



## **HELLA introduces car featuring dynamic HD Matrix LED headlamps with laser high beams**

- **Innovative technology in the new Audi A8 provides glare-free high beams and better vision**
- **Dynamic low beams with efficient LED lens module provide precise road course illumination**

**Lippstadt, May 14, 2018.** Automotive manufacturer Audi and lighting and electronics expert HELLA are introducing several vehicle front lighting innovations to the market, allowing illuminating roads even more dynamically and precisely while providing drivers with better vision. With the new Audi A8, an efficient LED lens module in the area of low beams will for the first time enter serial production. The new HD Matrix LED headlamp technology has additionally been further developed and a dynamic laser high beam realized.

The low beam of the new Audi A8 headlamp is equipped with a compact and efficient LED lens module. Special feature: the modules consist of glass and combine primary and secondary optics in a single body. This enables avoiding most scatter loss. For making the low beam a reality, a total of three of those modules are used -- one for reach, the other two for lighting in front of the vehicle. The latter have an efficiency of up to 70 percent. The degree of efficiency here describes the relationship between the available LED luminous flux and the luminous flux used for low beam distribution.

For realizing the high beam, lighting engineers have developed the Matrix headlamp technology further. They have increased the number and performance of individually controllable light emitting diodes (LEDs) and rearranged them. 32 LEDs are now situated in a joint module along two rows. LED control occurs on the basis of front camera data. As soon as it recognizes other vehicles or road users, the control unit turns off or dims individual LEDs in order to avoid glaring. All other parts will simultaneously be operating at high beam-capacity, thus improving road visibility. The



HD Matrix LED high beam is supported by two more LED modules throughout, which additionally increase, both, spread width and intensity.

Thanks to the HD Matrix LED headlamp and the additional LED modules, roads -- and especially curves -- can be illuminated even more actively and precisely. In the low beam, the optical concept of the lens module ensures that each LED can be attributed to a specific area of the road. When driving in curves, the respective light focus will shift. When driving with high beams, the high beam LEDs of the HD Matrix LED headlamps will shift the light towards the progression of the curve.

The dynamic laser high beams automatically turn on at 70 km/h. The laser module will project a light beam whose spot expands several hundred meters. The light furthermore adjusts to the progression of the curve, e.g. on country roads. And once the camera recognizes other vehicles in its range, the laser spot automatically dims. This technology will provide drivers with the best vision of the road without glaring oncoming traffic. In the new Audi A8, the laser light version for the first time integrates a light animation for "coming home" / "leaving home" functions, realized via 36 additional white LEDs.

Through dynamic HD Matrix LED high beams, laser high beams, efficient low beam LED lens modules and an animated daytime running light, Audi and HELLA have developed a holistic concept setting new vehicle front lighting standards not only in design but also in matters of safety functions.

You will get further information about the holistic lighting concept in the [film](#).

**Please note:**

This text and corresponding photo material can also be found in our press database at: [www.hella.com/press](http://www.hella.com/press)

## PRESS RELEASE



**HELLA GmbH & Co. KGaA, Lippstadt:** HELLA is a global, family-owned company, listed on the stock exchange, with more than 40,000 employees at over 125 locations in some 35 countries. The HELLA Group develops and manufactures products for lighting technology and electronics for the automotive industry and also has one of the largest retail organizations for automotive parts, accessories, diagnostics, and services within Europe. With more than 7,000 people working in research and development, HELLA is one of the most important innovation drivers on the market. Furthermore, with sales of 6.6 billion euros in the fiscal year of 2016/2017, the HELLA Group is one of the top 40 automotive parts suppliers in the world and one of the 100 largest German industrial companies.

**For additional information please contact:**

Dr. Markus Richter  
Company spokesman  
HELLA GmbH & Co. KGaA  
Rixbecker Strasse 75  
59552 Lippstadt, Germany  
Germany  
Phone: +49 (0)2941 38-7545  
Fax: +49 (0)2941 38-477545  
[Markus.Richter@hella.com](mailto:Markus.Richter@hella.com)  
[www.hella.com](http://www.hella.com)