

TECHNICAL EDUCATION COURSE

SMART GLASS TECHNOLOGIES

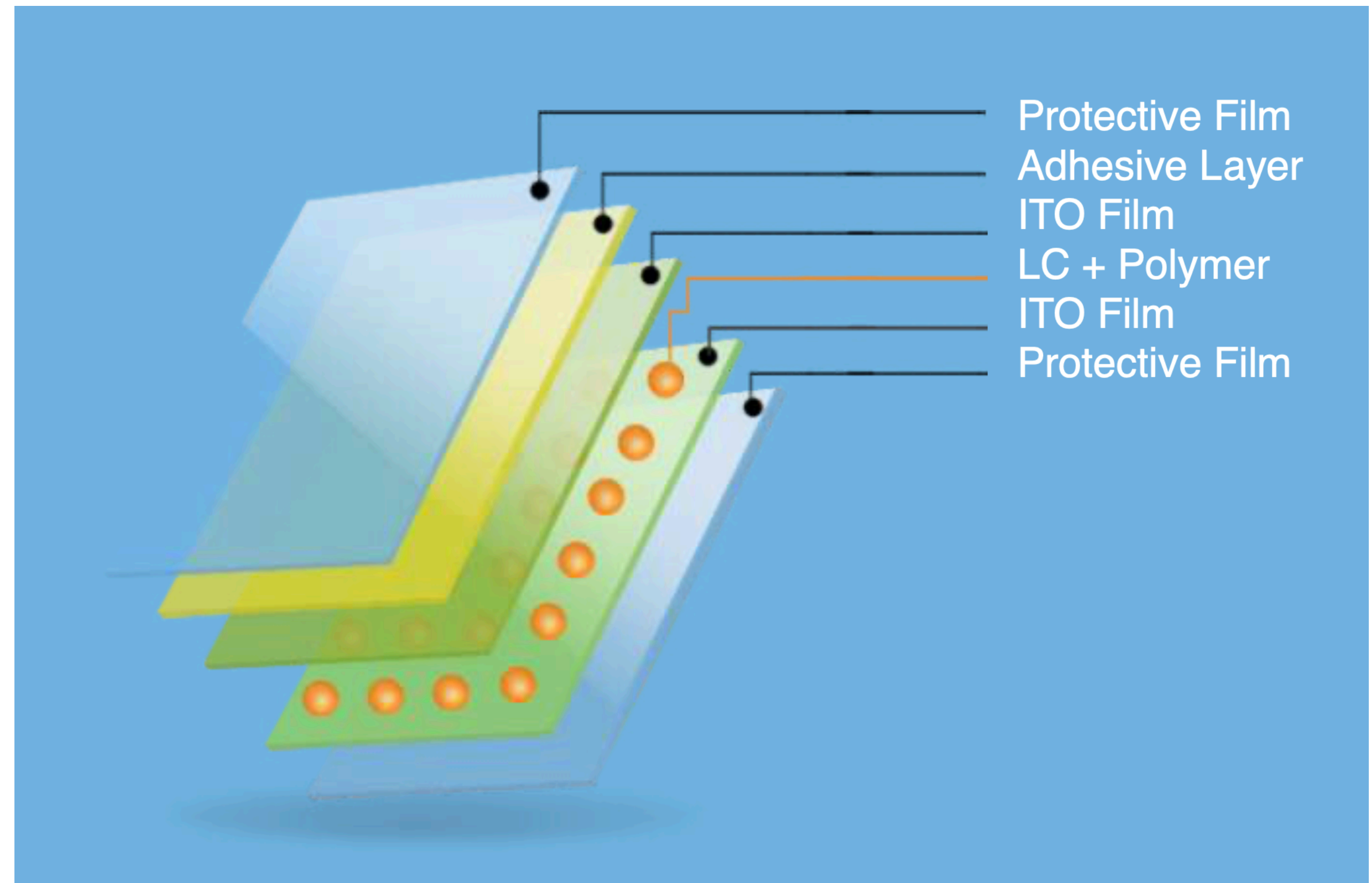
PRODUCTION

PDLC FILM

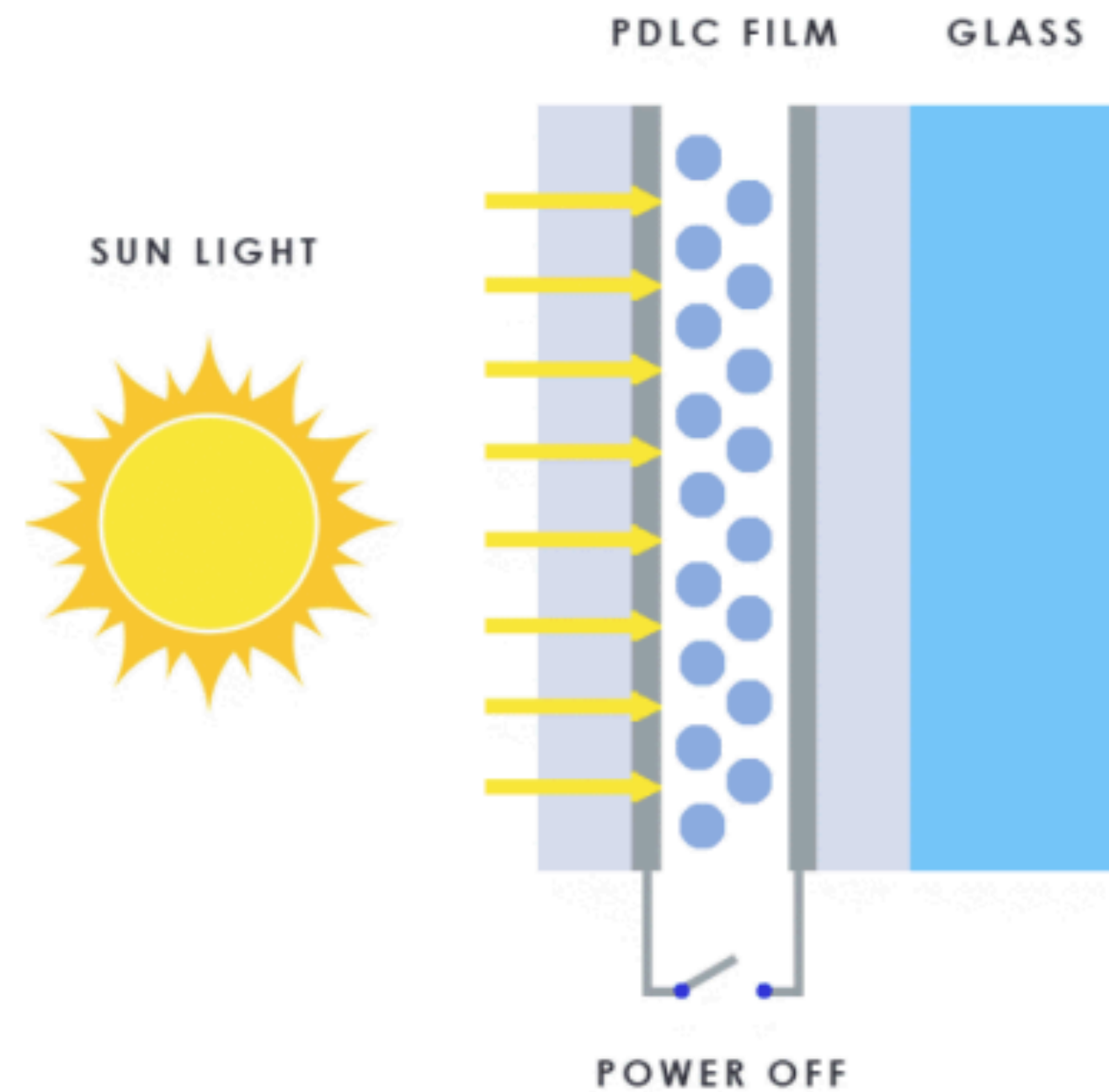
- PDLC = Polymer-Dispersed Liquid Crystal;
- The raw materials imported from Shenzhen;
- New ITO lamination technology reduces the thickness of a Smart Film, performing better transparency;
- Each panel then carefully inspected by UV lamp for ITO imperfections, burned spots or other defects.
- Highest transparency on the market of 87% and a lower haziness level of 2.6% in transparent mode.



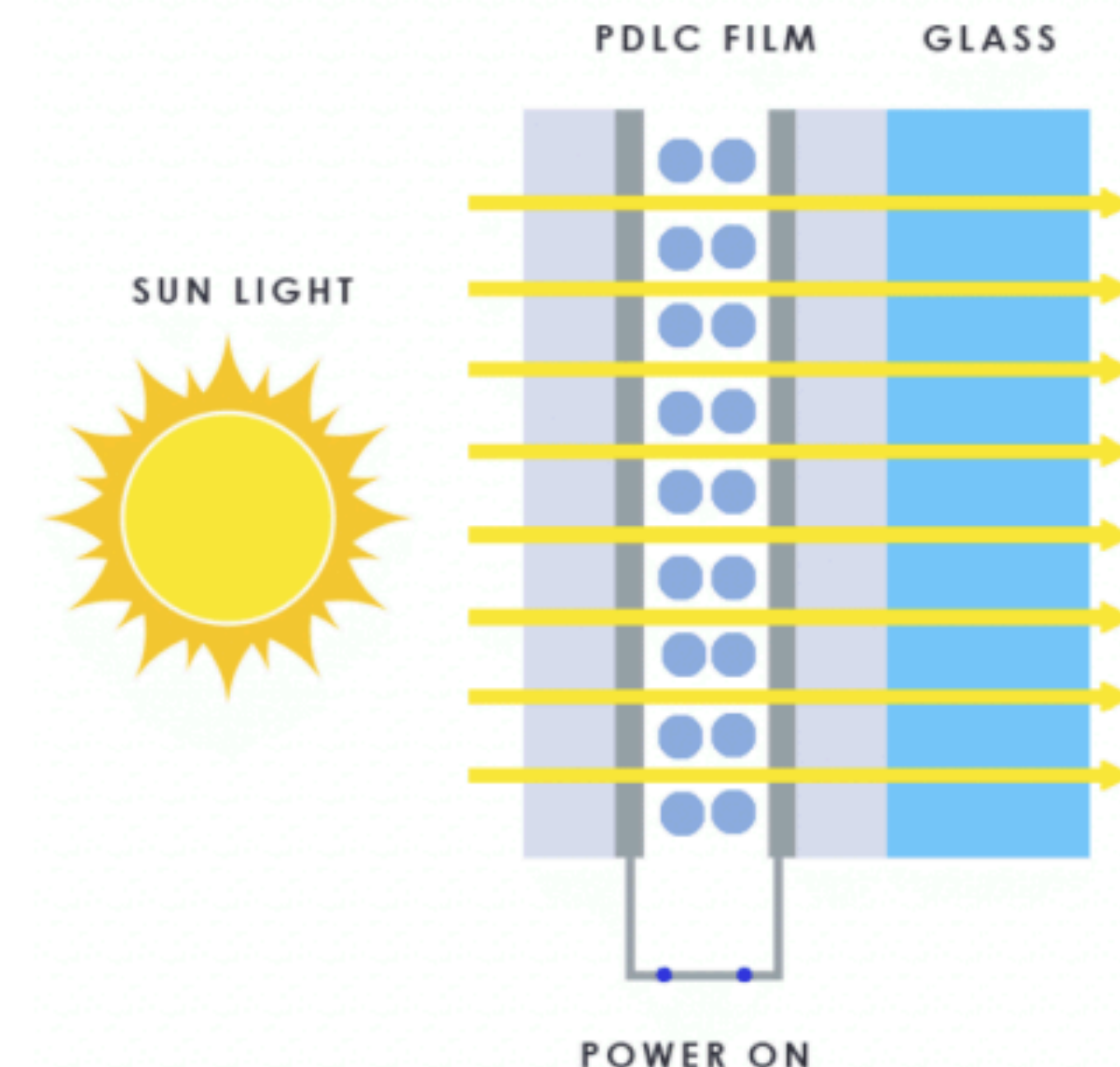
- Thickness 0.0015 inch (0.4 mm);
- During fabrication process each panel is cut by our custom pneumatic “slitter” with tolerance of 0.5mm;
- Our self-adhesive smart film has a maximum size of each panel - 58”(59-60) wide x 126” long
- (1.5 m x 3.2 m)



HOW THE **TECHNOLOGY** WORKS



When the power is switched **OFF** the liquid crystal molecules are randomly oriented scattering light and the Privacy Smart Film stays opaque.

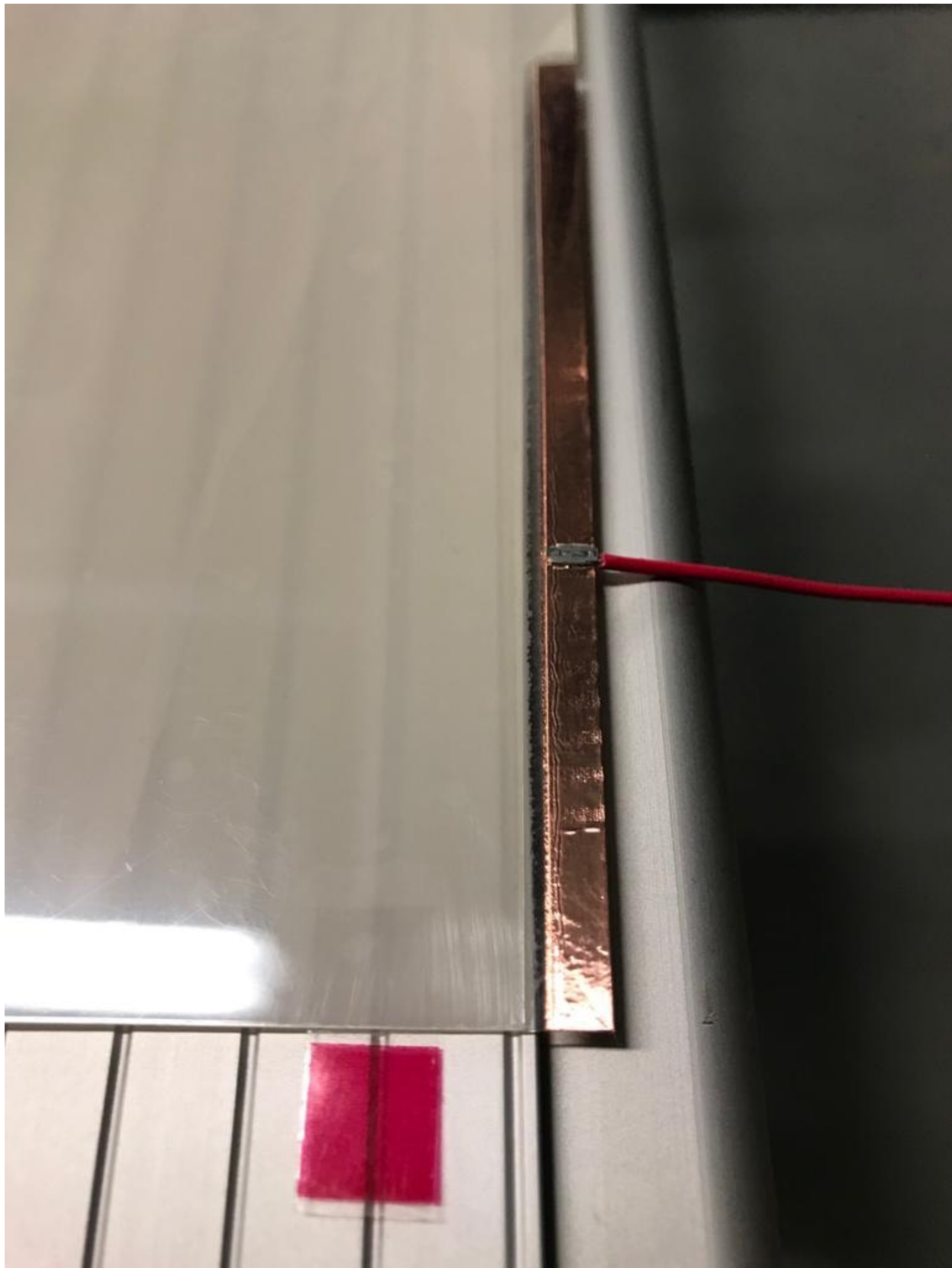


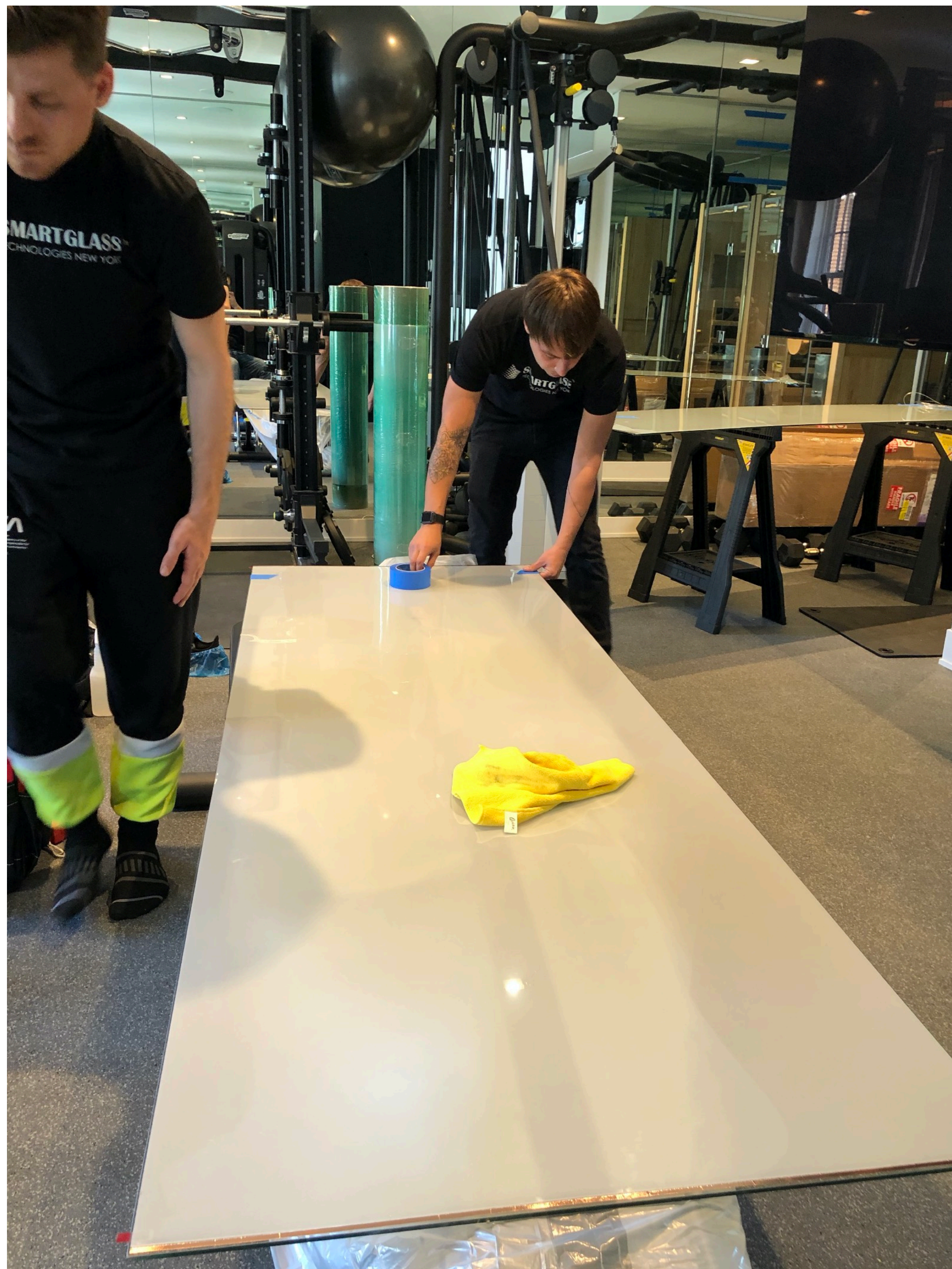
When the power is switched **ON** the liquid crystal molecules align and incident light passes through and the Privacy Smart Film panel instantly becomes transparent.

BUSBARS (ELECTRODES)

- Why we need busbars? To activate the ITO - to turn crystals in ON position.
- Electrodes “busbars” then fabricated using custom silver (highly conductive) compound and high quality copper tape.
- Using our out technological method “anchor” installed on each busbar stripe (please DO NOT solder wires on the anchor);
- Busbar 5mm (quarter of an inch 3/8 inch);

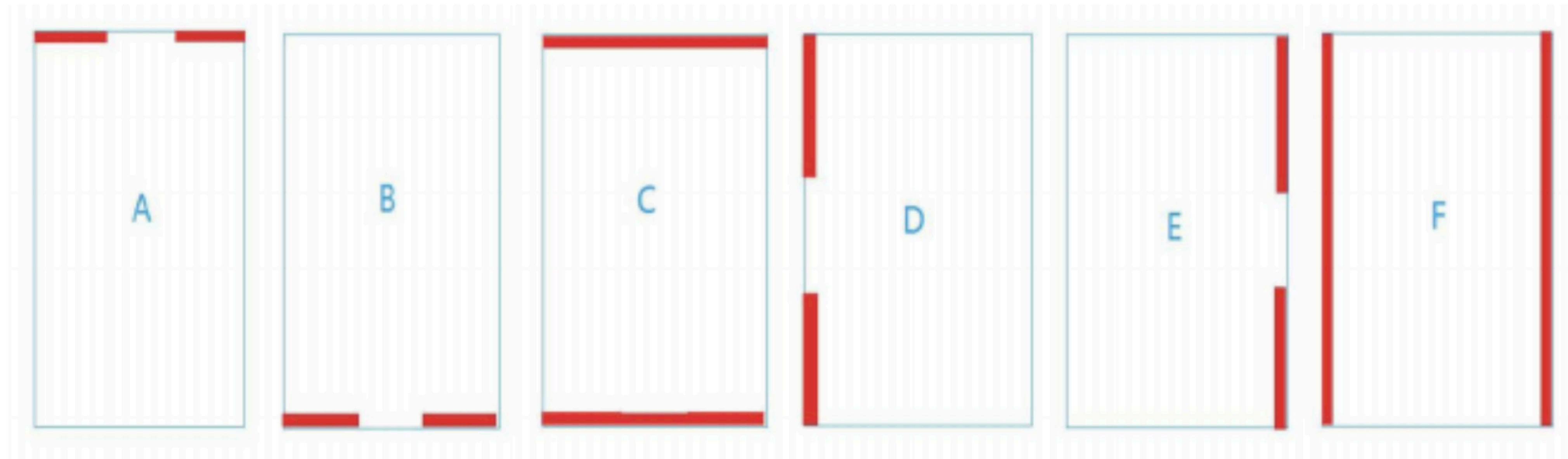




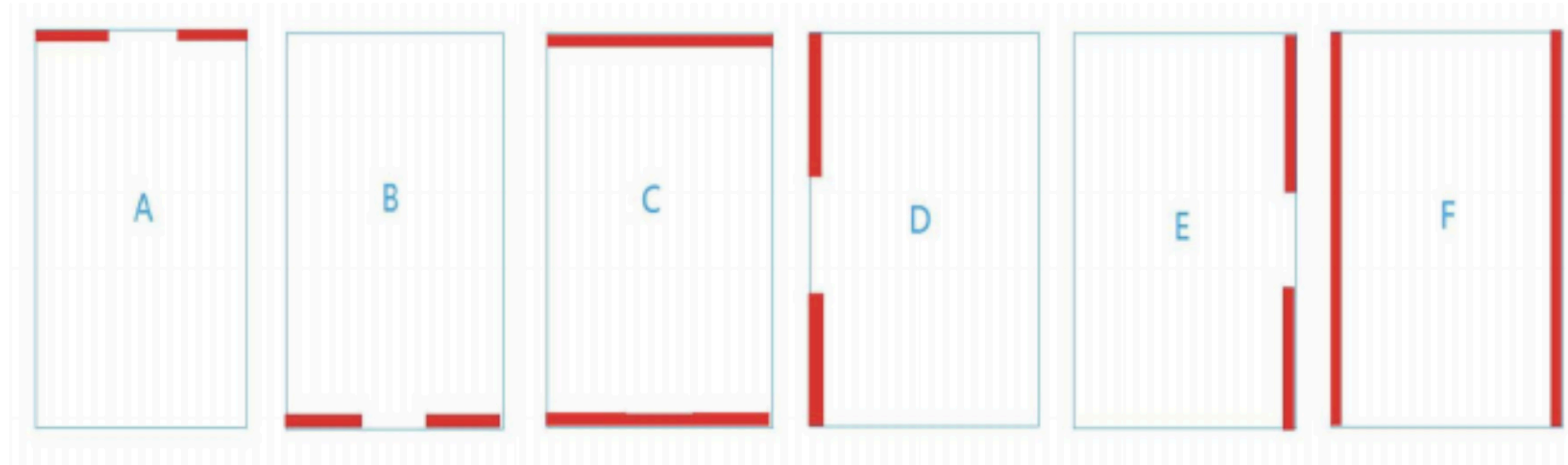


BUSBARS POSITION RULES

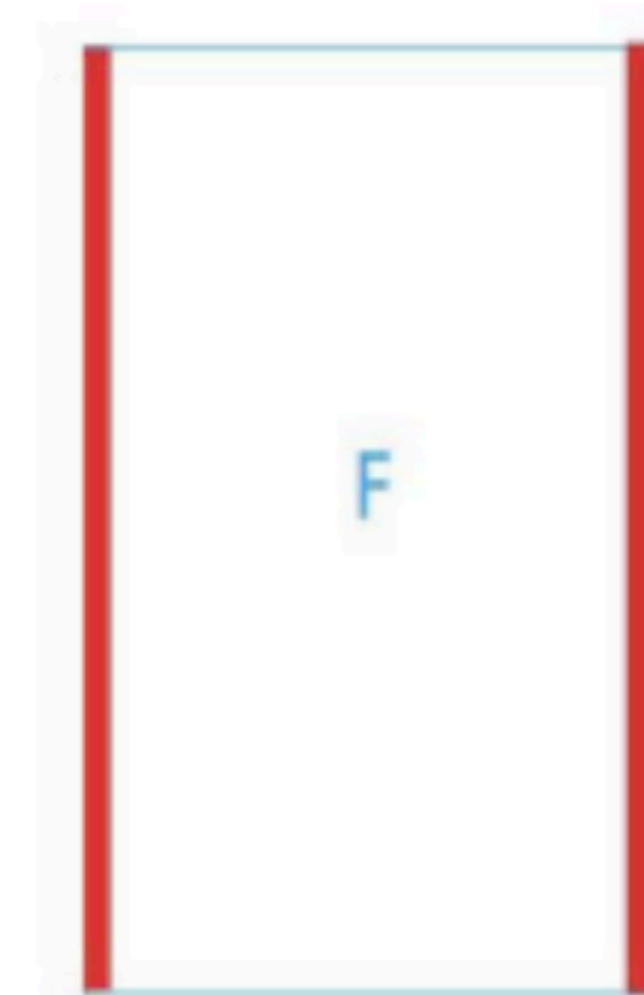
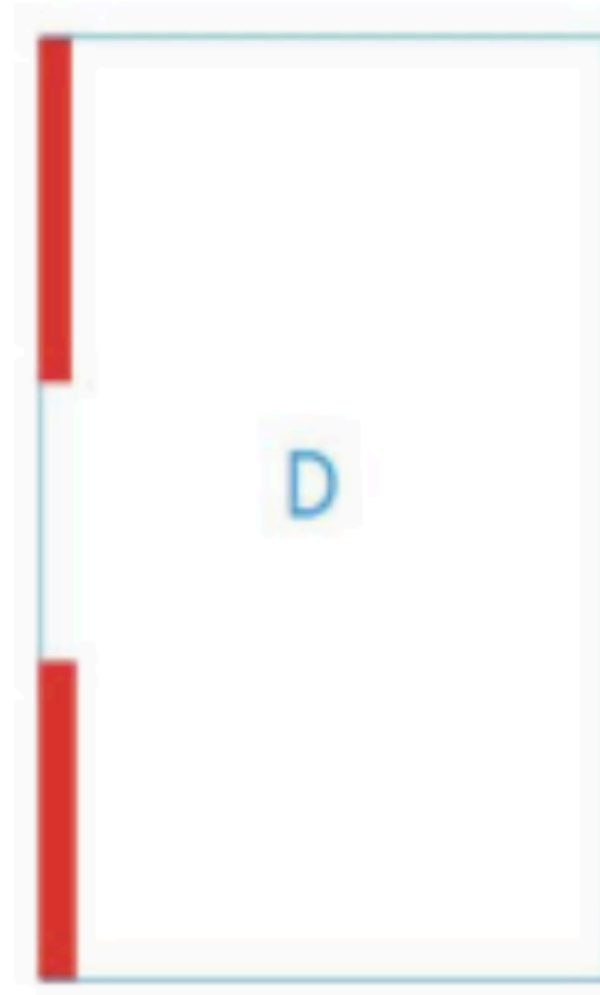
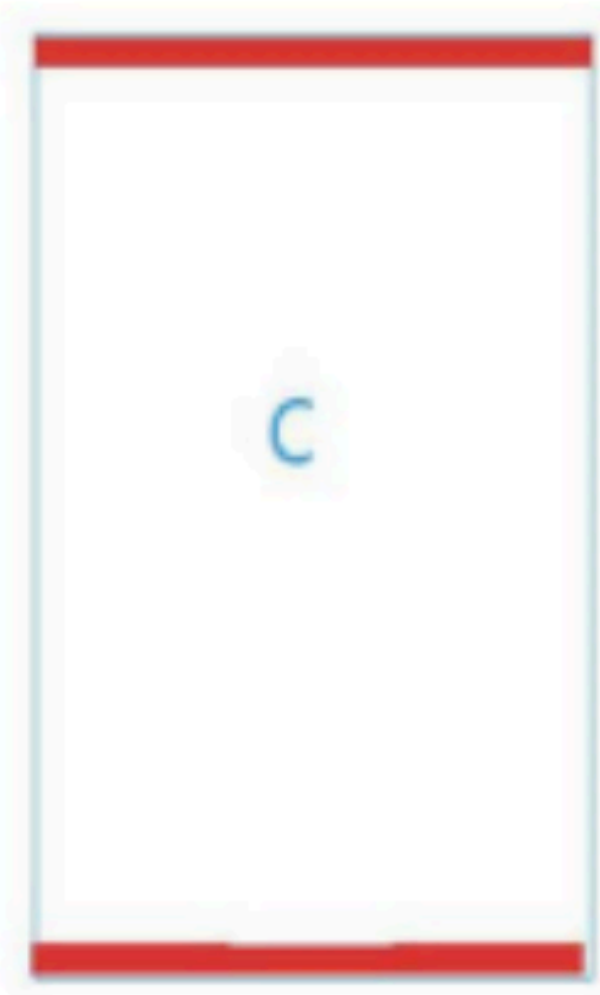
If height does not exceed **90 inch** and the **ratio** of Height to Width is not bigger than **3:1** than any busbar position is possible: A or B or C or D or E or F



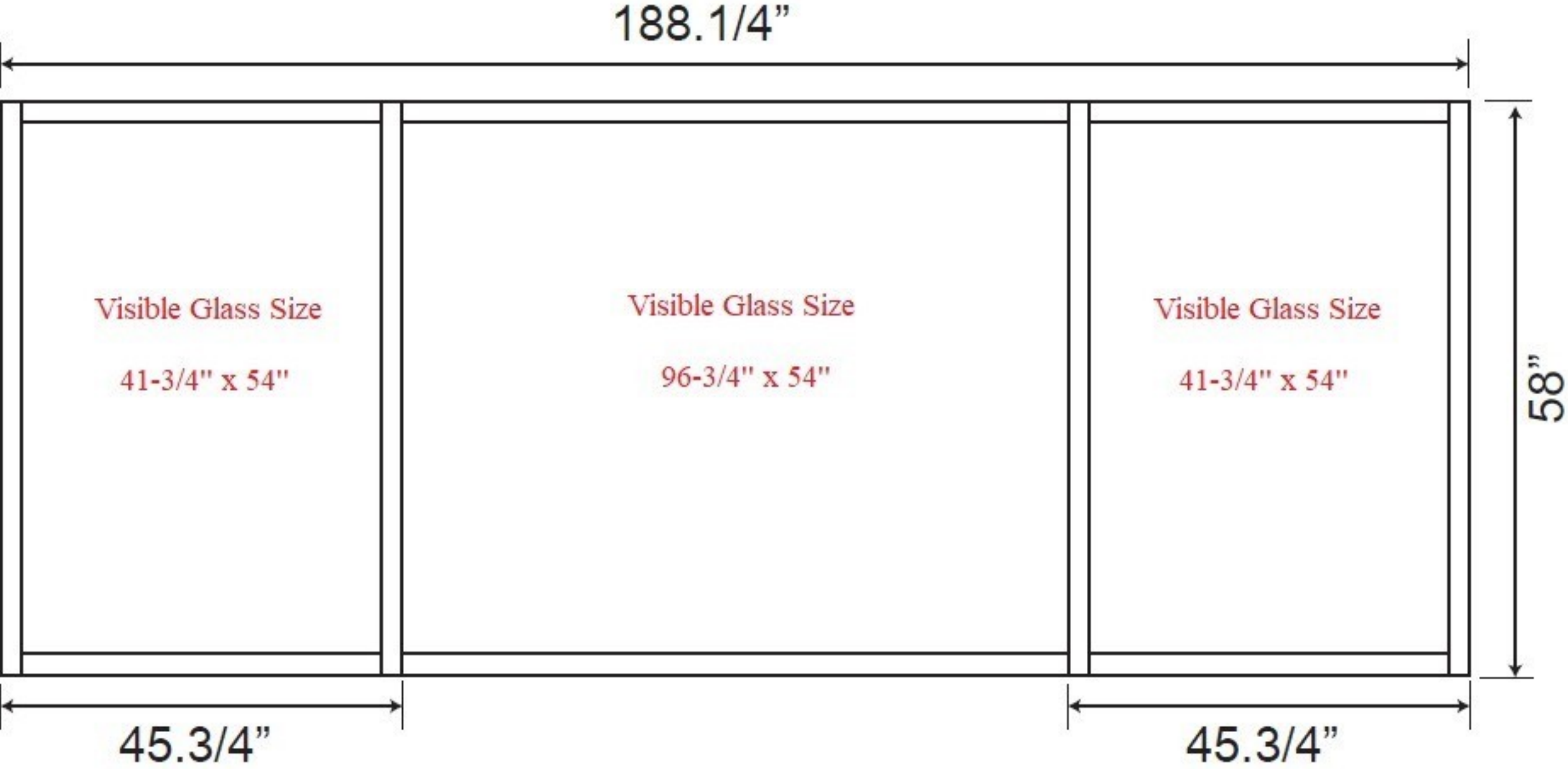
If height does not exceed **108 inch** (9 ft) and the **ratio** of Height to Width is not bigger than **2.5:1** than any busbar position is possible: A or B or C or D or E or F



If the measurements do not meet any of this 2 conditions then we need to have busbars top and bottom or double on the long side: C or D or E or F



HEYWEAR



Actual Glass Sizes
42-3/8" X 54-5/8" - 2 pcs
97-3/8" X 54-5/8" - 1 pc

- Upon fabrication completion, PDLC panels are rolled on the drum one by one secured by stretch wrap.
- Each panel has label with number and size.
- 1/2" bubble wrap used for extra protection during transportation around the drum.
- Then square protective pads used, to secure drum in the shipping box and securely packaged.
- Shipping UPS (2-3 Days Air) - (box sizes: 12 x 12 x 60" / 12 x 12 x 48" / 12 x 12 x 36")
- PDLC film panels are rolled on the drum by width, not by panel number indicated in the work order. In order to avoid possible damage during transportation, wider panels rolled first. Please check panel number before application.

