

PRESS RELEASE

***red dot Award Product Design 2008* assigned to the world's first full-LED headlamp**

The world's first mass-produced full-LED headlamp, developed by Magneti Marelli Automotive Lighting for the Audi R8, was assigned the *red dot 2008 Award* for product design.

The prize was presented Monday night during the awards ceremony held at the Aalto Theatre in Essen, Germany,

The *red dot Design Award* is one of the most important and best-known events worldwide in the design sector. A jury of experts evaluated and tested various products competing for the award according to the following criteria: innovation, functionality, durability, economic compatibility, ergonomic aspects and quality. A total of 3,200 products from 51 different countries took part in this year's edition.

By developing the full-LED headlamp for the R8, Audi and Magneti Marelli Automotive Lighting together have marked a turning point in automotive design and lighting technology. Besides the collaboration with Audi concerning design, Magneti Marelli Automotive Lighting provided the technological solution for the full-LED headlamp.

In this headlamp, all lighting functions – low beam, high beam, turn signal, Day Running Light and parking light – were developed with LED (Light-Emitting Diode) technology.

This product features more than 20 innovative concepts.

The basic light distribution is produced by two free-form reflectors in the shape of a shell, supplied by white LED arrays. The greatest advantage offered by white LEDs lies in the colour of their light, which is also known as the colour temperature. Reaching approximately 6,000° Kelvin, the intensity of their light is just about the same as the quality of daylight, thus ensuring excellent visibility for improved active safety.

On top of an average useful life that is longer than that of the vehicle itself, LED technology reduces fuel consumption and emissions. The use of LED-equipped Day Running Lights also makes an important contribution to a proper energy balance, since 75% of the total driving distance in the world is covered during the daytime.

In specific terms, DRLs with LED technology offer an energy consumption of 14 W (with 0.36 g of CO₂/km) per vehicle. When regular low beams are used instead, energy consumption is approximately 300 W (with 7.86g of CO₂/km). This means a consumption that is 20 times greater compared to the LED daytime running lights.

From a design standpoint, the front headlamps represent the “eyes” of a car, and they make a significant contribution to characterising the manufacturer’s family feeling. In the full-LED headlamp of the Audi R8, the “wing” design of the Day running light (DRL) covers a special role, since it delicately emphasises the curved bottom contour of the headlamp and represents an unmistakable element of style.

The “wing” contour of the DRL is illuminated when the car is turned on, and serves as a daytime running light or as a parking light with reduced lighting performances. Twenty-four closely spaced Advanced Power Top LEDs give the DRL a homogeneous look. The illuminated band of the daytime running light, together with the LED turn signals, frame the headlamp and form an absolutely unique three-dimensional illuminated sculpture.

The design of the low beam module, on the other hand, draws inspiration from Nature, and is reminiscent of a pinecone in the process of opening up. These features are a clear illustration of the new design possibilities offered by LEDs.

The use of LED technology in outside vehicle lighting is only at the beginning. Magneti Marelli Automotive Lighting still sees a wide range of opportunity for further developments and future innovations in this field – especially in combination with adaptive lighting systems and in terms of optimising energy consumption.

Magneti Marelli, a company belonging to the Fiat Group, designs, produces and markets advanced systems and components for motor vehicles. With its 46 production facilities (56 production units), 9 R&D centres and 27 application centres in 16 countries, 28,000 employees and a turnover of 5 billion Euros in 2007, the group supplies all the leading carmakers in Europe, North and South America and the Far East. The business areas include: Lighting - Electronic systems- Powertrain – Suspensions and Shock absorber systems - Exhaust systems– Aftermarket Parts & Services - Motorsport.

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