

**EMBARGOED UNTIL May 16, 08:30 KST**

## **Hyundai Motor Group Develops Intelligent Air Purification System**

- Smart Air Purification monitors and improves in car air quality
- Passengers can check real-time information of interior air quality through vehicle's Audio, Video, and Navigation (AVN) system
- Innovative laser-based fine particulate sensors ensure system's durability and reliability

**SEOUL, May 16, 2019** — Hyundai Motor Group developed an intelligent 'Smart Air Purification system' that monitors interior air quality to automatically filter the air inside a car. The innovation builds on the Group's prior work to enhance in-car air quality by introducing a new automated monitoring system, which continually checks interior air quality until it achieves an 'Excellent' status.

Combined with advanced filtering innovations, the technology can remove fine particulates before passengers enter the car, and purification of cabin air throughout a journey. The new development, already under consideration for future Hyundai and Kia vehicles, responds to growing concerns about the health impact of fine particulates, especially in highly-congested urban areas.

Conventional air purification systems only operate for a set period when activated, turning off after a designated time regardless of current cabin air quality. However, the new Smart Air Purification system constantly monitors the car's air quality, activating the purification function if the air quality decreases to 'Fair' level. It then maintains the cleaning process until the air quality improves to an 'Excellent' level. Even if the exterior air quality is at 'Poor' level, the system can purify air inside to 'Excellent' quality in almost instantaneously.

Passengers can monitor interior air quality levels via the car's audio-video navigation (AVN) screen, with a visual 16-bar digital display of air quality that fluctuates in real-time. This is categorized according to Korea Environmental Corporation Standards, which categorizes four levels of air quality based on the presence of fine particulate matter: Excellent, Good, Fair and Poor.

"Enabling our customers to breathe the cleanest air, even in highly-polluted areas, is a demonstration of how Hyundai Motor Group strives to care for its customers," said YongSuk Shin, head of FR Interior

& Exterior System Engineering Design Team. “This innovation is just one of many projects we are working on to provide our customers with the best in-car environments.”

Hyundai Motor Group designed an integrated, laser-based sensor to ensure the system’s durability and reliability. Typical sensors are prone to reliability issues as fine particulates can gradually build up on the measurement lens. A laser-based design sidesteps this problem, giving room for innovation by the Hyundai Motor Group R&D team. Furthermore, rigorous testing guarantees that the purifier’s fan motors and sensors will maintain full functionality at environments of both extreme heat and cold.

The new interior purification system is paired with advanced high-performance air filters which enhance the collection rate of fine particulates from 94% to 99%. Moreover, the new filtration system features a charcoal-based deodorization function and can automatically close car windows to assist the purification process.

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### **About Hyundai Motor Group**

Hyundai Motor Group is a global corporation that has created a value chain based on automobiles, steel, and construction and includes logistics, finance, IT and service. With about 250,000 employees worldwide, the group’s automobile brands include Hyundai Motor Co. and Kia Motors Corp. Armed with creative thinking, cooperative communication and the will to take on all challenges, we are working to create a better future for all.

For more information on Hyundai Motor Group, please see:

<https://www.hyundaimotorgroup.com>

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