

## HELLA 015050031

# HELLA LED Headlight 90mm Essential R80-12V Instruction Manual

Model: 015050031

## 1. INTRODUCTION

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This manual provides essential information for the proper installation, operation, and maintenance of your HELLA LED Headlight 90mm Essential R80-12V (Model 015050031). Please read these instructions carefully before use to ensure optimal performance and safety.

The HELLA R80 LED headlight features an innovative reflector design that provides homogeneous illumination, contributing to reduced driver fatigue. Its LED technology enhances safety compared to traditional halogen headlights. The high color temperature of the LEDs produces light similar to natural daylight, improving visibility and overall driving comfort. Designed for durability, these LED headlights are maintenance-free, which helps reduce operating costs. The robust construction includes aluminum cooling fins and impact-resistant polycarbonate glass, making the unit suitable for demanding environments.

## 2. PRODUCT OVERVIEW

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The HELLA 90mm Essential R80-12V LED Headlight is a round, clear-lens unit designed for vehicle lighting applications, specifically as a low beam headlight. It is equipped with a DEUTSCH connector for secure electrical connections.



Figure 1: HELLA LED Headlight 90mm Essential R80-12V. This image shows the complete headlight unit, highlighting its round shape and clear lens.



EXPERTER PÅ FORDONSBELYSNING OCH  
ELEKTRONISKA INSTRUMENT SEDAN ÖVER  
120 ÅR

Figure 2: Close-up view of the HELLA LED Headlight lens, showing the integrated LED elements and the HELLA branding.

### Key Features:

- **Innovative Reflector Design:** Provides homogeneous light distribution.
- **LED Technology:** Enhanced safety and visibility with daylight-like illumination.
- **Durability:** Long operational life and maintenance-free design.
- **Robust Construction:** Aluminum cooling fins and impact-resistant polycarbonate lens.
- **Connector Type:** DEUTSCH connector for reliable electrical connection.

- **Function:** Low beam.

## 3. SETUP AND INSTALLATION

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Installation should be performed by qualified personnel following all local regulations and vehicle manufacturer guidelines. Disconnect the vehicle's battery before beginning any electrical work.

### 3.1 Safety Precautions

- Ensure the vehicle's ignition is off and the battery is disconnected.
- Wear appropriate personal protective equipment (e.g., safety glasses, gloves).
- Avoid touching the LED elements directly.
- Verify correct polarity when connecting electrical wires.

### 3.2 Mounting

1. Identify the appropriate mounting location on your vehicle. The headlight is designed for vehicle-specific fitment.
2. Secure the headlight unit using suitable mounting hardware (not included, typically vehicle-specific). Ensure the headlight is firmly attached to prevent vibration.
3. Confirm the headlight is oriented correctly for optimal light projection.

### 3.3 Electrical Connection

1. Locate the existing headlight wiring harness on your vehicle.
2. Connect the HELLA LED Headlight's DEUTSCH connector to the corresponding vehicle harness connector. Ensure a secure and watertight connection.
3. If an adapter is required for your vehicle's specific wiring, ensure it is correctly installed according to the adapter's instructions.
4. Reconnect the vehicle's battery.

### 3.4 Aiming and Alignment

After installation, the headlight beam must be properly aimed to ensure safe driving and to comply with road regulations. Improper aiming can reduce visibility or blind oncoming drivers.

- Refer to your vehicle's service manual for specific headlight aiming procedures.
- Typically, aiming involves adjusting screws on the headlight assembly to control vertical and horizontal beam direction.
- Perform aiming on a level surface against a wall at a specified distance.

## 4. OPERATING INSTRUCTIONS

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The HELLA LED Headlight operates as a standard low beam headlight. Its function is controlled by your vehicle's existing lighting system.

- **Low Beam Activation:** Turn on your vehicle's headlights using the standard control switch. The LED low beam will activate.
- **Daylight-like Illumination:** The high color temperature of the LEDs provides clear, bright illumination

similar to natural daylight, enhancing visibility during night driving or in low-light conditions.

## 5. MAINTENANCE

The HELLA LED Headlight is designed to be maintenance-free due to its durable LED technology and robust construction. Regular cleaning and occasional inspection are recommended to ensure optimal performance and longevity.

### 5.1 Cleaning

- Clean the polycarbonate lens regularly with a soft cloth and mild soap and water.
- Avoid abrasive cleaners or harsh chemicals, as these can damage the lens surface.
- Rinse thoroughly with clean water and dry with a soft cloth to prevent water spots.

### 5.2 Inspection

- Periodically inspect the headlight for any signs of damage, such as cracks in the lens or housing.
- Check the electrical connections (DEUTSCH connector) for corrosion or looseness.
- Ensure mounting hardware remains secure.

## 6. TROUBLESHOOTING

If you encounter issues with your HELLA LED Headlight, refer to the following troubleshooting guide:

Problem	Possible Cause	Solution
Headlight does not illuminate	<ul style="list-style-type: none"><li>• Loose or corroded electrical connection.</li><li>• Blown fuse in vehicle's electrical system.</li><li>• Faulty wiring.</li></ul>	<ul style="list-style-type: none"><li>• Check and secure the DEUTSCH connector and other wiring.</li><li>• Inspect and replace any blown fuses.</li><li>• Consult a qualified technician for wiring inspection.</li></ul>
Dim or flickering light	<ul style="list-style-type: none"><li>• Insufficient power supply (voltage drop).</li><li>• Poor ground connection.</li><li>• Loose connection.</li></ul>	<ul style="list-style-type: none"><li>• Verify vehicle's electrical system voltage.</li><li>• Check and clean ground connections.</li><li>• Ensure all electrical connections are tight.</li></ul>
Moisture inside the lens	<ul style="list-style-type: none"><li>• Seal integrity compromised.</li><li>• Improper installation.</li></ul>	<ul style="list-style-type: none"><li>• Inspect the headlight for cracks or damage.</li><li>• Ensure proper sealing during installation.</li><li>• If persistent, contact HELLA support.</li></ul>

If the problem persists after attempting these solutions, contact HELLA customer support or a certified automotive technician.

## 7. SPECIFICATIONS

Feature	Detail
Brand	HELLA

Feature	Detail
Model Number	015050031
Product Type	LED Headlight
Series	90mm Essential R80-12V
Light Source Type	LED
Light Function	Low Beam (Product data indicates 2 functions, but only low beam is specified)
Voltage	12V
Wattage	135 watts (Note: This wattage may refer to an equivalent incandescent output or system wattage. Actual LED power consumption is typically lower.)
Lens Color	Clear
Lens Material	Polycarbonate
Housing Material	Aluminum (cooling fins)
Dimensions (W x H x D)	117mm x 118mm x 123mm
Connector Type	DEUTSCH connector
Standard	SAE
Vehicle Service Type	Bus (also generally applicable to vehicles requiring 90mm round headlights)
Country of Origin	Spain

## 8. WARRANTY AND SUPPORT

### 8.1 Warranty Information

According to the product specifications, there is **no specific warranty description** provided for this product. Please refer to your point of purchase or local HELLA distributor for any applicable consumer rights or implied warranties.

### 8.2 Customer Support

For technical assistance, spare parts, or further inquiries, please contact HELLA customer support through their official website or your local HELLA service center. Provide your product model number (015050031) and any relevant purchase details when seeking support.

You can find more information and contact details on the official HELLA website: [www.hella.com](http://www.hella.com)

