



## HELLA advances OLED technology for automotive applications

- **Organic light-emitting diodes (OLEDs) are of increasing importance for rear combination lamp design**
- **HELLA is developing OLED connection technology**
- **OLED rear combination lamps in new Audi A8 enables various "coming home" and "leaving home" scenarios**

**Lippstadt, May 8, 2018.** Whether in smartphones or in televisions -- OLEDs (Organic Light-Emitting Diodes) have already entered the mass market. In cooperation with the lighting and electronics expert HELLA, automotive manufacturer Audi has recently integrated OLED technology into the rear combination lamps of the new Audi A8.

The appearance of headlamps and rear combination lamps is no longer only at nighttime an important distinction characteristic for automotive manufacturers. Especially homogenous lighting functions are of increasing importance here. For its flagship car, Audi has therefore now decided in favor of area lighting in its rear combination lamps. Four upright OLEDs of less than one millimeter width are hovering in each unit. They are subdivided into four individually controllable segments -- two for the angular tail light and two for the luxury sedan's stop light.

The OLEDs consist of organic semiconductor layers that can be distributed across a carrier material. Two electrodes will then cause the layers to illuminate evenly. For a homogenous appearance, the technology can therefore do away with reflectors, light guides or additional optics. "The OLEDs furthermore allow for completely new design possibilities", says Dr. Michael Kleinkes, Head of Lighting Technology Development at HELLA.

The rear combination lamps in the new Audi A8 consist of three parts and expand across the entire vehicle rear. A total of eight OLEDs are used. Each is subdivided into four segments that are individually controllable, thus enabling different "coming home" and "leaving home" scenarios. The two upper segments furthermore support the stop



light while the lower ones complement the tail light, which is realized above the OLEDs as a lighting strip using LEDs. The combination of LED and OLED light sources creates the vehicle's unique look.

Already since 2005, HELLA has been researching OLED technology and has consequently adjusted it for automotive manufacturers so that it meets the various requirements regarding e.g. temperature resistance and a long service life. For integrating OLED technology into the rear combination lamp, developers have invented new connection technologies. To this end, they are using a special adhesive system ensuring the safe fixation of the OLEDs on the one hand while also not limiting the design. All research and development works have then directly been a factor in serial production. HELLA has conceived of and built a highly automated assembly line at the Lippstadt location, meeting the highest standards of retraceability and reproducibility.

You will find further information about OLED technology in the [film](#).

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# PRESS RELEASE



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