

AGC's Light Control Panoramic Roof with Low-E Coating Adopted in the LEXUS "RZ", Toyota LEXUS' First Dedicated BEV Model

Tokyo, May 11, 2022 - AGC (AGC, Inc.; Headquarters: Tokyo; President: Yoshinori Hirai), a world-leading manufacturer of glass, chemicals and high-tech materials, has developed a light-control panoramic roof with Low-E coating, which has been adopted for the LEXUS RZ, a dedicated BEV*¹ model to be launched by TOYOTA MOTOR CORPORATION in the second half of 2022. The use of Low-E glass*² with high solar control and heat insulating performance allows the panoramic roof to provide both an open cabin environment and a comfortable cabin temperature, while the elimination of a sunshade contributes to a lighter body.



LEXUS RZ, a dedicated BEV model released by Toyota



Shade-less panoramic roof
(Photo shows dimmed/transparent mode of dimming glass)

While conventional panoramic roofs let in light and create an open interior space, they are susceptible to solar heat and outside temperature, requiring sunshades to keep the cabin comfortable and preventing the occupants from fully enjoying the open feeling due to heat and cold issues.

The special Low-E coating technology developed by AGC recently for automotive glass has cleared the reliability evaluation required for the LEXUS brand, which pursues high quality and advanced features. It has also achieved unprecedented solar control and heat insulation performance, thereby greatly reducing the heat in summer and cold in winter, which had been an issue. The shade-less configuration also contributes to vehicle weight reduction and head clearance (the distance from the top of the head to the ceiling when seated).

Furthermore, a light-control type is also available to instantly control the transmitted light and adjust the light environment inside the cabin, providing new enjoyment, comfort, and experiential value to the LEXUS brand in the new era.

The AGC Group has positioned the mobility business as a strategic business under its medium-term management plan **AGC plus-2023**. AGC will contribute to the realization of new mobility and a sustainable society by providing optimal materials and solutions as the functions required of automotive glass diversify with the advancement of CASE.

*1 BEV: Abbreviation for Battery Electric Vehicle

*2 Low-E glass: Abbreviation for low emissivity glass. Glass coated with a special metallic film reduces heat transfer by radiation and has high solar control and heat insulating performance.

<MEDIA INQUIRIES>

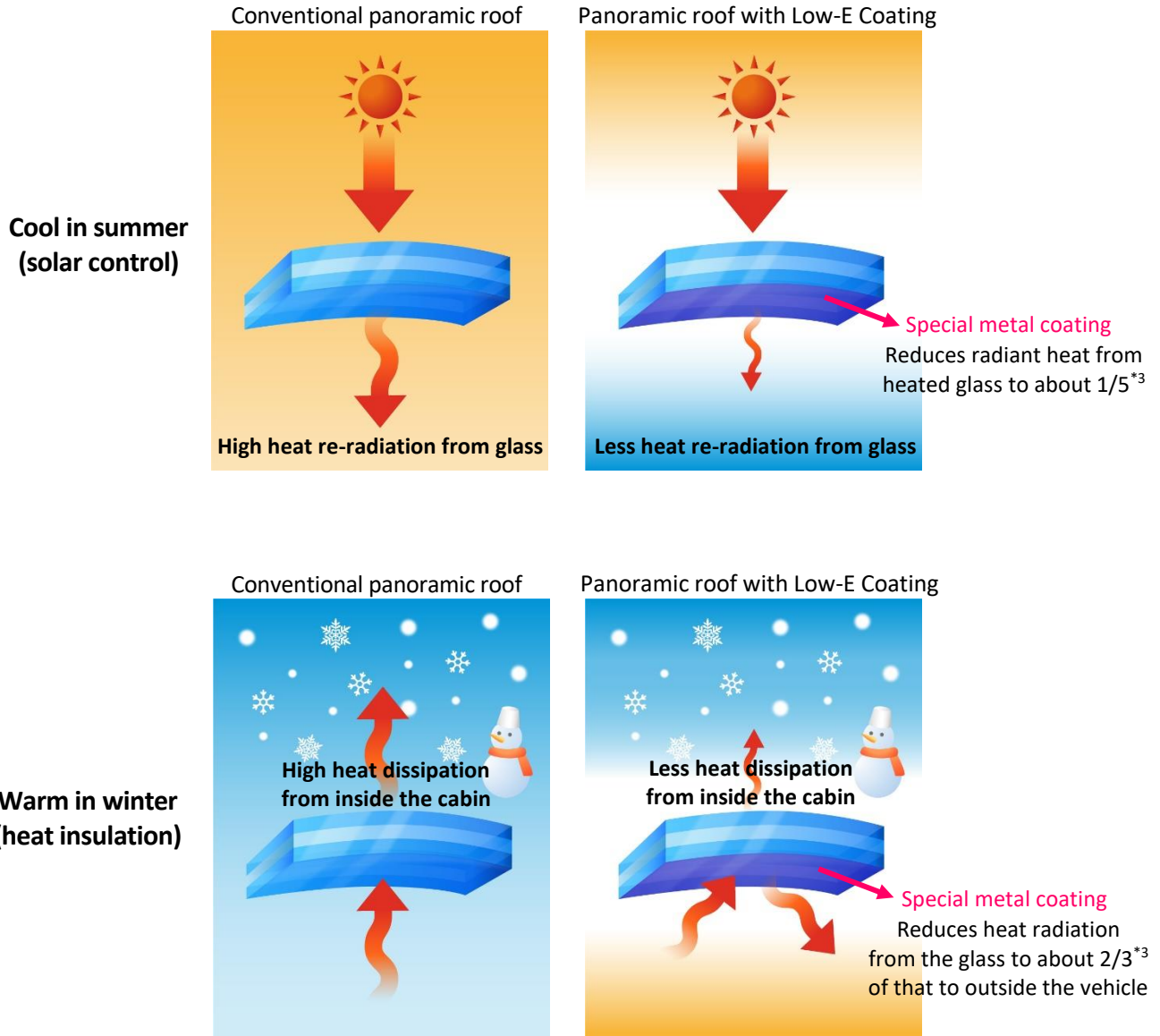
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[Reference: Technical Overview]

<Special Low-E coating for automotive glass>



*3 Measured values: Values as measured by AGC, not guaranteed values.

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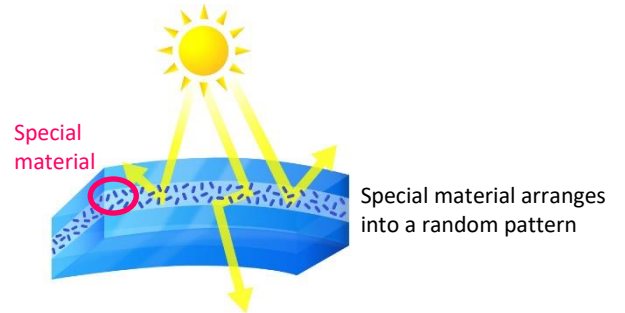
< Light Control Glass "WONDERLITE™ Dx" >

Voltage is used to control distribution and orientation of the special material in the film encapsulated between layers of interlayer in laminated glass, enabling instantaneous switching between dimmed mode and transparent mode.

Dimmed mode (opaque state, when switched off)



Once arranged into a random pattern, the special material diffuses light from the outside to turn the glass opaque and reduce glare.

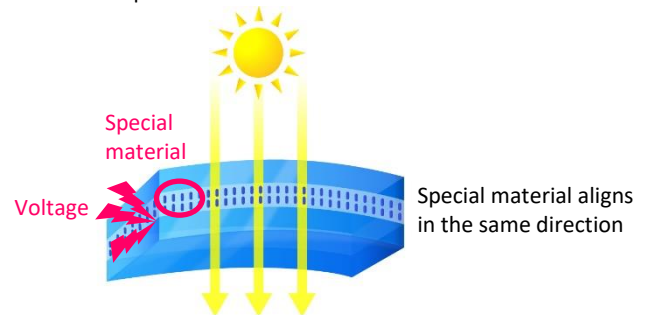


Light is scattered and glass becomes opaque

Transparent mode (clear state, when switched on)



When a voltage is applied to the film, the special material aligns in the same direction, the glass becomes transparent because as light is able to pass through. This provides a wide sense of openness.



Becomes transparent as light is able to pass through

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