



# Cardinal LoE-i89 Coating Glass Facts

Cardinal CG Company has developed a durable sputtered Transparent Conductive Oxide (TCO) coating that can be used on the room side glass surface. LoE-i89 enhances the U-Factor of the window by reflecting heat back into the home. Light transmission has been improved in LoE-i89 by approximately 8% over their previous LoE-i81 coating. The patented LoE-i89 coating is an Indium Tin Oxide (ITO) coating applied by the sputtering process.

LoE-i89 coating has the following attributes:

- Sufficient durability so it can be used on the room side glass surface.
- Dependent on the outdoor ambient temperature, indoor room temperature and the percent of relative humidity in the room, LoE-i89 potentially has a higher probability of room side glass condensation in the winter. This is due to the fact that LoE-i89 reflects room side heat back into the room, leaving the interior pane of glass slightly cooler than other glass types.

Care and maintenance:

- Standard cleaning solutions, such as a soap solution with clean water or standard commercial cleaning products (like Windex) can be used to clean the LoE-i89 coating.
- Many rust removal products contain hydrofluoric acid (HF). HF containing materials, including rust removers, will attack glass and the LoE-i89 coating, causing permanent damage. These materials should not be used to clean the LoE-i89 coating.
- Abrasive cleaning products including cerium oxide, Soft Scrub and Bar Keepers Friend should not be used on LoE-i89 coating. In addition, scratch removal should not be attempted on this coating. Buffing with the aforementioned products may cause changes in the appearance of the coating.
- As with standard non-coated glass products, razor blades or other sharp instruments should not be used when cleaning the LoE-i89 glass surface. The surface is as hard or harder than clear glass, but because it's a coated surface, if you scratch it, the scratch is brighter because you've scratched through a coated surface. If a squeegee is used to clean the coated glass surface, the squeegee should not have any exposed metal edges, as the metal edges could scratch the coating or glass.
- If furniture polish or similar materials are used on the wood components of the window, care should be taken to avoid overspray onto the coated glass. If overspray does occur, the glass must be cleaned immediately.