



BRIEF INFORMATION

90 mm LED MODULE L 4060

- 5 front light functions in LED with only 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:** Robust die-cast aluminium housing with integrated electronics
 - **Resistant to stone chipping:** 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

Technical Data		
Operating voltage	Multivolt 9 – 32 V	
Functions	Low beam, high beam, fog light, daytime driving light, position light, cornering light and direction indicator light	
Connection	Low beam headlamp: with either FEP or DEUTSCH connector High beam headlamp and fog lamp: with integrated FEP connector; adaptation to DEUTSCH connector possible	
Type approval	ECE	SAE
Low beam	ECE R112 series 01	SAE J566, FMVSS108
High beam	ECE R112 series 01	SAE J566, FMVSS108
Fog light	ECE-R19 F3, series 04	SAE J583
Daytime running light	ECE-R87	SAE J2087
Position light	ECE-R7	SAE J222
Cornering light	ECE-R119	SAE J852

Upgrade to LED

HELLA offers you conversion to LED light technology for all 90 mm halogen/xenon single and multifunctional modules.

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 light

Auxiliary LED light functions



Fog light



Fog light and cornering light

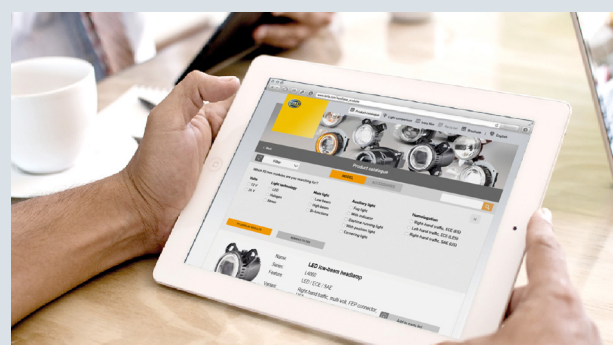


Fog light with daytime running light and position light

The module selector

www.hella.com/headlamp-modules

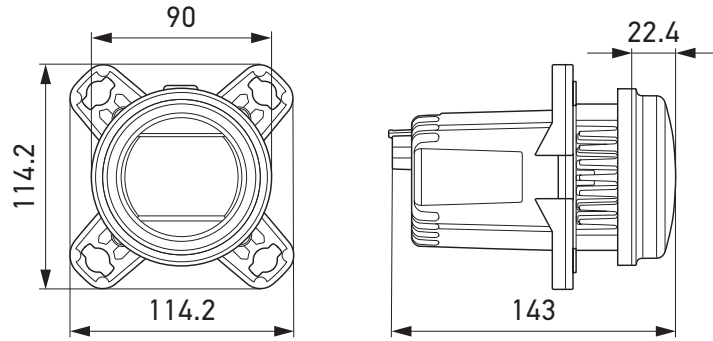
This tool shows you options for equipping a vehicle with original equipment or upgrading it with LED modules. See shots from Europe's biggest light testing facility and compare the light distribution of halogen and LED headlamps to help you make the right choice for your application.



Technical Drawings

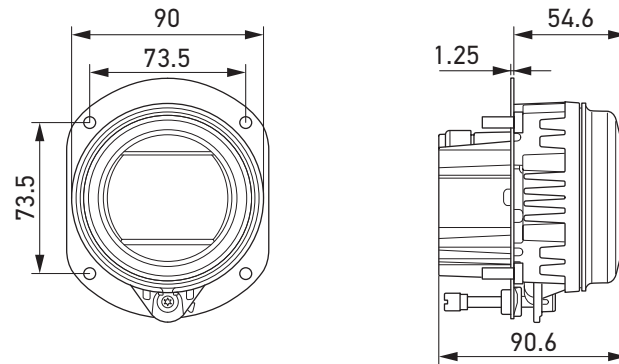
90 mm: L 4060 low beam

For performance mounting
(enables replacement of existing halogen versions)



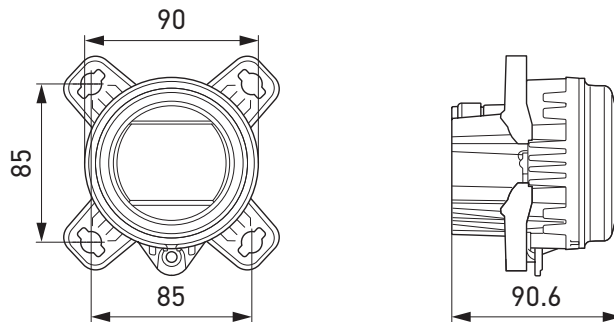
90 mm: L 4060 high beam/fog light

With preassembled carrier frame



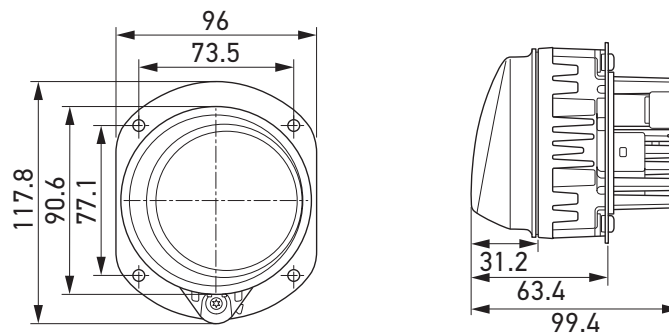
90 mm: L 4060 high beam

For performance mounting
(enables replacement of existing halogen versions)

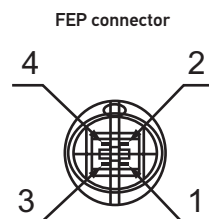
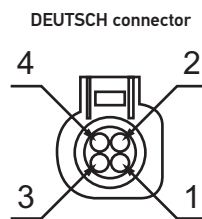


90 mm: L 4060 fog and cornering light

With preassembled carrier frame

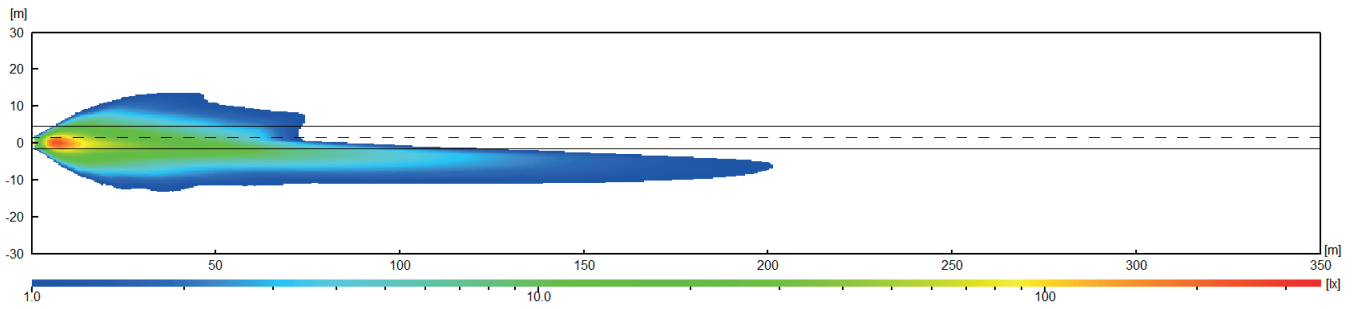


Pin assignment

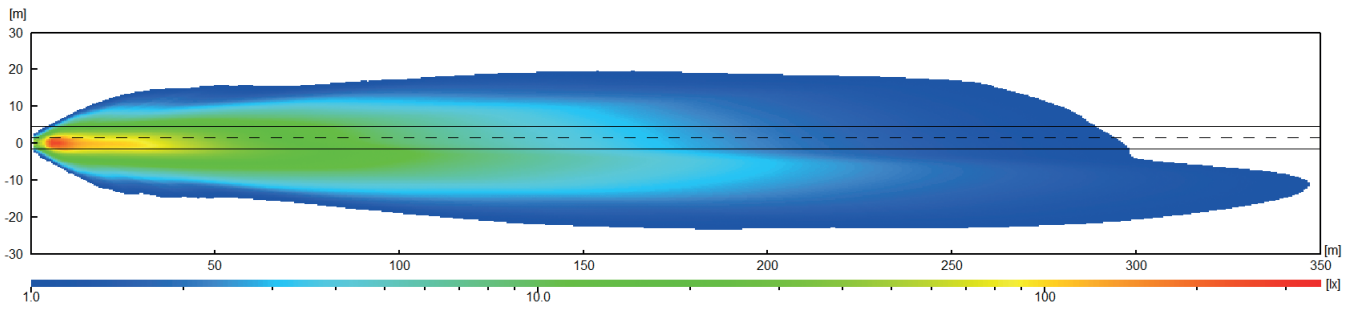


- 1) Central function (low beam, high beam, fog light and cornering light)
- 2) Position light (if available)
- 3) Ground
- 4) Daytime running light or direction indicator (if available)

ISOLUX DIAGRAMS



L 4060 low beam



L 4060 high beam (incl. low beam)

APPLICATION EXAMPLES










L 4060 low beam



L 4060 low beam and high beam

RANGE OVERVIEW

Product photos	Description	Mounting concept/ versions	Part number
	<p>Low beam headlamp L 4060 Module headlamp with 40 x 60 mm polycarbonate lens, rugged die-cast aluminium housing, silver design cover, performance mounting</p>	<p>ES / SAE version, FEP connector</p> <hr/> <p>LES version, FEP connector</p> <hr/> <p>ES / SAE version, DEUTSCH connector</p> <hr/> <p>LES version, DEUTSCH connector</p>	<p>1BL 012 488-001</p> <hr/> <p>1ML 012 488-011</p> <hr/> <p>1BL 012 488-101</p> <hr/> <p>1ML 012 488-111</p>
	<p>LED low beam headlamp L 4060 with daytime running and position light Module headlamp with 40 x 60 mm polycarbonate lens, rugged die-cast aluminium housing, silver design cover, performance mounting</p>	<p>ES / SAE version, FEP connector</p> <hr/> <p>LES version, FEP connector</p> <hr/> <p>ES / SAE version, DEUTSCH connector</p> <hr/> <p>LES version, DEUTSCH connector</p>	<p>1BL 012 488-021</p> <hr/> <p>1ML 012 488-031</p> <hr/> <p>1BL 012 488-121</p> <hr/> <p>1ML 012 488-131</p>
	<p>LED high beam headlamp L 4060 Module headlamp with 40 x 60 mm polycarbonate lens, rugged die-cast aluminium housing, silver design cover</p>	<p>Preassembled carrier frame</p> <hr/> <p>For performance mounting</p>	<p>1FO 011 988-021</p> <hr/> <p>1FO 011 988-121</p>
	<p>LED high beam headlamp L 4060, with daytime running and position light Module headlamp with 40 x 60 mm polycarbonate lens, rugged die-cast aluminium housing, silver design cover</p>	<p>Preassembled carrier frame</p> <hr/> <p>For performance mounting</p>	<p>1FO 011 988-031</p> <hr/> <p>1FO 011 988-131</p>
	<p>LED high beam headlamp L 4060 with direction indicator light Module headlamp with 40 x 60 mm polycarbonate lens, rugged die-cast aluminium housing, silver design cover</p>	<p>with pulse generator, preassembled carrier frame</p> <hr/> <p>with pulse generator, Performance mounting</p> <hr/> <p>without pulse generator, preassembled carrier frame</p> <hr/> <p>without pulse generator, Performance mounting</p>	<p>1FO 011 988-081</p> <hr/> <p>1FO 011 988-181</p> <hr/> <p>1FO 011 988-071</p> <hr/> <p>1FO 011 988-171</p>
	<p>LED fog lamp L 4060 Module headlamp with 40 x 60 mm polycarbonate lens, rugged die-cast aluminium housing, silver design cover</p>	<p>Preassembled carrier frame</p>	<p>1NO 011 988-001</p>
	<p>LED fog lamp L 4060, with daytime running and position light Module headlamp with 40 x 60 mm polycarbonate lens, rugged die-cast aluminium housing, silver design cover</p>	<p>Preassembled carrier frame</p>	<p>1NO 011 988-011</p>
	<p>LED front fog lamp L 4060, with cornering light Module headlamp with 40 x 60 mm, polycarbonate lens, rugged die-cast aluminium housing, silver design cover</p>	<p>Preassembled carrier frame, right</p> <hr/> <p>Preassembled carrier frame, left</p>	<p>1NO 011 988-061</p> <hr/> <p>1NO 011 988-051</p>

ACCESSORIES

Part number	Low beam 012 488-001/-011	High beam, daytime running light and position light 012 488-021 / -031	Low beam 012 488-101/-111	High beam, daytime running light and position light 012 488-121 / -131	Fog light 011 988-001	Fog light, daytime running light and position light 011 988-011	Fog light and cornering light 011 988-051 / -061	High beam 011 988-021	High beam 011 988-121	High beam, daytime running light and position light 011 988-031	High beam, daytime running light and position light 011 988-131	High beam, direction indicator (with pulse generator) 011 988-081	High beam and direction indicator (with pulse generator) 011 988-181	High beam and direction indicator (without pulse generator) 011 988-071	High beam and direction indicator (without pulse generator) 011 988-171	
Carrier frame																
Premium carrier frame (up to truck)	9AH 169 580-011	XX	XX	XX	XX	-	-	-	-	XX	-	XX	-	XX	-	XX
Performance carrier frame (all classes)*	9AH 254 228-012	XX	XX	XX	XX	-	-	-	-	XX	-	XX	-	XX	-	XX
Surplus supply, LED FEP 4-pin connector																
Housing, 10 units	8JA 202 231-002	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X
Blade contact, 50 units	8KW 863 933-013	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X
Individual conductor seal 0.35 – 0.5 mm ² or individual conductor seal 0.75 mm ² , 50 units	9GD 863 952-022	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X
Blind plug, 50 units	9GD 863 952-002	X	-	-	-	X	-	X	X	X	-	-	X	X	X	X
Surplus supply, LED DEUTSCH 4-pin connector (together with adapter cable, see¹, except for 012 488-1xx)																
Male connector housing, 10 units (**1 unit in set)	8JA 201 022-042	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X
Lock/wedgelock, 10 units (**1 unit in set)	9NB 201 024-042	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X
Contact sleeve 0.5 – 1.5 mm ² , 50 units (**5 units in set)	8KW 201 025-112	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X
Blind plug, 50 units (**3 units in set)	9NB 201 026-012	-	-	X	-	X	-	X	X	X	-	-	X	X	X	X
Set Amount, see **	8JA 201 022-821	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X
Headlamp levelling system																
Headlamp levelling, 12 V	6NM 007 282-221	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-
Headlamp levelling, 24 V	6NM 008 299-501	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-
Bracket for right-side mounting of actuator	8HG 138 619-007	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-
Bracket for left-side mounting of actuator	8HG 138 620-007	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-
Mounting set for leveling actuators (bracket and articulated element)	8HG 183 586-001	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-
Adapter cable																
¹ Adapter from FEP connector to Deutsch connector (4-pin), 1 unit	8KA 202 117-001	XX	XX	-	-	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
Adapter from FEP connector to Performance module series or DynaView (009 295), 1 unit	8KA 202 117-011	XX	-	-	-	-	-	-	XX	XX	-	-	-	-	-	-
Other accessories (only if the vehicle was registered i.a.w. ECE-R48, series 05. As of ECE-R48, series 06, supplement 03, no more mandatory accessories)																
Function monitoring device 12 V, 1 unit	5DS 011 630-001	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-
Function monitoring device 24 V, 1 unit	5DS 011 630-021	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-

- X Accessory for proper connection
- XX Optional accessories
- * Still in development for AgroPlus low beam module