

## 3M Showcases Science on Display at CES 2016

New integrated design solutions help enable tomorrow's breakthrough electronics

3M is showcasing its electronics design optimization and assembly solutions for the consumer electronics industry this week in Las Vegas at CES, taking place Jan. 6 – 9. Exhibiting in booth 31411 and demonstrating in its product showcase suites, 3M will display the science behind how 3M enables companies in the consumer electronics and automotive industries to design with freedom by bridging consumer demands for more exceptional displays with maximized assembly and bonding solutions. With a wide array of electronics design solutions like films for display light management, advanced large-format touchscreen technology for more interactive experiences, and advanced bonding solutions for greater device durability, 3M helps enable electronics designers to meet the demands of consumers.

### 3M Privacy Filters Help Prevent Visual Hacking on Touch-Enabled Devices

Ever feel like someone is reading over your shoulder on the train or in a coffee shop? They may be doing more than glancing; they may be visually hacking. Visual hacking is the act of collecting confidential information by looking at someone's screen. The increasing mobility of consumer devices means screens are everywhere - from smartphones and tablets to the new touchscreen laptops which have quadrupled in sales from 2012-2014.<sup>1</sup> To help users of new touchscreen devices protect sensitive information from visual hacking and enjoy the viewing experience that comes with new, high-resolution designs, 3M has developed its [newest and thinnest black privacy filter](#), on display at CES (Booth #31411).

3M Privacy Products allow anyone viewing a screen from a side angle to see a dark, blank screen while the user still sees a clear image thanks to a proprietary micro-louver technology from 3M. The new privacy filter offers a more responsive and consistent touch experience and is thin enough for laptops to close completely. The smooth matte finish helps ensure fingers move easily across a screen without harsh glare or leaving smudge marks, while delivering strong effective blackout performance at a 30-degree side angle. Learn more at [www.3MScreens.com](http://www.3MScreens.com).

### New Touch Systems Technology Provides Easy Integration and Exceptional Interactive Experience

Also on display at CES 2016 (Booth #31411), [3M Touch Systems](#) is previewing its new line of projected capacitive (PCAP) multi-touch systems with proprietary ultrafine metal mesh conductor design. The specially designed ultrafine mesh conductor is just 3 microns wide, allowing for a more optically pleasing, vibrant viewing experience when integrated into a display. Additional features include the ability to project through glass up to 5 millimeters thick, a bezel-free design and support for up to 80 simultaneous touch points for more natural multiuser interaction.

This new technology overcomes design and optical challenges found in other PCT solutions by utilizing advanced optical modelling techniques developed by 30 years of 3M science and service to the display industry. The result is a sensor designed to work universally on 2K and 4K applications across a range of sizes, including planar (curved) screens, while maintaining high image quality and touch responsiveness. Additionally, this unique technology minimizes moiré and sparkle - which are known problems in other PCAP systems - and offers equipment manufacturers and display integrators a more durable, scalable and easy-to-integrate, multi-touch system that can be customized to meet customer-specific applications. The new systems are for displays ranging in size from 15 to 65 inches and are designed for a broad range of commercial display applications, including digital signage, industrial shop floor and casino gaming. 3M anticipates it will unveil its full line of new systems in Q1 of 2016. For more information visit [www.go.3M.com/PCAP](http://www.go.3M.com/PCAP).

## Display Film Solutions Expand Automotive Interior Designs

3M also is showing its light optimization display films that advance the performance of consumer electronic devices and improve user interaction with automotive displays. As automotive displays follow the consumer electronics trend of increasing in size and capability, stray light from those displays, as well as from instrumentation, can create reflections on the windows or side glass. The 3M [Advanced Light Control Film](#) booth demo shows how display films can help manage light distribution and reflections from glass surfaces in an automotive interior to help minimize driver distraction and enable a more open and aesthetically pleasing design.

## Electronics Device Bonding and Protection

To help make devices more durable, 3M's liquid adhesives can now be applied as a pressure-sensitive adhesive (PSA) to a variety of substrates. The rapid-bond, high-strength polyurethane (PUR) adhesive can be laminated once it is dried, is capable of dispensing or jetting very thin glue lines, and offers faster handling strength, quicker curing and tougher adhesive strength.

Further enhancing product durability, [3M Electronics Materials Solutions](#) is developing PSAs that exhibit high chemical resistance. This is designed to help protect devices from everyday interaction with consumer chemicals like oils from a person's skin or added chemicals like sunscreen and kitchen cleaners. The bonding solutions also can help extend the overall life of a device and improve its functionality.

Providing additional device protection, 3M™ Novec™ Electronic Grade Coatings are designed to help provide moisture and corrosion protection for electronic components, as well as easy-to-clean properties and smudge resistance for device displays.

3M provides a wide array of innovative products and systems that enable greater speed, brightness and flexibility in today's electronic devices, while addressing industry needs for increased thinness, sustainability and longevity. Using the most recent R&D advances in materials and science, 3M offers technology, materials and components to create exceptional visual experiences; enable semiconductor processes and consumer electronics devices, and enhance and manage signals. 3M helps enable the digitally enhanced lifestyle of today and tomorrow. Learn more at: [www.3M.com/electronics](http://www.3M.com/electronics).

## About 3M

At 3M, we apply science in collaborative ways to improve lives daily. With \$32 billion in sales, our 90,000 employees connect with customers all around the world. Learn more about 3M's creative solutions to the world's problems at [www.3M.com](http://www.3M.com) or on Twitter [@3M](#) or [@3MNewsroom](#).

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<sup>1</sup> IDC Worldwide Quarterly PC Tracker, Global, Commercial market only, 2012-2014 data

3M Media Relations Jane Kovacs, 512-984-6747 or PR Agency Contact Heidi Wight, 612-455-1795 [heidi.wight@padillacrt.com](mailto:heidi.wight@padillacrt.com)