



Press Release

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Marelli Showcases Forward-Looking Lighting Technology at Auto Shanghai 2025

Solutions like the Pixel Rear Lamp, Near-Field Ground Projection, and the Thin Lit Line Headlamp define new frontiers in terms of intelligent interaction between vehicles and car design

Marelli, a global technology partner to the automotive industry, will showcase its **latest automotive lighting innovations** at **Auto Shanghai 2025**, from April 23 to May 2 at the Shanghai National Exhibition and Convention Center. At the booth characterized by the theme “*Fast Forward. Forward Fast.*” – located in Hall 1.2H, Stand 1BF009 - the highlights of Marelli’s innovations in automotive lighting technology will be the world’s first OLED TFT applied to the Pixel Rear Lamp, the Near-Field Ground Projection technology, and the revolutionary Thin Lit Line Headlamp. These solutions define new experiences for smart mobility and promote the evolution of automotive lighting through co-creation with customers.

Pixel Rear Lamp: the future of automotive taillights

As a technology premiere, Marelli will showcase its concept product, the “Pixel Rear Lamp”, which integrates high-resolution display technology into the taillights, leveraging OLED-TFT technology to embrace the trend of dynamic light communication and personalization. Thanks to this innovation, the pixel rear lamp can display vehicle status and driving intention information to other road users in the form of dynamic images, thereby significantly improving driving safety. This technology also brings unprecedented design freedom to automotive designers, making personalized lighting signatures possible.

The pixel rear lamp also enables seamless vehicle-to-everything (V2X) integration. Compared with traditional miniLED and MicroLED display solutions, pixel rear lamps achieve a significant reduction in cost while ensuring delicate and smooth dynamic image display.

Near-Field Ground Projection: a display of symbols designed for safe and smart interactions

Marelli’s Near-Field Ground Projection enables dynamic color projections on the ground. As the respective modules can be mounted in front, rear and on sides of the vehicle, a 360-degree lighting impression is created. This revolutionary technology significantly enhances vehicle safety and greatly improves interaction between the vehicle, users, and other traffic participants. In terms of safety, the product can project clear color warning signs in real time to alert surrounding vehicles and pedestrians about vehicle actions such as turning, reversing, emergency braking, and passenger drop-off. In terms of smart interactions, it also projects dynamic real-time displays of autonomous driving status, battery status, driving range, and the owner's personal QR code with contact information, enhancing convenience and intuitive interaction. In terms of customization, the lamp supports welcome light carpets and can even project movies or interactive games, meeting the demand for personalized vehicle expression and in-car entertainment.



Weighing as little as 60 grams, the compact and lightweight projection module allows flexible installation in doors, rearview mirrors, and fenders. It projects full-color dynamic streaming content with at least 50 lumens brightness and 200,000-pixel resolution, covering an area no smaller than a 44-inch TV. At the Marelli booth, the “h-Digi® microLED & Near-Field Ground Projection” is an innovation case integrating near-field projection into headlamps, enabling ground or forward projection of full-color dynamic streaming content with 100 lumens brightness and 400,000-pixel resolution. The projected area approximates a 100-inch TV, making it ideal for outdoor camping and entertainment.

Thin Lit Line Headlamp: redefining automotive lighting aesthetics and functionality

Marelli's latest generation Thin Lit Line Headlamp pushes automotive lighting design boundaries with an unprecedented width of just 5 millimeters. This breakthrough ultra-slim design removes traditional styling constraints, empowering automotive designers to develop distinctive, futuristic, and personalized vehicle appearances aligned with consumer demands for advanced automotive aesthetics.

Despite its extremely slim profile, the Thin Lit Line Headlamp maintains exceptional optical performance and functionality, integrating core features such as Adaptive Driving Beam (ADB), low beam, turn signals, and daytime running lights, with extensive customization options, reflecting Marelli's superior optical design capabilities and deep technological expertise.

The Near-Field Ground Projection module and Thin Lit Line Headlamp are both ready for mass production. Thanks to Marelli's standardized module platform and large-scale localized development capabilities, the product development cycle has been significantly shortened, effectively helping car manufacturers respond quickly to rapidly changing market demands and achieve rapid mass production and iterative upgrades of innovative technologies.

“We are proud to showcase the world's first application of an OLED TFT in exterior lighting with our 'Pixel Rear Lamp,' at Auto Shanghai,” stated Frank Huber, President of Marelli's Lighting business, “alongside two other outstanding innovations: our 'Near-Field Ground Projection' module and 'Thin Lit Line Headlamp'. These solutions demonstrate our ambition to continue setting trends in the automotive lighting field, aiming to co-create solutions with our customers that enhance and personalize car design and the driving experience, while also increasing safety functions.”

Kelei Shen, EVP of Marelli, President of Marelli China, stated: *“As a leader in automotive lighting, Marelli is dedicated to driving industry innovation in China, the world's largest automotive market, and delivering safer, smarter, and more personalized mobility experiences. Our latest technologies showcased at Auto Shanghai highlight our commitment to innovation and set new benchmarks in intelligent interaction and automotive design aesthetics. These innovations underscore our capability to quickly transform ideas into mass-producible advanced solutions, effectively meeting customer demands.”*

**About Marelli**

Marelli is a global mobility technology supplier to the automotive sector. With a strong and established track record in innovation and manufacturing excellence, our mission is to transform the future of mobility through working with customers and partners to create a safer, greener, and better-connected world. With around 45,000 employees worldwide, the Marelli footprint includes over 150 sites globally.