BRIEF INFORMATION
90 mm LED MODULE L4060

➔ Provider for all 5 front light functions in LED with 2 headlamps
➔ For diverse applications and the highest demands
➔ Maximum design and technological freedom thanks to modular system
➔ More illumination and safety with innovative LED technology

PRODUCT FEATURES

➔ Striking design: Ring-shaped, homogeneous daytime running light/position light or direction indicator
➔ Conversion: Existing halogen versions can be converted to LED modules (compatible installation solutions)
➔ 90 mm LED upgrade: All lighting functions available with LED technology, for maximum service life
➔ Design: 40 x 60 mm polycarbonate and polymethylmethacrylate lenses for varying light distribution as low beam, fog light, high beam and fog light with cornering light
➔ Housing: Sturdy die-cast aluminum housing with integrated electronics
➔ Resistant to impact from stones: Polycarbonate cover lens
➔ Weight saving: Lens made from lightweight yet durable polycarbonate and polymethylmethacrylate

Drive 20 times around the world without needing to replace the bulb.
➔ Bulb replacement has become a thing of the past. Maintenance-free due to passive cooling
➔ No moving parts are necessary (e.g. fan)
➔ Lower fuel consumption and reduced CO2 emissions due to lower power consumption of max. 20 W on low beam or high beam
➔ LED headlamps improve safety. The illumination is similar to daylight, considerably improving vision and ease of driving (drivers do not tire as quickly)
➔ Multi-voltage (12 V, 24 V)
➔ ECE and SAE type-approved
**TECHNICAL DETAILS**

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- **Type approval**
  - **ECE**
    - Low beam: ECE-R112 S01
    - High beam: ECE-R12 S01
    - Fog light: ECE-R19 F3, series 04
    - Daytime running light: ECE-R87
    - Position light: ECE-R7
    - Cornering light: ECE-R119
  - **SAE**
    - Low beam: SAE J566, FMVSS108
    - High beam: SAE J566, FMVSS108
    - Fog light: SAE J583
    - Daytime running light: SAE J2087
    - Position light: SAE J222
    - Cornering light: SAE J852

* A 3A fuse from HELLA must be used for all LED headlamps. A fuse of >3A is not sufficient to safely interrupt the power supply in the event of a fault. In the case of unknown protection, an external safety switch (e.g. 8JD 743 557-021) must also always be used. If water gets in, incorrect protection can lead to damage ranging from melting to burning of the product.

**Upgrade to LED**

HELLA is currently the only provider that can offer you conversion to LED light technology for all 90 mm single and multifunctional modules in halogen and xenon.

**Main LED light functions**
- Low beam
- Low beam with daytime running light and position light
- High beam
- High beam with daytime running light and position light
- High beam and direction indicator (SAE for <80°)

**Auxiliary LED light functions**
- Fog light
- Fog light and cornering light
- Fog light with daytime running light and position light

**90 mm configurator:**
[www.hella.com/90mm-modules](http://www.hella.com/90mm-modules)

This tool shows you the options for equipping or upgrading a vehicle with 90 mm LED modules. See images from Europe’s biggest light testing facility and compare the light distribution of halogen and LED modules, in order to help you make the right choice for your application.
90 mm: L4060 low beam
Performance module mount

90 mm: L4060 high beam/fog light
With preassembled carrier frame

90 mm: L4060 high beam
Performance module mount

90 mm: L4060 fog light and cornering light
With preassembled carrier frame

Pin assignment
1) Central function (low beam, high beam, fog light and cornering light)
2) Position light (if available)
3) Ground
4) Daytime running light or direction indicator (if available)

Installation and thermal conditions
ISOLUX DIAGRAMS

APPLICATION EXAMPLES

Daytime running light
Position light
Low beam
Direction indicator
High beam

L4060 low beam
L4060 low beam and high beam
<table>
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<th>Description</th>
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<td><img src="image1" alt="L4060" /></td>
<td>L4060 low-beam headlamp</td>
<td>Modular headlight with 40 x 60 mm polycarbonate lens, sturdy die-cast aluminum housing, silver design cover, performance mount</td>
<td>012488101</td>
</tr>
<tr>
<td><img src="image2" alt="LED low-beam headlamp L4060" /></td>
<td>LED low-beam headlamp L4060 with daytime running and position light</td>
<td>Modular headlight with 40 x 60 mm polycarbonate lens, sturdy die-cast aluminum housing, silver design cover, performance mount</td>
<td>012488121</td>
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<tr>
<td><img src="image3" alt="LED high-beam headlamp L4060" /></td>
<td>LED high-beam headlamp L4060</td>
<td>Modular headlight with 40 x 60 mm polycarbonate lens, sturdy die-cast aluminum housing, silver design cover</td>
<td>011988021</td>
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<td><img src="image4" alt="LED high-beam headlamp L4060 with daytime running and position light" /></td>
<td>LED high-beam headlamp L4060 with daytime running and position light</td>
<td>Modular headlight with 40 x 60 mm polycarbonate lens, sturdy die-cast aluminum housing, silver design cover</td>
<td>011988031</td>
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<tr>
<td><img src="image5" alt="LED high-beam headlamp L4060 with direction indicator" /></td>
<td>LED high-beam headlamp L4060 with direction indicator</td>
<td>Modular headlight with 40 x 60 mm polycarbonate lens, sturdy die-cast aluminum housing, silver design cover (SAE for &lt;80°)</td>
<td>011988081</td>
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<tr>
<td><img src="image6" alt="LED front fog lamp L4060" /></td>
<td>LED front fog lamp L4060</td>
<td>Modular headlight with 40 x 60 mm polycarbonate lens, sturdy die-cast aluminum housing, silver design cover</td>
<td>011988001</td>
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<td><img src="image7" alt="LED front fog lamp L4060, with daytime running light and position light" /></td>
<td>LED front fog lamp L4060, with daytime running light and position light</td>
<td>Modular headlight with 40 x 60 mm polycarbonate lens, sturdy die-cast aluminum housing, silver design cover</td>
<td>011988011</td>
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<tr>
<td><img src="image8" alt="L 4060 LED front fog lamp, with cornering light" /></td>
<td>L 4060 LED front fog lamp, with cornering light</td>
<td>Modular headlight with 40 x 60 mm polycarbonate lens, sturdy die-cast aluminum housing, silver design cover</td>
<td>011988061</td>
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## ACCESSORIES

### Carrier frame
- **Premium carrier frame (up to Truck)**: 9AH 169 580-011
- **Performance carrier frame (all classes)**: 9AH 254 228-012

### Surplus supply, LED FEP 4-pin plug
- Housing, 10 units: 8JA 202 231-002
- Blade contact, 50 units: 8KW 863 933-013
- Individual conductor seal 0.75 mm², 50 units: 0.75 mm², 50 units
- Individual conductor seal (all classes): 9GD 863 952-002
- Blind plug, 50 units: 9GD 863 952-012

### Surplus supply, LED DEUTSCH connector 4-pin (together with adapter cable, see 1, except for 012 488-1xx)
- Male connector housing, 10 units (**1 unit in set): 8JA 201 022-042
- Female connector housing, 10 units (**1 unit in set): YNB 201 026-012
- Contact sleeve (0.5 – 1.5 mm²), 50 units (**3 units in set): 8KW 201 025-112
- Blind plug, 50 units (**3 units in set): YNB 201 026-012
- Set packaging: 8JA 201 022-821

### Headlight beam throw adjustment system
- Headlamp leveling system, 12 V: 4NM 007 282-221
- Headlamp leveling system, 24 V: 4NM 008 299-501
- Bracket for right-side mounting of actuator: BHG 183 586-001
- Bracket for left-side mounting of actuator: BHG 138 620-007
- Mounting set for leveling actuators (bracket and articulated element): 4NM 007 282-221

### Headlight cleaning systems
- SRA set with fixed nozzles, 12 V, 4 nozzles: 8WS 008 549-001
- SRA set with telescoping single nozzles, 12 V, 2 single nozzles: 8WT 008 549-101
- SRA set with telescoping double nozzles, 12 V, 2 double nozzles: 8WT 008 549-201
- SRA set with fixed nozzles, 24 V, 4 nozzles: 8WS 008 549-501
- SRA set with telescoping single nozzles, 24 V, 2 single nozzles: 8WT 008 549-601
- SRA set with telescoping single nozzles, 24 V, 2 double nozzles: 8WT 008 549-701

### Bend lighting accessories
- Connecting cable for LED module, bend lighting control unit, 1 unit: 8KB 163 160-811
- Bend lighting control unit, 24 units: SDF 009 244-007

### Adapter cable
- 1. Adapter from FEP connector to Deutsch connector (4-pin), 1 unit: BKA 202 117-001
- 2. Adapter from FEP connector to Performance module series or Dynaview (IP69K2IP), 1 unit: BKA 202 117-011

### Other accessories (only if the vehicle was registered i.a.w. ECE-R48, series 05. As of ECE-R48, series 04, supplement 03, no more mandatory accessories)
- Function monitoring device 12 V, 1 unit: SDS 011 630-001
- Function monitoring device 24 V, 1 unit: SDS 011 630-011

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**X** Accessory for proper connection

**XX** Optional accessories

**X** Still in development for AgroPlus low beam modules

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