PRESS RELEASE

# The vehicle shows the way

## Light carpet function illuminates vehicle side area

**Lippstadt, Germany, January 06, 2016.** The night is dark and the parking lot is unlit. Where did I park the car again? In the new BMW 7 Series, pressing a button on the car key is all it takes to find out. A radiant light carpet then lights up the ground under both sides of the car, leading the driver to it. The lamps that generate this effect were designed by the lighting experts at HELLA and are the first of their kind.

Unlike predecessor systems that were installed in the outside mirror or the underside of the driver door, the LED modules are mounted in the rocker panels behind the front wheels in a static position. There, the lights illuminate the ground in a radiant and uniform fashion for a total length of over four meters. The light image has very high resolution to make the boundaries between the individual arrays very clear and distinct. During production, which takes place fully automatically, the pattern of the light is checked in meticulous detail for every light module. If performance is not 100 percent in line with the specified target as the quality test is being carried out, the component is not delivered.

Micro-optics specially designed by the Fraunhofer Institute for Applied Optics and Precision Engineering are used to direct the light to precisely defined areas on the ground. The design of these lenses is particularly unique as each lens is actually made up of many micro lenses. A single lens generates a very weak strip of light due to its small size. When one combines a large number of these small projectors, however, a very bright light pattern results. This functional principle is also advantageous in that whenever the cover of the LED module becomes slightly dirty in a few areas, there are always plenty of other lenses pointed toward the same area to be illuminated. The light carpet function should therefore never be greatly compromised or fail altogether as a result of minor contamination.

Other applications of the light are also being conceived by the illumination development engineers at HELLA, one of which could be integrating the light into the ambient interior lighting concept to produce colored light and attractive motifs.

HELLA has not only equipped the BMW 7 Series with a light carpet, but also interior light solutions for rear-seat passengers. Specifically, HELLA supplies the light guides used for ambient lighting and the interior reading light mounted above the rear row of seats. This light, which boasts LED technology, comprises a flat interior light that provides a warm glow for the rear of the vehicle cabin to aid orientation for passengers.

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