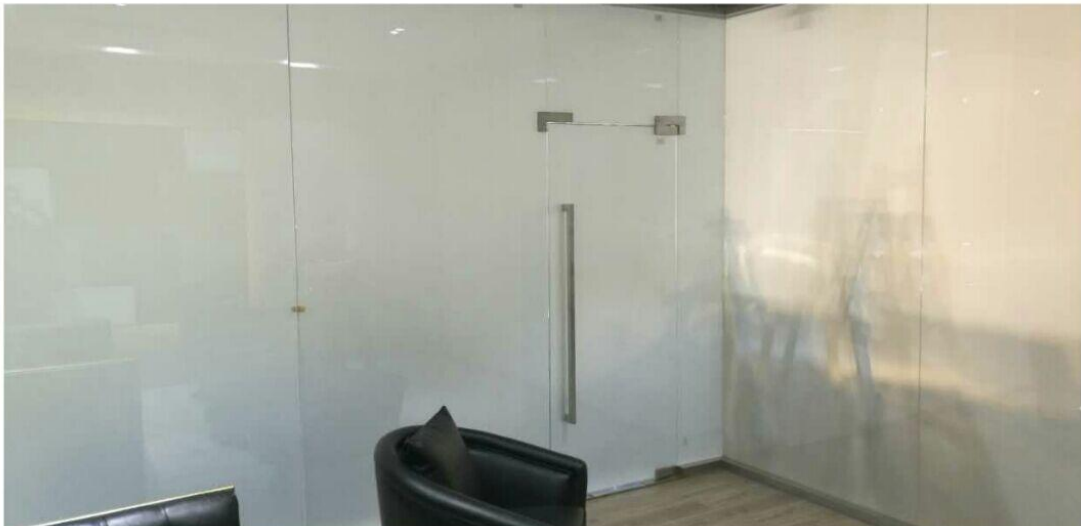
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