



Digital FlatLight from HELLA enables customizable light signatures and communication

- **Innovative FlatLight technology series is continuously being further developed**
- **Combined with SmartGlass, individually switchable light signatures as well as extended functionality can be realized.**

Lippstadt, December 13, 2021. Minimizing installation space, increasing efficiency, design freedom and the degree of individualization - what is important in headlamp development also applies to rear lighting. For a long time now, rear lighting has not only fulfilled important safety functions, but also offers a wide range of possibilities for creating individual lighting signatures. For example, dynamic direction indicators are already integrated as an attractive functional feature in the compact class. "Our lighting developers have long been thinking far beyond that. In order to be able to display more complex animations, graphics and later also fonts for communication between the vehicle and the environment, it is above all necessary to further increase the segmentation of the rear combination lamps," says Dr. Frank Huber, Managing Director responsible for the Lighting division at the internationally positioned automotive supplier HELLA. "Our Digital FlatLight technology takes signal lighting to a new level. By integrating a SmartGlass display, our FlatLight now becomes digital. Appropriately equipped rear combination lamps can be controlled with fine granularity. This allows for a variety of customizable signatures and significantly expands the feature set."

With the FlatLight | μ MX technology, HELLA already presented an innovative light guide concept using micro-optics at the beginning of 2021. It enables particularly homogeneously illuminated surfaces with an extremely low module depth of only 5 millimetres. At the same time, the technology combines high efficiency with a wide range of design options, as the front surface of the module can be masked with different decors.



Digital FlatLight uses exactly this technology. By using a SmartGlass display, the functionality is increased many times over. In the HELLA VISION | Digital FlatLight prototype presented for the first time at the IAA Mobility 2021, for example, the SmartGlass in front is divided into 44 triangular segments that can be individually switched and dimmed by software. In contrast to a classic display, not only the size and number but also the shape of the individual segments can be individually designed. This eliminates the need for masks and decors. In the case of a series application, vehicle manufacturers are instead given the option of creating different designs, e.g. for each equipment variant, using the HELLA GAIN software.

The Digital FlatLight is based on the FlatLight | μ MX optical system. On this basis, it is possible to equip simpler equipment variants with FlatLight and, for example, to expand the functionality of the better equipped variants by adding a SmartGlass display. With the Digital FlatLight, new signatures can be easily programmed for a possible facelift. New business models such as the installation and adaptation of graphics via app or software update are also conceivable in this context. Another plus point: when switched off, the Digital FlatLight impresses with its "Black Panel" look, a homogeneous glossy black surface. Alternatively, the SmartGlass can be used to make the selected signature visible even when it is not illuminated.

"Our Digital FlatLight technology is a big step towards the future. Already today it allows to display fonts and symbols. In addition, light signatures that adapt to the driving modes, text or symbols that warn road users of traffic jams or icy roads, or graphics that display the battery charge level of the electric vehicle can also be realized with this technology," says Dr. Huber. In order to further increase the resolution of the rear combination lamp and thus the range of functions, HELLA is working to further increase the segmentation, i.e. the number of pixels. This is possible, for example, by integrating Active Matrix Displays. This means that the vision of a communicating vehicle is becoming more and more of a reality.

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PRESS RELEASE



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