

Visteon displays expert explains innovative POLED and haptic technology for center displays

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Information displays are fast becoming the primary consumer interface in the vehicle cockpit and, as a result, automakers are demanding bigger, brighter and more vivid screens from the supply base. This bold styling, coupled with embedded functions, is opening up the possibility of new applications throughout the vehicle to improve the user experience. With expertise in optics and illumination, Visteon is focusing on advanced manufacturing techniques and disruptive technologies to ensure it stays ahead of the competition with integrated display solutions.

Visteon's latest display solutions incorporate advanced design, enhanced user interface and excellent craftsmanship to deliver class-leading features for entry-level to high-end segments in a variety of vehicle locations from the center panel to rear seat.

Utilizing plastic organic light emitting diode (POLED) technology, Visteon enjoys style freedom, an altogether new and different curvature of the display, narrow borders and very slim design with this industry-shifting solution.

With a host of benefits, cold-formed POLED displays have increased flexibility - so can be easily shaped. They also possess a very high contrast ratio and color saturation, as well as demonstrating fast response to user input and lower power consumption than traditional screens.

With this type of POLED, the front lens is heated and molded into shape and then subsequently molded into the outer packaging. Advantages include curvature and 5mm rolled edges - with the aesthetics offering heightened

desirability to consumers who appreciate the mimicking of tablet and smartphone features and implementation.

Visteon's unique dimmable display offers a bi-modal lens that can electronically transition between a tinted state and a transmissive state - with a range of combinations in between. The technology allows dimming capability for between 1-60 percent with regards to colorized light, allowing the manufacturer to have higher transparency when the display is 'on', and achieving a uniform black surface – which automakers crave for their premium vehicle lines – when the screen is 'off'.

With a glass cover lens, haptic technology capabilities allow the user to feel textures, surface edges and mechanical detents using four actuators placed behind the displays.

Features include button edges - detected as the user moves their finger across the display; feedback on click - felt by the user on press; circular motion felt when using rotary knobs; and swiping and scrolling, which feels like turning a page in a book. The benefits of haptics provide the sensing feedback to ensure the user has made the desired on-screen selection accurately.