Daytime running light with auxiliary lighting functions in 12 V
- With halogen bulb H15 or LED Kartoval®
- Can be combined with 90 mm module headlights

Produktmerkmale

- **Precision reflector**
  The light of the bulb is focused and enables extremely high illumination and signal effect.

- **Clear lens**
  Requires clean processing within the light. The direct view of the reflector results in a brilliant finish and attractive appearance.

- **Two integrated lighting functions**
  The 90 mm daytime running lights provide integrated position, high beam or fog light as well.

- **Integrated plug-type connection**
  For fast electric connection through a K-Jetronic plug.

- **Installation**
  Straightforward installation of the daytime running lights using a mounting plate, as for the 90 mm fog lights.

- **Modular series**
  This daytime running light matches the 90 mm module series from Hella. This means all the front lighting functions can now be realised and combined in the 90 mm format.

- **Kartoval® technology**
  Optimum light yield thanks to the combination of daytime running light (90 mm reflector with a bulb) and position light (LEDs with 2 Kartoval® lenses).
Advantages of daytime running light

Daytime running light provides a decisive safety lead in road traffic and helps prevent 58% of accidents resulting in serious injuries.*

For this reason, Hella developed special daytime running lights long before any laws required them to be introduced, thus contributing to increasing driving safety.

Daytime running lights provide more safety than low beam.

The Hella daytime running lights generate a passively shining, white signal light. The vehicle is recognised by other road users more quickly and better. This way, Hella makes the crucial difference in increasing reaction time and providing a perceivable safety lead.

Current legislation situation concerning daytime running light

To increase safety on the roads, the European Commission has decided that all new motor vehicles must be equipped with daytime running lights from 2011 onwards. Many countries within the EU have already reacted and introduced legislation to make the use of these lights compulsory.

* Study carried out by the SWOV-Institute for Road Safety Research on behalf of the EU.
Combination of lighting

As a leader in innovation in the field of automotive original equipment, Hella is setting new standards in daytime running lights, too: two functions in one!

Combination of daytime running light, high beam and fog light: H15 bulb technology
The new H15 bulb for 12 V 55 W/15 W makes it possible to combine a headlight function (high beam or fog light) with a lamp for daytime running light in one single reflector.

Combination of daytime running and position light: Hella LED Kartoval® hybrid technology
The daytime running light is realised by a bulb in the 90 mm reflector. The position light by the LEDs with 2 Kartoval® lenses.

With LED Kartoval® hybrid technology, Cartesian ovals guide the light efficiently through the light guide system in the coupling-in and out areas. The working principle of the coupling-out unit is based both on reflection and refraction of the light beams.

Whereas light that diffuses in the y/z plane leaves the coupling-out parallel to the z-axis (light refraction), light in the x/z plane is reflected retaining the incident angle, as long as the two side surfaces of the oval are mutually parallel. In contrast to the x-direction, the coupling-out cross-section is mapped in the y-direction.

Kartoval®: Scattering and mapping coupling-out pattern.

Further advantages ...

Extremely low energy consumption in comparison with low beam
Daytime running lights produce a passive signal light. When combined with highly efficient precision optics, Hella daytime running lights are significantly more efficient than conventional low beam. Here are the convincing figures: established in an investigative report carried out by the Federal Institute for Roadways (BAST – Bundesanstalt für Straßenwesen):

- **Low beam during the day**
- **Daytime running light with bulbs**

![Bar chart showing energy savings](chart.png)

Source: BAST (Bundesanstalt für Straßenwesen - Federal Institute for Roadways)
## Range overview

<table>
<thead>
<tr>
<th>Product picture</th>
<th>Drawing</th>
<th>Part Number</th>
<th>Specification</th>
<th>Type approval</th>
<th>VPE</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Module" /></td>
<td><img src="image2.png" alt="Drawing" /></td>
<td>2BE 010 102-101</td>
<td>90 mm module with P 21 W 12 V Longlife bulb and Kartoval® LED 12 V, with two functions: Daytime running light/position light</td>
<td>ECE/SAE</td>
<td>1 unit</td>
</tr>
<tr>
<td><img src="image3.png" alt="Module" /></td>
<td><img src="image4.png" alt="Drawing" /></td>
<td>9AH 165 968-001</td>
<td>Carrier frame, optional for the installation of 90 mm modules with Kartoval optics</td>
<td></td>
<td>1 unit</td>
</tr>
<tr>
<td><img src="image5.png" alt="Module" /></td>
<td><img src="image6.png" alt="Drawing" /></td>
<td>1F0 010 293-001</td>
<td>90 mm module with H15 12 V 55 W/15 W bulb, with carrier frame, with two functions: Daytime running light/high beam</td>
<td>ECE/SAE</td>
<td>1 unit</td>
</tr>
<tr>
<td><img src="image7.png" alt="Module" /></td>
<td><img src="image8.png" alt="Drawing" /></td>
<td>1N0 010 294-001</td>
<td>90 mm module with H15 12 V 55 W/15 W bulb, with carrier frame, with two functions: Daytime running light/fog light</td>
<td>ECE</td>
<td>1 unit</td>
</tr>
</tbody>
</table>

## Application examples

- **90 mm module with LED Kartoval® technology**
  - Daytime running light
  - Kartoval® LED position light

- **90 mm module with H15 bulb technology**
  - Daytime running light
  - Position light