

Mercedes Multibeam LED headlamps - in a class of their own

HELLA's 84 light pixels provide the best possible light on the road



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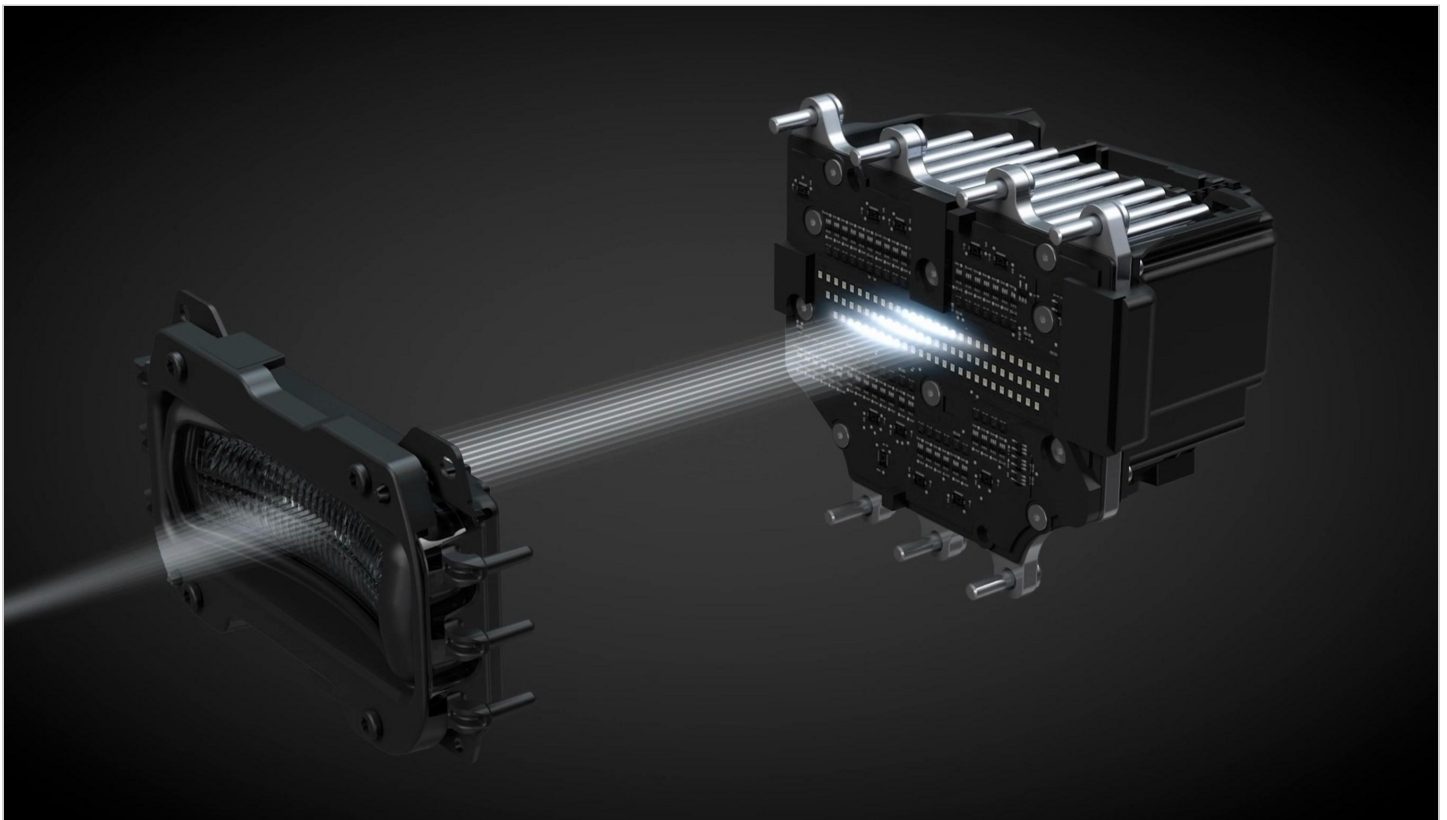
22 Jun, 2016, 10:28 ET

LIPPSTADT, Germany, June 22, 2016 /PRNewswire/ -- Daimler's new Mercedes-Benz E-Class is making its debut in 2016 with a world first: three-layered multibeam-LED headlamps developed in partnership with lighting and electronics experts at HELLA.

The three-layered display includes 84 individual controllable LEDs per headlamp that vary light distribution depending on traffic, weather and road conditions. The integrated adaptive High Beam Assistant Plus allows more frequent use of the vehicle's high beams, offering greater safety and comfort.

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"The multibeam LED headlamp is making important contributions to road safety," notes Steffen Pietzonka, head of global marketing Original Equipment Lighting, HELLA KGaA Hueck & Co.

Safety plus, glare-free high beam

Unlike static high-beam headlamps, Daimler's adaptive high-beam function can selectively mask light patterns directed at oncoming vehicles within a fraction of a second. The system uses a windshield-mounted camera to assess the driving environment. The adaptive system blocks light aimed directly at an oncoming vehicle, but still illuminates the areas adjacent to oncoming traffic. It provides maximum illumination of the roadway for the driver and prevents glare for oncoming drivers.

A newly developed adverse weather light also reduces glare from the roadway when it is raining by specifically dimming individual LEDs in the low beam. The system reduces glare from illuminated road signs by selectively reducing the brightness of individual LEDs.

Two light guides above the main headlamp generate the direction indicators, daytime running lights and position lights in the beacon design typical of the Mercedes Benz brand. Added visual effects in the light guides are created by a blue "Coming-Home" light, which welcomes a driver as soon as the car door is unlocked with either the car key or a smart phone.

First headlamp with variable configurable low beam and high beam

The LED module in the E-Class includes 84 LEDs arranged in three lines that can be controlled individually. This allows precise control of the light pattern for both high and low beams without the need for mechanical actuator units. It marks the first time dynamic bend lighting has been implemented purely by electronics.

Using new materials

In another first, transparent silicone plastics are being used as the primary optics for an LED headlamp. Silicone plastic replaces thermoplastics used until now on LED headlamps. Silicone is resistant to the high energy radiation of LEDs and, in contrast to glass, can be machined more precisely to meet strict tolerances in the manufacturing process.

The silicone lens resembles a small scrub brush with distinct "fingers" that direct the light from the 84 individual LEDs to the front lens, which is tucked behind a focusing outer lens of the LED headlamp module.

Trendsetting design wins the Red Dot Design Award

Apart from its high functionality, the second generation multibeam LED headlamp in the Mercedes-Benz E-Class with high-end lighting technology appears in a completely new design which recently won the prestigious Red Dot award in the product design category for 2016. The Red Dot design prize is awarded annually by the Design Zentrum Nordrhein-Westfalen in Essen, Germany.

HELLA KGaA Hueck & Co., Lippstadt: HELLA is a global, family-owned company, listed on the stock exchange, with around 32,000 employees at 100 locations in more than 35 countries. The HELLA Group develops and manufactures lighting, electronic components and systems for the automotive industry. HELLA also has one of the largest trade organizations for automotive parts, accessories, diagnostics, and services within Europe. Complete vehicle modules, air-conditioning systems, and vehicle electrical systems are also produced in joint venture

companies. With more than 6,000 people working in research and development, HELLA is one of the most important innovation drivers on the market. In addition, with preliminary sales of approx. 5.8 billion euros in fiscal year 2014/2015, the HELLA Group is one of the top 40 automotive parts suppliers in the world and one of the 100 largest German industrial companies.

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