

PDLC glass with auto sliding door



In polymer-dispersed liquid-crystal glass (PDLCs), liquid crystals are dissolved or dispersed into a liquid polymer followed by solidification or curing of the polymer. During the change of the polymer from a liquid to solid, the liquid crystals become incompatible with the solid polymer and form droplets throughout the solid polymer. The curing conditions affect the size of the droplets that in turn affect the final operating properties of the “smart door”. Typically, the liquid mix of polymer and liquid crystals is placed between two layers of glass that include a thin layer of a transparent, conductive material followed by curing of the polymer, thereby forming the basic sandwich structure of the smart door. This structure is in effect a capacitor.