



VARI GUARD
SMART GLASS



A MORE INTELLIGENT WAY TO CONTROL RESEARCH FRONTIERS' SPD-SMARTGLASS TECHNOLOGY IN CARS SHOWN AT ELECTRONICA 2018

Munich, Germany, November 15, 2018 – Daimler AG has been using SPD-SmartGlass technology from Research Frontiers (Nasdaq: REFR) to allow occupants in tens of thousands of their cars (including their flagship S-Class) to press a button and change the tint of their roof from dark to clear. Mercedes' MAGIC SKY CONTROL roof blocks up to 95% of the heat entering the vehicle (reducing temperatures by up to 18°F/10°C), and creates an “open-air” feeling inside the vehicle without having to open the roof. SPD-SmartGlass technology in cars has also been shown to increase the driving range of electric vehicles by up to 5.5%, reducing CO2 emissions by up to 4 grams/kilometer, and improve fuel efficiency, comfort and security.

This week, at electronica 2018, the world's leading trade fair and conference for electronics, Texas Instruments demonstrated a control unit [reference design](#) (TIDA-020013) created to more intelligently and efficiently power SPD-SmartGlass electronically dimmable glass using a standard 12-volt automotive battery. The interactive demonstration is paired with gesture control to lighten or tint glass with the SPD-SmartGlass technology.



SPD-SmartGlass, using the intelligent control unit reference design from Texas Instruments, at electronica 2018 in Munich, Germany.

We invite you to view [this video](#) to learn more and to see the gesture-controlled SPD-SmartGlass in action.

The SPD-SmartGlass sunroof application, supplied to Texas Instruments by VariGuard, a business unit of SPD-SmartGlass developer Research Frontiers, gives occupants more control over the lighting in their car, removes unwanted heat, light and glare, and increases the driving range of electric vehicles. It also miniaturizes the electronics package and reduces the cost of the entire system to the auto maker, while also improving power efficiency.

Engineers can use the TI reference design to accelerate their own designs using electronically dimmable glass. The design includes TI's highly efficient power management circuits and a 32-bit C2000™ real-time MCU to help generate the necessary signal to drive and control substantial surface areas.

To learn more about electronica 2018, visit the [event's website](#).

About VariGuard SmartGlass

VariGuard SmartGlass and SmartPlastic products offer a wide range of visible light transmission, instant switching between dark and clear states, and over 99% UV-blocking at all times. Based on patented SPD light-control technology developed by VariGuard's parent company Research Frontiers, VariGuard SmartGlass is used in a variety of industries worldwide.

About Research Frontiers Inc.

Research Frontiers (Nasdaq: REFR) is a publicly traded technology company and the developer of patented SPD-Smart light-control film technology which allows users to instantly, precisely and uniformly control the shading of glass or plastic products, either manually or automatically. Research Frontiers has licensed its smart glass technology to over 40 companies that include well known chemical, material science and glass companies. Products using Research Frontiers' smart glass technology are being used in tens of thousands of cars, aircraft, yachts, trains, homes, offices, museums and other buildings. For more information, please visit our website at www.SmartGlass.com, and on [Facebook](#), [Twitter](#), [LinkedIn](#) and [YouTube](#).

Note: From time to time Research Frontiers may issue forward-looking statements which involve risks and uncertainties. This press release contains forward-looking statements. Actual results, especially those reliant on activities by third parties, could differ and are not guaranteed. Any forward-looking statements should be considered accordingly. "SPD-Smart," "SPD-SmartGlass," "VariGuard," "VariGuard SmartGlass," and "VariGuard SmartPlastic" are trademarks of Research Frontiers and its business unit VariGuard SmartGlass. MAGIC SKY CONTROL, Mercedes-Benz, and model designation S-Class are trademarks of Daimler A.G.

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