ADHESIVE PDLC FILM MEASURING GUIDE

Precise measurement of a window or glass panel is extremely important to the success of a switchable film installation. The film is supplied pre-sized to the dimensions ordered and should not be altered in the field. If the finished film is too large, it may contact adjacent surfaces, interfere with installation, create bubbles, or leave insufficient clearance for edge sealing where required. If it is too small, excessive uncovered glass may remain.

A FEW POINTERS

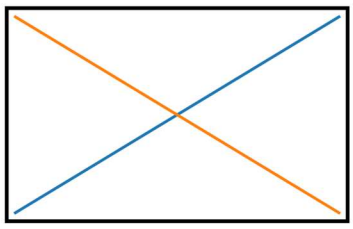
1. Always use a steel measuring tape or accurate distance meter.
2. Measure every window or glass panel individually, even when openings appear to be the same size.
3. Measure only the usable glass area where film will be applied. Do not include the frame, gasket, sealant, beveled edges, butt joints, or other obstructions.
4. The installer is responsible for determining the appropriate deductions/clearances and submitting the FINAL FINISHED FILM DIMENSIONS to VitroLens.
5. MEASURE AND ORIENT FROM INSIDE THE ROOM: Adhesive PDLC film is installed on the room-side surface of the glass. All measurements, drawings, square-corner marks, busbar locations, wire-exit locations, and film orientation shall be viewed and recorded from INSIDE THE ROOM FACING OUT. The film is fabricated/cut using this same inside-looking-out orientation.

STEP 1: DETERMINE IF THE WINDOW OR GLASS PANEL IS SQUARE

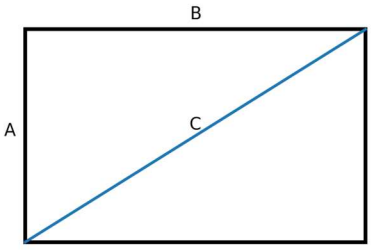
Use any of the following methods. If the opening is out of square, the installer shall define the final finished film geometry and all required deductions.



A. Framing square



B. Compare diagonals

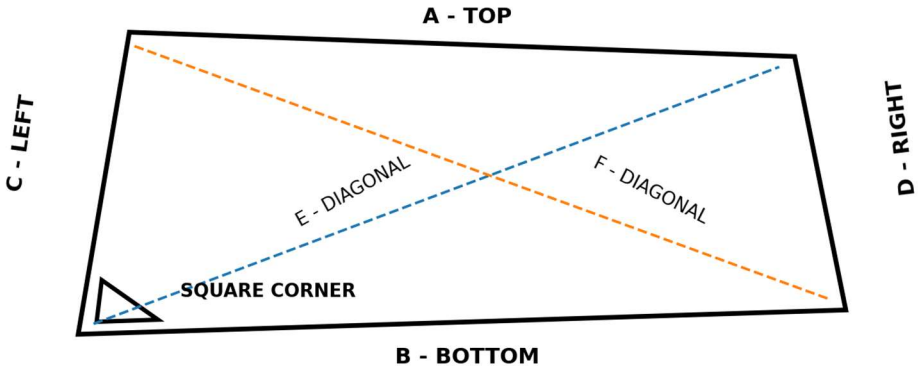


C. $A^2 + B^2 = C^2$

OUT-OF-SQUARE GLASS

If the glass is not square, the installer shall measure and define the actual geometry required for fabrication. Provide all dimensions necessary to reproduce the FINAL FINISHED FILM SHAPE, which may include top width, bottom width, left height, right height, and both diagonals. The installer is responsible for applying all required clearances and deductions. Identify the corner known to be square with a small triangle mark placed inside the glass outline on the dimensioned drawing.

Do not submit a field template to VitroLens. For irregular or out-of-square shapes, submit an installer-prepared dimensioned drawing that already represents the FINAL FINISHED FILM DIMENSIONS. VitroLens will fabricate to the dimensions provided and will not calculate, modify, interpret, or apply additional deductions.



Submit dimensions defining the FINAL FINISHED FILM SHAPE - not the raw opening.

IMPORTANT: VitroLens will fabricate the film to the FINAL FINISHED FILM DIMENSIONS submitted by the installer. VitroLens will not make additional deductions.

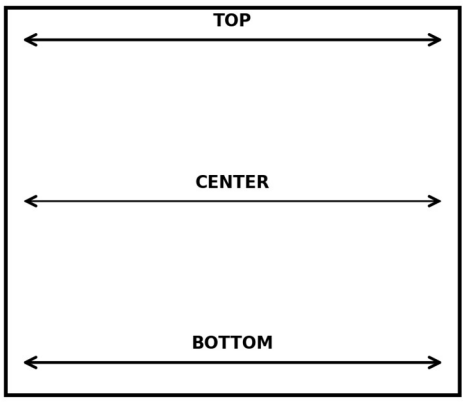
MEASURING & DEDUCTIONS

STEP 2: MEASURE THE HORIZONTAL DIMENSIONS

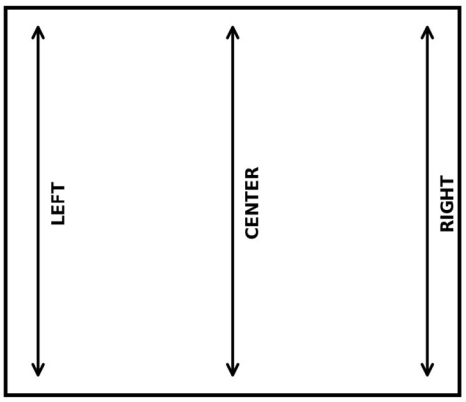
Measure the glass at the top, center, and bottom as shown. Determine the necessary installer deduction/clearance for the actual field condition. A typical deduction may be approximately 1/16" to 1/8" (1.5 to 3 mm) on each side, but the installer is responsible for the final selection.

STEP 3: MEASURE THE VERTICAL DIMENSIONS

Measure the glass at the left, center, and right as shown. Determine the necessary installer deduction/clearance for the actual field condition. A typical deduction may be approximately 1/16" to 1/8" (1.5 to 3 mm) on each side, but the installer is responsible for the final selection.



STEP 2 - WIDTH



STEP 3 - HEIGHT

VITROLENS PRO TIP – CHECK GASKET CONDUCTIVITY

PDLC film is electrically energized and should not contact conductive material. Many rubber glazing trims and gaskets are manufactured using recycled rubber. Recycled rubber can contain carbon black and other conductive materials from the original rubber products, which can make a gasket electrically conductive even though it looks and feels like ordinary rubber. If energized PDLC film contacts a conductive gasket, electrical current can track or leak through the gasket, potentially causing arcing, film-edge damage, intermittent operation, or controller faults. Before determining the final film clearance, use a multimeter set to continuity and place the probes on two separated points of the rubber gasket. If continuity is detected, replace the gasket with a verified non-conductive material or increase the film-to-gasket clearance so the energized film cannot contact the conductive gasket.

STEP 4: DETERMINE THE FINAL FILM SIZE

1. Review all field measurements and select the finished film width and height appropriate for the opening.

2. Apply all required installer-determined clearances/deductions.

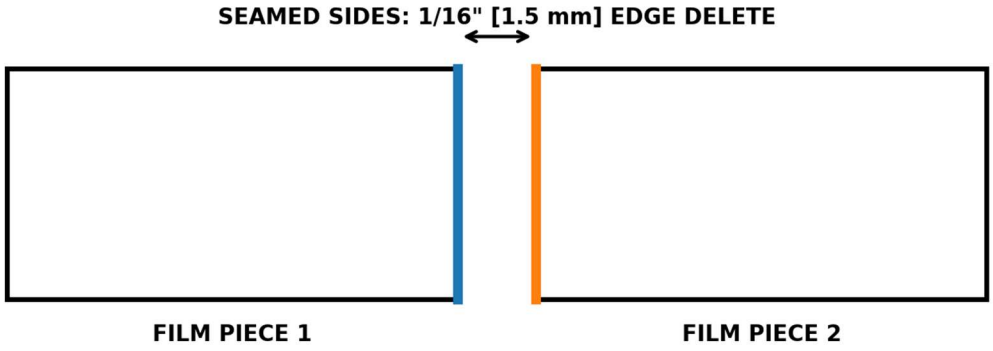
3. Identify the busbar location and wire exit for each film piece.

4. Record the FINAL FINISHED FILM DIMENSIONS on the order form on Page 3.

5. For irregular shapes, holes, notches, unusual framing, or out-of-square openings, provide an installer-prepared dimensioned drawing showing the FINAL FINISHED FILM SHAPE and all dimensions required for fabrication.

DEDUCTIONS FOR SEAMED PIECES

For adjacent seamed film pieces, provide a 1/16" [1.5 mm] edge delete on the seamed sides unless otherwise approved for the project.



VitroLens TECHNOLOGIES

ORDER FORM - SWITCHABLE ADHESIVE FILM

ORIENTATION: INSIDE ROOM LOOKING OUT — All dimensions, shapes, square-corner marks, busbar locations, and wire exits shown on this order form or attached drawings must be represented from the room side of the glass facing outward.

Enter FINAL FINISHED FILM DIMENSIONS only. Attach an installer-prepared dimensioned drawing or CAD file for irregular or out-of-square shapes when required.

ITEM	LABEL / DESCRIPTION	WIDTH IN / MM	HEIGHT IN / MM	BUSBAR LOCATION	WIRE EXIT	HOLES / NOTCHES YES / NO & QTY	QTY

PROJECT NAME:		**PROJECT LOCATION:**	
COMPANY NAME:		**INSTALLER / CONTACT:**	
PHONE / EMAIL:		**DATE MEASURED:**	
ACCEPTED BY (PRINT):		**ACCEPTED BY (SIGN):**	
DATE:		**PO / QUOTE / PROJECT #:**	
INSTALLER DIMENSION APPROVAL **By signing above, the installer/customer confirms that the dimensions listed on this order form are the FINAL FINISHED FILM**			

DIMENSIONS after all installer-determined deductions and clearances. VitroLens Technologies, Inc. will fabricate the film to the dimensions submitted and will not make additional deductions.

For unusual field conditions, do not rely on the order table alone. Submit an installer-prepared dimensioned drawing or CAD file that defines the FINAL FINISHED FILM SHAPE and dimensions.