Patterned Transparent Conductors Enhance Touchscreen Device Performance

At the Consumer Electronics Show (CES) in Las Vegas, 3M unveiled an extension to its line of transparent conductors. The new 3M Patterned Transparent Conductors, used in consumer electronic devices for a variety of applications including projected capacitive touch sensing, offer key advantages over existing ITO/PET designs and help enhance both the performance and appearance of consumer electronic devices.

According to 3M, the company's Patterned Transparent Conductors make it possible for engineers to meet consumers' increasingly demanding design requirements. Today's touch screen devices must be lighter and thinner, with increased capabilities that feature larger display sizes and state-of-the-art touch functionality.

The Patterned Transparent Conductors offer sheet resistance that is orders of magnitude lower than current ITO-based products, on a flexible polyester substrate that can support today's demanding consumer electronics touch sensor appearance and performance requirements. The resulting systems can offer fast, accurate projected capacitive sensing over the entire display service in a stylish, functional and reliable package.

"The extension to 3M's family of Transparent Conductors supports our strategy of providing consumer electronics designers and engineers a range of materials options in this area," said Bret Haldin, business development manager at 3M Electronics Markets Materials Division. "These products can help meet industry requirements driven by the increased use of antennas and projected capacitive touch systems."

Haldin went on to state that the Patterned Transparent Conductors combine many of the advantages of glass-based projected capacitive sensors, such as fine conductive feature width and low sheet resistance, with the thinness and weight advantages of a film-based material.

Because of its flexible polyester substrate and fine conductive features, 3M's new Patterned Transparent Conductor material supports curved and narrow bezel touch sensor designs, enabling new form factors and increasing the effective display area of smartphones and tablet devices. These benefits are based on a highly controllable patterning process which provides interconnect structures, on film substrate, that are four to five times narrower than the industry norm, helping electronics engineers push the boundaries of display and device design.

3M Transparent Conductors are also available as Unpatterned Transparent Conductors for EMI shielding applications. To realize the full benefits of the entire

portfolio of materials, the company encourages considering these materials early in the product development process.

For more information about 3M's Patterned Transparent Conductors and its family of transparent conductors visit 3M's booth # 36526 during the CES show in Las Vegas from January 6-9, 2011 or visit www.3M.com/ptc.

For more information, visit www.3m.com [1].

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[1] http://www.3m.com