

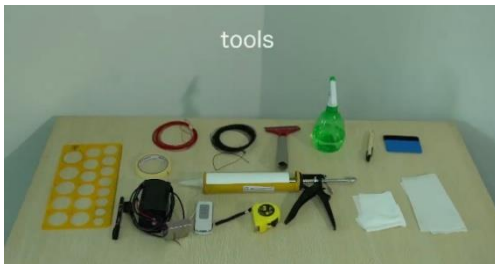
Thank you for choosing our product!

Please note: Our smart self-adhesive PDLC/PNLC/EP/DLC films are different from conventional window films. They must be installed dry, without water.

Before installation, please read the following instructions carefully.

Installation Process

1. Prepare the Tools: Ensure you have all necessary installation tools ready.



2. Inspect the Product: Open the package and verify all items against the packing list.



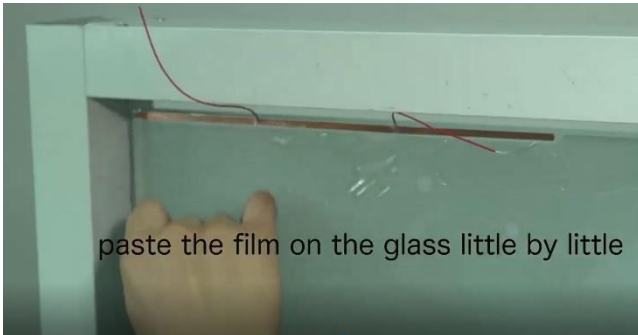
3. Pre-Installation Test: Test the film with power to ensure it functions properly before installation.



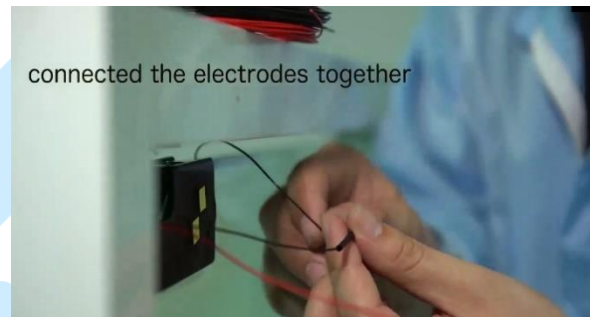
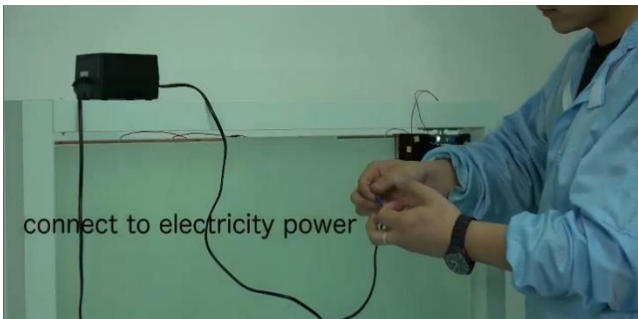
4. Clean the Surfaces: Thoroughly clean the glass surface and the adhesive side of the film.



5. Apply the Film:Carefully align and stick the film to the glass step by step, smoothing out any air bubbles.



6. Final Power Check:Reconnect the power and test the film again to confirm it operates correctly.



7. Remove the Protective Layer:Peel off the outer protective film from the installed smart film.



8. Seal the Edges:Apply special neutral silicone glue to seal the film edges and busbars for protection and durability.



Self-adhesive Film Installation Video



Power Connection Video



Operational Details Requirements

1. Film Handling:

- The PDLC film is prone to folding if handled incorrectly. To move the film, roll it carefully instead of folding it.
- Folding the film may cause damage and render it inoperable.



2. Film and Glass Cleaning:

- Clean the glass surface thoroughly with glass cleaner or alcohol.
- Ensure the glass surface is completely dry before applying the film.
- Use a lint-free cloth with alcohol to clean the adhesive side of the film, but avoid using any liquid, including alcohol, on the busbar.

Note: Do not use alcohol to clean the busbar, as it may cause damage.

Ensure the film and busbar are completely dry before powering on.

3. Avoiding Bubbles:

Bubbles are typically caused by dust from the glass surface, air, hands, or film surface. To minimize dust:

- Increase air humidity to approximately 50% by spraying water into the air to reduce airborne dust.
- Wear clean rubber gloves to avoid dust from hands.



- Clean the glass surface three times with a glass cleaner and a metal scraper to remove stubborn dust.

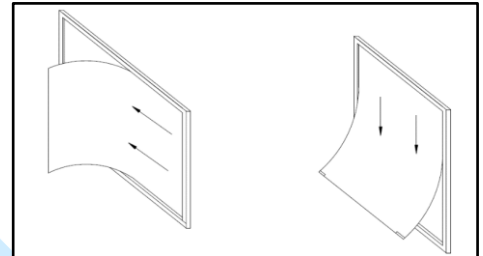


- Clean the adhesive side's protective film with a lint-free cloth and alcohol before installation.
- Peel off the protective film gradually during application, not all at once.
- If dust causes bubbles, carefully peel back the film, remove the dust with tape, and reapply.
- After installation, use a light source behind the film to check for small bubbles. If found, mark them, peel back the film, remove the dust, and reapply.



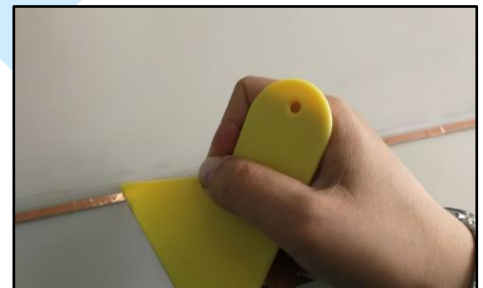
4. Film Application Method:

- Apply the self-adhesive film from one side to the other, typically from top to bottom.
- Avoid applying from both sides toward the middle, as this creates stress in the film, leading to potential damage over time.



5. Securing the Busbar Copper Belt:

During transportation or handling, the copper belt of the busbar may loosen. Before applying the film, use a plastic scraper to firmly press the copper belt onto the film.



6. Preventing Film Edge Detachment:

- To prevent folding, place the film on a flat surface after unpacking or roll it in the reverse direction.
- The film should be 2-3 mm smaller than the glass. Trim the film if necessary.
- Use neutral hot melt glue to secure specific points along the film edge, ensuring the glue is acid-free.
- After applying the film, immediately seal all edges and the busbar with neutral silicone sealant to prevent air infiltration between the film and glass.



7. Avoid Contact with Metal Frames:

Maintain a 2-3 mm gap between the film edge and any metal frame to prevent electrical short circuits, which could cause film failure.

8. Silicone Sealant Application:

- Use only neutral silicone sealant (e.g., Toshiba 83, Toshiba 381, or Momentive TSE382) for sealing the film edges and busbar. Acidic sealants are not permitted.
- Apply the sealant immediately after film installation, covering the entire busbar and film edges.
- Apply three layers of sealant (allowing each layer to dry before applying the next), ensuring a total thickness of 0.5-1 mm.



Note:

- Use neutral silicone sealant only.
- Ensure the sealant does not shrink when dry.
- Avoid sealants containing organic solvents or plasticizers.

9. Edge Banding Tape Applications:

When sealing smart film edges and electrodes, it is recommended to use specialized waterproof sealing tape for edge sealing under the following conditions:

- For frameless glass panels, we recommend sealing the joints with specialized waterproof edge sealing tape: Since silicone sealant can be easily wiped off during glass cleaning, we advise using professional waterproof edge sealing tape for sealing.



- If you are unsure whether the neutral silicone sealant you are using is specifically designed for dimmable films, we recommend first sealing the film edges and electrode positions with specialized waterproof sealing tape before applying the silicone sealant for sealing (but you must confirm it is neutral silicone sealant).

10. Busbar Cover Frame:

- Seal the busbar with neutral silicone sealant first and allow it to dry completely.
- Cover the dried sealant with tape before installing any frame to prevent the frame from touching the sealant, as frame deformation could damage the busbar.

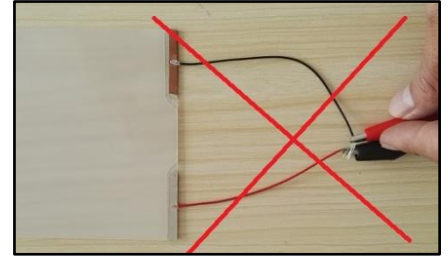


11. Working Voltage:

The film operates at a lower voltage than standard household power. Use a transformer to adjust the voltage to the film's requirements, as indicated on the product label. Do not connect the film directly to household power.

12. Busbar Handling:

- Do not connect busbar wires improperly.
- Avoid pulling the busbar wires, as they may detach from the film or glass.
- Do not clean the busbar with alcohol.
- If liquid is present on the busbar or film edges, allow them to dry completely before connecting power.



13. Remote Switch Battery:

Due to shipping restrictions, the remote switch does not include a battery. Use a 12V23A (8x20 mm) battery for the remote switch.

14. Transformer Connection:

Refer to the diagram on the last page for proper connection.



For household power connections:

5sqm House Transformer with Remote switch :

The remote control panel

This is the "Output" label. This port wire connects the film;



This is the "Input" label. This plug connects the power, 220V or 110V;

10,20,30sqm House Transformer with Remote switch:

This is the "Input" label. This plug connects the power, 220V or 110V;

Note: The remote switch signal receiver is installed inside



This is the "Output" label. This port wire connects the film or glass, like the red and black wires;



15. Cutting the Film:

- If a professional film cutter is unavailable, use scissors to cut the film, not a knife.
- After cutting, clean the film edges multiple times with a lint-free cloth;

16. Ultra-Thin Water Paste PDLC Film Installation:

The installation process for ultra-thin water paste PDLC film is similar to standard solar glass film:

- Clean the glass surface three times as described above.
- Spray a water-based lubricating film solution onto the glass surface.
- Remove the adhesive side's protective film and apply the PDLC film to the glass, keeping the protective film in place.
- Remove the non-adhesive side's protective film, spray water on the PDLC film, and reapply the adhesive side's protective film.
- Use a scraper to remove all water, ensuring no water remains.
- Remove the protective film and let the film dry for 48 hours.
- After 48 hours, test the film with power and seal the busbar and film edges three times with neutral silicone sealant, ensuring a thorough seal.

Note: Do not power on the film until it has dried completely (after 48 hours).

After you read above items carefully, you can check the following video instruction:

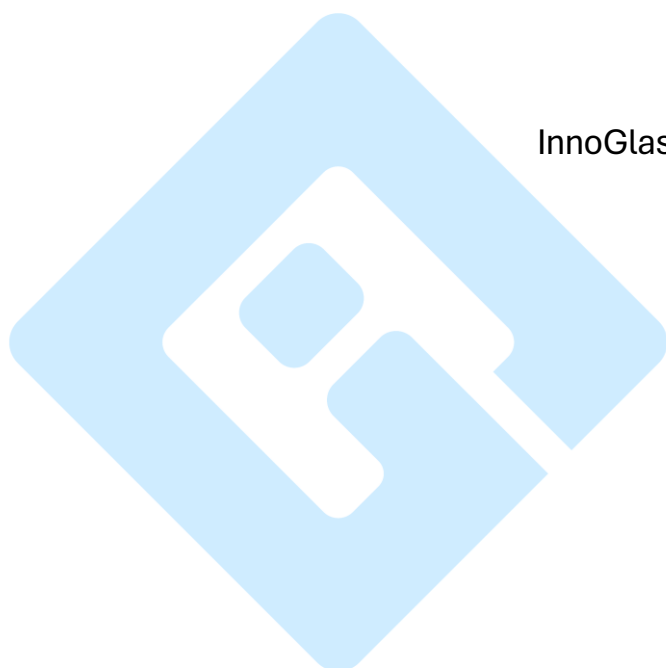
Busbar installation Video



Our website: www.inno-glass.com



If you still have inquiry, pls contact us freely!



InnoGlass

Power and Transformer Connection Drawing:

