



# SKYLINE

**SDX™ Smart Film  
Installation Guide**

## At A Glance

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Welcome to the Skyline SDX Smart Film Installation Guide. This document is designed to provide you with comprehensive instructions to ensure a successful installation of your smart film products. Each step has been carefully outlined to assist you in achieving optimal results, from precise measurements to final electrical connections.

Proper installation is crucial for the performance and longevity of the film, which is pre-sized to fit your glass panels. We strongly recommend reading this guide in its entirety before beginning the installation process. Adhering to these guidelines will help you avoid common issues and ensure a smooth and efficient installation.

Please note that certain steps involve electrical work, which should be performed by a certified electrician to ensure safety and compliance with local regulations. We are committed to supporting you through this process, so if you encounter any challenges or have questions, do not hesitate to reach out for assistance.

Let's begin your installation journey with confidence and precision.

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## Contact

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## Manufacturing Location

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773.278.4660

By following these guidelines, you will ensure the reliable operation, longevity and warranty of the product. For further assistance, please call Skyline Headquarters at 773-278-4660 or contact Steve Spangler, national sales director at: steve@skyline.glass.

### 1.1 Measuring Guide

The precise measurement of a window or glass panel is extremely important to the success of a smart film installation. The film comes pre-sized to fit and cannot be altered on site. If the measurement is too small, the film will not cover the entire glass area. However, if your measurement is too large, the film will not fit within the allotted space. (Noting the 1/8" deduction).

#### Pointers

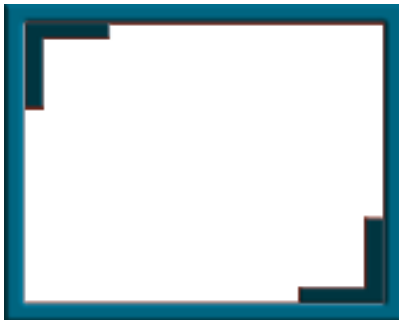
1. Always use a steel measuring tape or distance meter for accuracy.
2. Measure every window or glass panel, even if they all appear to be of similar size.
3. Measure only the inside dimensions of a window or glass panel encompassing the surface area to which film will be applied. Do not include the frame, sealant, gasket, beveled edges or butt-joints in the measurements

#### Step 1

Determine if the window or glass panel is square, using any of these methods:

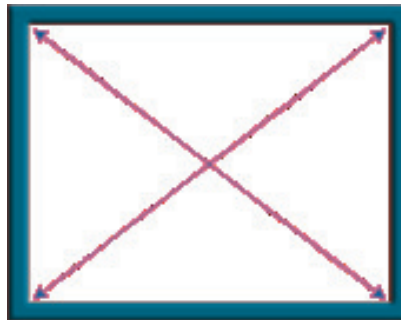
##### Method 1: Framing Square

Check each corner of the window/glass with a framing square. If the corners form 90 degree angles, proceed to Step 2.



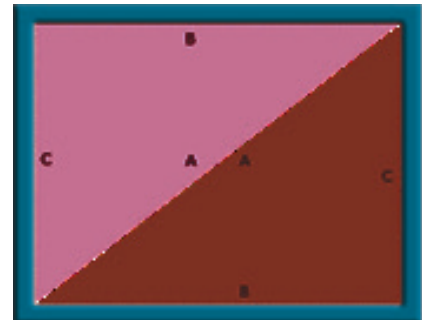
##### Method 2: Diagonals

With a true square or rectangle, measure the diagonals. If the lengths of the diagonals are equal, proceed to Step 2.



##### Method 3: Pythagorean Theorem

Use  $(A^2 + B^2 = C^2)$  to calculate the triangle measurements. If the window/glass creates two equal triangles, proceed to Step 2.



Note: If the window or glass is found to be out of square, a drawing of the window may need to be sent to ensure accuracy of film size required

#### Step 2

Measure the horizontal dimensions of the glass at the top, center, and bottom as shown.

**DO NOT take any deductions from your measurements for clearance.** Skyline will account for deductions (generally 1/8" (3mm) on each side) and inform you via shop drawings.



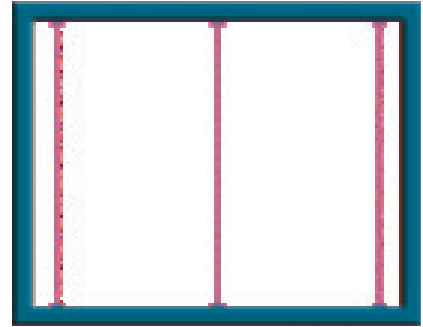
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## SDX™ Smart Film Installation Guide

### Step 3

Measure the vertical dimensions of the glass on the left, center, and right as shown.

**DO NOT take any deductions from your measurements for clearance.** Skyline will account for deductions (generally 1/8" (3mm) on each side) and inform you via shop drawings.



Please provide your Account Manager with as much information as possible (photos and/or drawings) about your glass specs such as frame type, edges, silicones and any other information that may help us to have a better understanding of your application requirements.

## 1.2 Receiving & Handling

All SDX Smart Film products must be checked, inspected, and electrically tested upon delivery, prior to any installation, and any damages or defects must be reported within 72 hours of receipt of product.

All working areas such as walls, floor, ceilings, tables must be kept clean and free of dust, debris, lint, food and liquids at all times. Film is not recommended to be installed on an active job site.

1. Before signing and accepting the shipment from the carrier, inspect the container (i.e. box, crate) for any signs of physical damage. If there is any indication of damage, it is critical to open the container and inspect the shipment in the presence of the carrier. If any damage is found, the shipping documents should be noted accordingly and signed by the driver as a witness. Photographs should also be taken as proof of damage and submitted for review within 72 hours.
2. Carefully open the container to prevent causing any damage to the film and handle with care.
3. Do not fold or crease the film as this will cause permanent damage to the product. The film must always be kept loosely rolled or flat (see images below).
4. Always use nitrile gloves when handling and installing the product.
5. When moving the film, it is best to hold it as close to the corners as possible. It is beneficial to have 2 people move larger sheets to reduce risk of damage. Use adequate numbers of skilled workers (based on project size).



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### 1.3 Preparation

Planning and preparation is the key to a successful installation. Installer must wear clean clothing to protect debris, dust and lint from adhering to the glass surface or film.

Once all materials are gathered and product has been properly reviewed and tested, you can proceed with the installation of smart film. All working areas such as walls, floor, ceilings, tables must be kept clean and free of dust, debris, lint, food and liquids at all times.

#### Required Items and Tools

Nitrile gloves

Alcohol

Applicator squeegee

Glass scraper/Flat razor blade

Lint-free cloth (microfiber)

Low-tack masking tape (painters tape)

Packaging tape

Wiremold / trim (if necessary)

Double-sided tape, ½” to ¾” wide

Ladder/scaffold (if necessary)

Electrical tester (switch cord)

Wire strippers

18-22AWG electrical wire leads

Electrical tape

Clean clothing

#### Remove From box

Remove smart film from shipping container and place in a clean safe location near the installation area (preferably on a clean table top).

#### Inspection

Inspect each piece of film immediately prior to the start of installation. Do not install film pieces which are improperly sized, have damaged edges or are deficient in any other manner. Refer to warranty letter for additional information.

#### Testing

Test each piece of film (with a switch cord) to ensure it operates properly. **Notify a representative immediately should there be an issue with the operation of the product.**

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### 1.4 Execution

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All SDX Smart Film products must be checked, inspected, and electrically tested upon delivery, prior to any installation, and any damages or defects must be reported.

#### Step 1

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Clean any frame edges, molding and wall surfaces within at least 6" from the glass surface working area.

Thoroughly clean the surface of the glass with glass cleaner or alcohol & squeegee to ensure there are no particles/debris left on the glass. It is best to clean both sides of glass (if possible) to distinguish debris on application side. Use a glass scraper, if necessary to remove any debris stuck onto the glass surface.

**NOTE: the cleaner you get the glass from the start, the quicker the installation time** as there will be fewer air bubbles to deal with during installation. Glass must be completely dry prior to application of film

#### Step 2

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Wipe 3M tape to ensure dust free. Install double-sided 3M tape on the top edge of the glass exactly where it will affix the plastic molding. The tape will be used as an installation guide so it should be installed at the upper end of the glass without leaving any space. Leave the second protective strip on the double-sided tape at this point.

#### Step 3

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Wearing nitrile gloves, clean the non-adhesive side of the film using a dry microfiber cloth. Turn film over and wipe down the adhesive side.

**DO NOT remove the protective covering.**

#### Step 4

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Place the sheet of film just under the 3M tape, on the intended glass surface and hold into place with green painters' tape to ensure proper fit and placement on glass before removing the protective covering. Note that there are 2 copper busbars along one side of the film as specified by customer. Make sure that the film is oriented correctly so that the copper busbars are located on the intended side (never the bottom).

**Copper busbars are not to come in contact with any metal framing or stops.**

DO NOT handle the film by holding the copper busbar alone.

#### Step 5

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Create tabs (with regular packaging tape) and place at each corner of the film on the adhesive side. This will act as a handle, which will allow for easy release of the protective covering.

**DO NOT use sharp items (e.g. nail, knife) to remove the protective covering. Use of these items creates risk of film delaminating at the edge.**

#### Step 6

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Gradually remove the protective covering (about 8"-12" (203mm to 305mm) from the top by pulling down on the tape tabs while carefully applying this portion of the film to the glass.

*Continued on next page...*

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### Step 7

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Continue to work the protective covering down the sheet slowly and focus the squeegee in the center of the film to allow edges to lay themselves down. If you discover air dust/bubbles once the film adheres to the glass, slowly pull the film back up past that location, and remove the debris with a piece of green painters tape wrapped around your index finger (adhesive side out).

NOTE: the film will start to lose adhesiveness with repeated removal from the glass.

NOTE: if any of the edges/corners are not laying down entirely, you can apply acetone in those areas, wipe it dry to hold the film in place.

◆ **Repeat steps 1-7 until all film pieces are installed on glass. NOTE: Any imperfections in glass (indentations, protrusions) may leave small air bubbles in the film.**

### Step 8

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The wiremold installation process starts after all the films are installed. The back side of the wiremold is notched so that the pigtails can be applied direct to the copper busbar. The pigtails can then be spliced to the additional wire leads via the butt spliced connector and routed through the wiremold

Remove the adhesive on the back side of the wiremold and carefully place it on the ½” clear area of the glass where the wiremold is to be installed. The pigtails can then be spliced to the additional wire leads via the butt spliced connector and routed through the wiremold, directing them to the electrical location for final connection.

### Step 9

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Connect electrical wiring by attaching pigtails to the exposed copper busbar (copper tabs are non-polar).

**NOTE: After connecting to the busbar, the butt splice connector can be used to connect the rest of the wire lead to be routed through the wiremold. Be certain that wires do not slip through or generate tension on the busbar, as this can cause bubbles or delamination in the film. To prevent this, secure wires with electrical tape within the wiremold.**

◆ **Quickly test the film again to ensure it is working before proceeding.**

### Step 10

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With the power off, completely cover the busbar area within existing frame or with wiremold/trim (to match existing finishes) to avoid exposure to electric shock. It is recommended to use a plastic wiremold – model Legrand UL 800.

◆ **CONGRATULATIONS! Your installation is now complete.  
Clean the film with non-ammonia based cleaner and wipe down with a dry, clean lint-free cloth.**

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### 2.1 Electrical Installation Guide

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All SDX Smart Film products must be checked, inspected, and electrically tested upon delivery, prior to any installation, and any damages or defects must be reported.

#### Step 1

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Please refer to standard wiring diagrams and controller specific wiring diagrams.

#### Step 2

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Determine a location for a switch (or switches) to operate the film

#### Step 3

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Plan the wiring route.

From film to controller and from controller to building power & switch leg (diagrams provided).

#### Step 4

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Install the wiring. Install the cable between the power source and boxes in the voids of the walls, ceilings and floors. After determining there is enough capacity in the circuit to support the additional load, extend wiring of the same size from the power source to the switch and fixture locations. If running a new circuit directly from the electrical panel, the new wire should be sized according to the fuse or circuit breaker size.

#### Step 5

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Connect pigtails to controller or junction at a box prior to running to the controller.

You can wire the panels together in series/parallel or at a central junction box. You must adhere to the proper number of allowable square footage per controller type. (40sf2 max for Mini's & 100 sf2 max for Flex's)

### 2.2 Care & Maintenance

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To clean the window from the smart film side, use a dry soft cloth only. Manual cleaning of the window from the glass side to remove accumulated dust or fingerprints is possible using glass cleaning products that do not contain vinegar, hydrofluoric, or phosphoric acid. You can use everyday-use window cleaning materials.

Refer to the full cleaning guide here: [skyline.glass/sdx-resources](https://skyline.glass/sdx-resources)

### 2.3 Limited Warranty

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Refer to Skyline's warranty guide here: [skyline.glass/sdx-resources](https://skyline.glass/sdx-resources)

### 2.4 Additional Resources

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For additional resources, visit [skyline.glass/sdx-resources](https://skyline.glass/sdx-resources)

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