LED headlights

LED headlights are headlights which use light-emitting diodes (LEDs) as light source.

Function

When using LEDs, the lighting functions are generated by way of a semiconductor

matrix LED headlight, which is electronically stimulated to give off light. Light distribution is achieved through the additive superposition of the individual light distributions of various lens modules.

In an LED headlight, free-form lenses distribute the light in a specific manner to yield the overall desired light distribution. This does, however, demand good thermal management of the individual LED modules, among other things.

AAs only around 20 to 30 per cent of the electrical power is converted into useful light output, the power loss of the LEDs has to be very effectively dissipated from the LED chip and emitted to the surrounding area. LED technology used to be employed primarily for the main lighting functions (dipped beam and high beam) in the full-LED headlights available on the market. More recently, the highly dynamic development of adaptive lighting functions has also extended to the area of LED headlights.

Safety

With their tone close to natural light, LED headlights make driving both comfortable and safe for motorists. The driver is subject to less strain and is consequently more relaxed. This high colour temperature also benefits people who work in the dark, as it is kinder to the eyes and less fatiguing, thus guaranteeing safer working. In contrast to conventional bulbs, another advantage of LED lamps is that they do not require a warm-up phase before producing the specified light signal. These fractions of a second are of crucial importance to brake lamps in particular, helping to lessen the impact of – or even prevent – collisions.

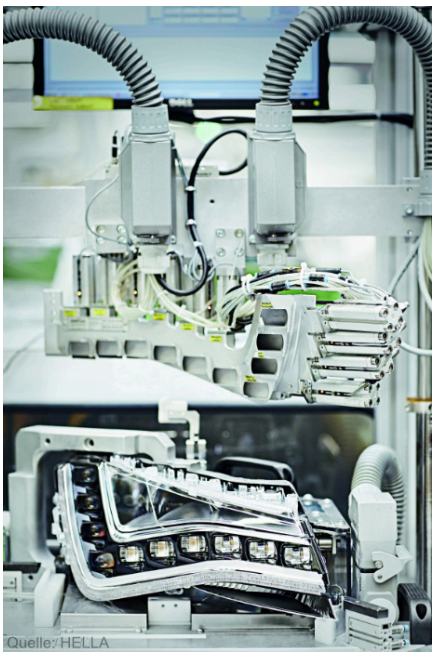
Protection of the environment

Thanks to their extremely long service life, minimal energy consumption and freedom from wear and maintenance, LEDs are currently considered to be the most environment-friendly lighting technology. They achieve the same light output with a significantly lower energy consumption, which also has a positive effect on fuel consumption and exhaust emissions.

Value retention

LED lamps are virtually wear- and maintenance-free and generally last as long as the vehicle. These aspects make a crucial contribution to value retention as no additional costs arise from the vehicle being out of service or from replacement work. Not having to keep changing bulbs more than justifies the higher purchase price.

Bilder



Matrix LED headlight from HELLA

LED headlights from hella

Hersteller

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OSRAM_EN

Herth+Buss

Valeo_EN

Quelle:
http://www.my-cardictionary.comhttps://www.my-cardictionary.com/cardictionary/products/led-headlights.html