Visteon®

NEWS RELEASE

Optical bonding improves readability of vehicle cockpit displays

2017-04-28

Optical bonding is a process that fills the air gap between the cover glass, or touch panel, and the actual display (e.g. LCD, OLED) with a refractive index-matched optically clear adhesive (OCA) to drastically reduce reflections. This method improves readability both indoors and outdoors, and the enhanced display performance leads to a much-improved user experience.

Many “seamless” 2-D and 3-D surfaces, with color LCDs behind, are now using optical bonding for central information displays and digital clusters to reduce the amount of reflection in the optical bonding stack. The trend also extends to 3-D surfaces for displays and instrument clusters.

Optical bonding for automotive displays includes four key processes:

Optically bonded assemblies are complex with a high degree of interaction between design, materials and the manufacturing process – also offering a significant learning curve to meet requirements and to ensure optimization for each new application configuration.

Each new program introduces elements that can significantly affect function, durability and manufacturing performance. These technologies are new – making an early and comprehensive engagement with Visteon’s suppliers critical. Given the rapid change and complexity of some customer requirements, in-house, optically bonded applications represent a significant value-add opportunity for Visteon.

Visteon’s technology and manufacturing strategy for optical bonding is focused on meeting customer requirements

while minimizing risk. Using qualified materials, equipment and manufacturing methods that provide high process capability and yields, Visteon can optimize operational performance and provide flexibility for product cross-loading and equipment re-use.