



Smart Film Solutions

INSTALLATION GUIDE

Smart Glass

Professional Installation Guide
& Safety Standards

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SAFETY FIRST

■ CRITICAL — READ BEFORE INSTALLATION

- Never connect the smart glass wires directly to 110V/220V AC mains power. Doing so will instantly burn out and ruin the panel. Always route power through the dedicated transformer/rectifier.
- Never use standard silicone. Only use specialized glass sealant meeting the exact criteria below to prevent chemical reactions that cause glass cracking or delamination.

01

SECTION

PREPARATION
Tools & Materials

Handling Equipment

- Heavy-duty glass suction cups (essential for safe transport)

Cleaning & Safety

- Clean soft cloths
- Anhydrous alcohol
- Protective work gloves

Electrical Tools

- Wire strippers
- Electrical tape
- Heat shrink tubing
- Dedicated power transformer/rectifier (provided)

Sealant Requirements (Crucial Specs)

- ✓ Zero shrinkage
- ✓ Neutral curing
- ✓ Zero organic solvents

If sourcing silicone locally, it must strictly meet all three conditions above.

02

SECTION

STEP-BY-STEP
Installation

01 Unboxing & Inspection — Requires 2+ people

Carefully open the wooden crate. Always use two or more people and glass suction cups to lift the panels, avoiding any impact to the edges. Check the glass surface and inspect the electrode wires.

Note: There are 4 wires total at one end of the glass (2 on each side). The two wires on the same side serve the exact same function — one is a backup wire and can be left disconnected.

02 Frame & Bottom Support Preparation — Ensure proper fit

Clean the inside of the installation frame and ensure it is perfectly flat. The bottom supporting surface is critical: it must be completely level and have slight elasticity/flexibility to cushion the glass. Pre-drill or leave wire routing grooves inside the frame to guide the transformer lines out smoothly.

03 Wiring & Insulation — No polarity required

Connect the two output wires from the transformer/rectifier to the active wires extending from the smart glass. There is no positive or negative polarity.

Multi-panel Setup: If installing multiple smart glass panels, connect them in parallel to the transformer.

Insulation: Secure all connections by soldering or using professional crimp caps. Slide heat shrink tubing over the joint, wrap tightly with electrical tape, and hide the wires neatly inside the frame groove. Ensure wires are never pinched underneath the glass weight.

04 Glass Positioning & Temporary Fixing — Balance the pressure

Use suction cups to steadily lift the glass into the frame, placing it gently onto the flexible bottom support. Adjust the clearance gaps on the top, bottom, left, and right sides to ensure the glass bears weight evenly. Secure the glass in place temporarily using glazing beads or temporary fixtures.

05 Power-On Test — Mandatory before sealing

Always test the functionality before applying silicone sealant. Connect the transformer to your 110V/220V AC power source. Use the remote control or switch to operate the glass. Confirm that it transitions smoothly between the "transparent" and "opaque" states. Proceed to the final step only if everything functions perfectly.

06 Sealing & Caulking — Final finish

Clean the installation gaps thoroughly using anhydrous alcohol. Apply your approved specialized silicone evenly into the joints, making sure the bead is full, smooth, and consistent. Avoid getting silicone on the electrode wire connections. Keep the wiring area dry and allow a tiny amount of clearance space for natural thermal expansion.

SECTION

03 PROFESSIONAL TIPS Avoid Common Mistakes

■ Transformer Priority

We cannot stress this enough — the transformer must be wired correctly. Direct exposure to grid voltage will instantly destroy the internal smart film.

■ Verify Your Silicone

Double-check the ingredient list of your sealant before application. The wrong chemical makeup will trigger a reaction over time, leading to delamination and massive replacement costs.

■ Backup Wire Protection

Since you only need to connect one wire per side, ensure the unused backup wires are completely insulated and taped up securely to prevent any accidental short circuits.

Technical Support & Warranty

Professional Support

CX SMART FILM provides comprehensive technical support for smart glass installations worldwide. Our engineering team offers remote guidance, on-site installation training, and post-sales troubleshooting for all authorized partners and certified installers.

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Disclaimer

This document is the official smart glass installation standard of CX SMART FILM. All installation must be performed by trained professional glaziers. The manufacturer is not liable for damage caused by improper installation, unauthorized modification, or use of non-approved materials and tools. Specifications subject to change without notice.