



BRIEF INFORMATION

LED combination headlamp C240

- Combination headlamp with high beam, low beam, daytime running light, position light, front direction indicator and side direction indicator (cat. 5) in 100 % LED
- Homogeneous beam patterns with a sharp cutoff for low beam
- Conformal coating of components and anti-corrosion and fuse protection ensure safer operation
- A thick aluminum heatsink with a large PCB area provides better thermal management

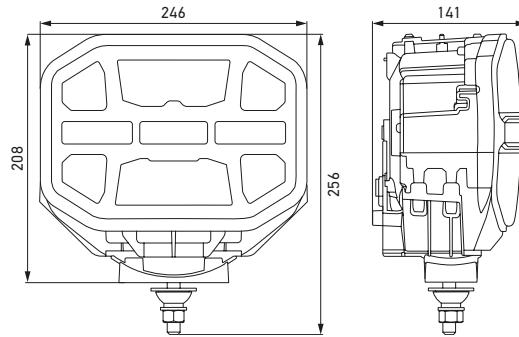
PRODUCT FEATURES

HELLA's new combination headlamp offering high beam, low beam, daytime position light, position light, front direction indicator and side direction indicator (cat. 5) in 100 % LED technology. The C240 LED meets all ECE and SAE requirements and is ideal for use almost anywhere in the world. Additional approvals are possible for China and India. The housing of the C240 LED is made of PBT GF30 and an aluminium element at the top, which features excellent thermo management and contributes to a longer product life.

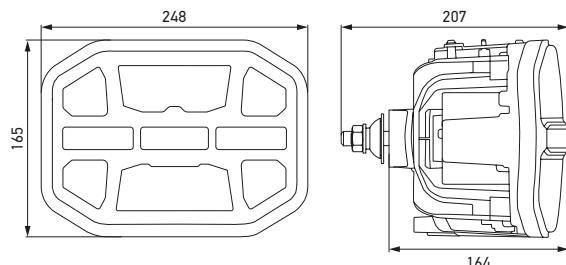
A specially developed thermal design with temperature sensors prevents the headlamp from overheating. With its robust lens made of shatterproof plastic, the headlamp is particularly resistant to vibration and impact. Ideal for the tough conditions on construction vehicles (strong vibrations, dust, wetness, mechanical shock, etc.). The C240 LED offers the flexibility to choose from the essential series offering symmetrical light distribution and the performance series offering asymmetrical light distribution.

TECHNICAL DETAILS

Technical data		Dimensional sketch
Operating voltage range	Multi voltage (9 – 32 V)	
Rated voltage	12 V and 24 V	
Light function	High beam, low beam, daytime running light, position light, front direction indicator and side direction indicator (cat. 5)	
Light source	LED automotive standard	
Housing	PBT GF30	
Weight	Centre mounting: 2,400 g Bottom mounting: 2,500 g	
Temperature range	-40 °C to +50 °C	
Protection class	IP 6K9K	
Approved	ECE ES / LES: R149.01 ECE symmetric: R149.01 class CS ECE R148.01 FMVSS 108, ECE-R10.06	
Conform	CISPR 25.06 class 5	
Mounting	M12 x 50 Bolt	
Connection	6-pin DEUTSCH connector	



Bottom mounting



Centre mounting

		Current / Power Consumption																										
		Input Voltage (V)						Input Current (A)						Power Consumption (W)														
		High beam	Low beam	Front direction indicator light	Daytime running light	Position light	Side direction indicator (cat. 5)	High beam	Low beam	Front direction indicator light	Daytime running light	Position light	Side direction indicator (cat. 5)	High beam	Low beam	Front direction indicator light	Daytime running light	Position light	Side direction indicator (cat. 5)									
SAE	13.5	28	13.5	28	13.5	28	13.5	28	13.5	28	2.12	0.70	1.43	0.49	1.43	0.51	1.08	0.35	0.14	0.06	0.08	0.07	25	17	16	12.5	1	2.5
ECE-ASYM	13.5	28	13.5	28	13.5	28	13.5	28	13.5	28	2.04	0.69	1.44	0.49	0.90	0.32	1.07	0.35	0.13	0.06	0.08	0.07	25	17	12	12.5	1	2.5
ECE-SYM	13.5	28	13.5	28	13.5	28	13.5	28	13.5	28	1.32	0.46	0.71	0.27	0.90	0.32	1.08	0.35	0.13	0.06	0.08	0.07	17	10	12	12.5	1	2.5

Pin assignment – 6-pin DEUTSCH connector

PIN	Function	ASIL (ISO 26262)	Safety Goal (SG)
1	Ground		LB SG01 – The unique identification as a 2-track vehicle shall be given (safety goal on vehicle level)*
2	Low beam	ASIL B	LB SG02 – Sufficient illumination of the lane shall be ensured*
3	High beam	–	–
4	Position light	–	–
5	Direction indicator / cat. 5	ASIL B	DI SG03 – The driver shall be informed about any loss of the indicator function
6	Daytime running light		

* Note: It is assumed, that left and right tail light are controlled by separate lines each.

LIGHTING FUNCTIONS

Unmistakable design, coupled with specially designed light pattern, suitable for field applications, defines the essence of HELLA's new combination headlamp.



Side direction indicator (cat. 5)



European direction indicator (ECE)



American direction indicator (SAE)



Daytime running light



Low beam, high beam, position light



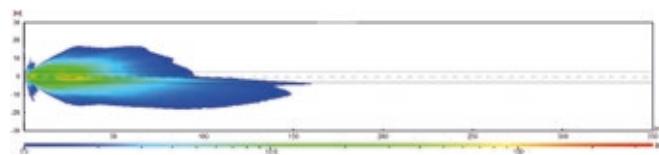
Low beam, position light



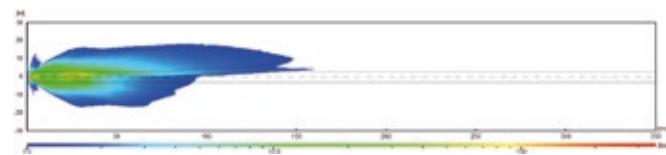
Position light

LIGHT DISTRIBUTION

ECE – Low beam right-hand traffic asymmetric



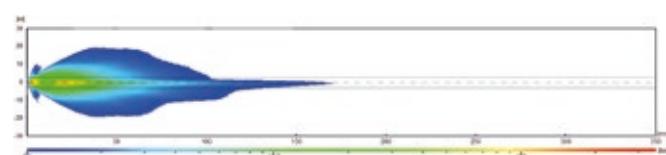
ECE – Low beam left-hand traffic asymmetric



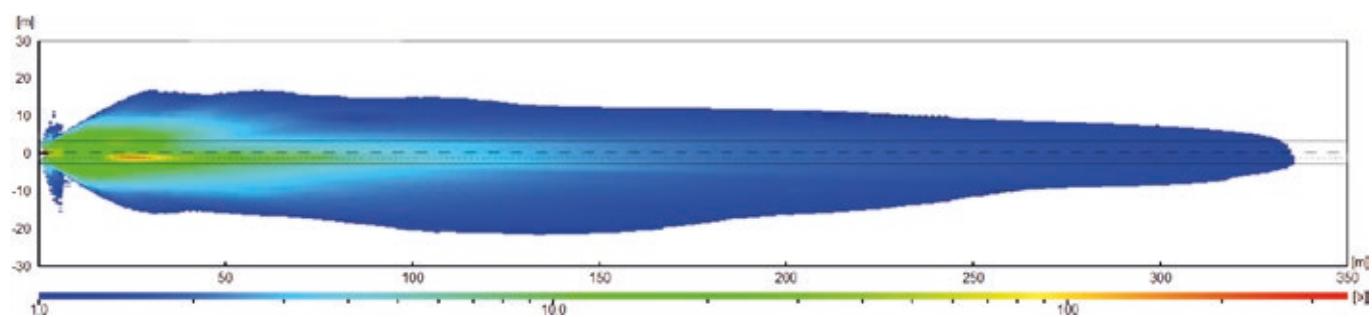
ECE – Low beam symmetric



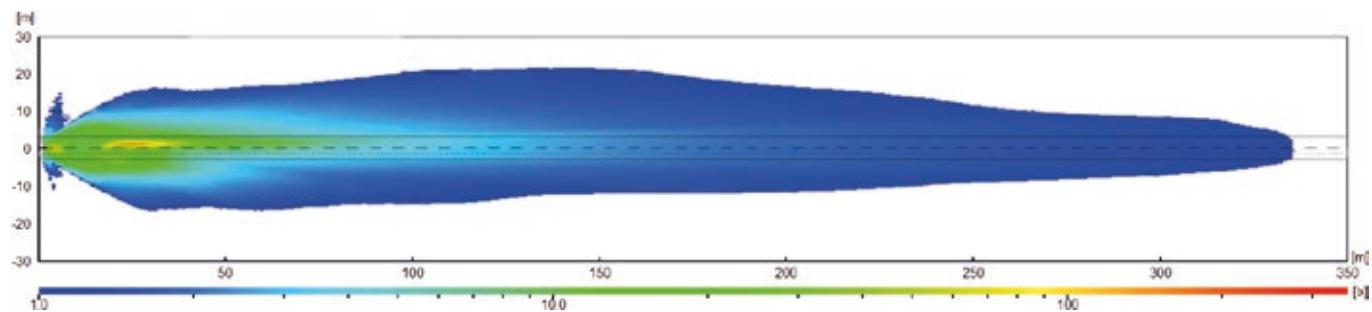
SAE – Low beam asymmetric



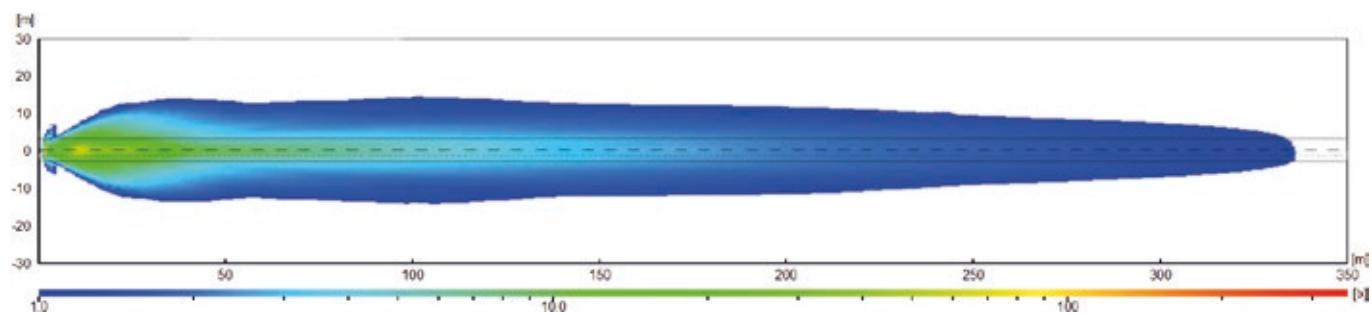
ECE – High beam right-hand traffic asymmetric



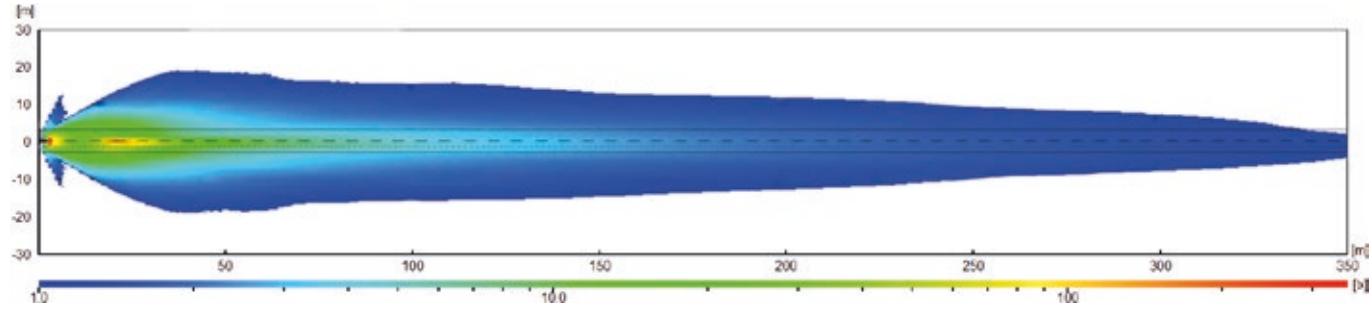
ECE – High beam left-hand traffic asymmetric



ECE – High beam symmetric



SAE – High beam asymmetric

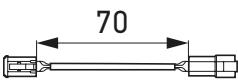


PROGRAM OVERVIEW

Type Approval	Description	Variant	Part number	VPE*
ECE – Essential	Class C symmetric, central mount	Left	1SF 328 550-011	1
		Right	1SF 328 550-021	1
	Class C symmetric, bottom mount	Left	1SF 328 550-031	1
		Right	1SF 328 550-041	1
	Cat. 5 with DRL, class C symmetric, central mount	Left	1SF 328 550-491	1
		Right	1SF 328 550-501	1
ECE – Performance	Class B asymmetric, ES, central mount	Left	1EF 328 550-131	1
		Right	1EF 328 550-141	1
	Class B asymmetric, ES, bottom mount	Left	1EF 328 550-151	1
		Right	1EF 328 550-161	1
	Cat. 5 with DRL, class B asymmetric, ES, bottom mount	Left	1EF 328 550-231	1
		Right	1EF 328 550-241	1
	Class B asymmetric, LES, central mount	Left	1LF 328 550-251	1
		Right	1LF 328 550-261	1
	Class B asymmetric, LES, bottom mount	Left	1LR 328 550-271	1
		Right	1LR 328 550-281	1
SAE – FMVSS	Cat. 5 with DRL, class B asymmetric, LES, bottom mount	Left	1LF 328 550-351	1
		Right	1LF 328 550-361	1
	Central mount, DI 10 LEDs	Left	1EF 328 550-371	1
		Right	1EF 328 550-381	1
	Bottom mount, DI 10 LEDs	Left	1EF 328 550-391	1
	Cat. 5 with DRL, bottom mount, DI	Left	1EF 328 550-471	1
	Cat. 5 with DRL, bottom mount, DI 10	Right	1EF 328 550-481	1

* Packaging unit

ACCESSORIES

Product Picture	Description	Part Number	VPE*
	Pinning adapter from C240 to C220	8KA 328 135-071	1

* Packaging unit

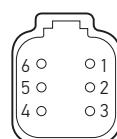
Pin configuration and alignment

Connector DT06-6p



- 3 o 0 4
- 2 o 0 5
- 1 o 0 6
- Pin 4: Position light
- Pin 5: Direction indicator light / cat. 5
- Pin 6: Daytime running light

Connector DT04-6p



- 6 o 0 1
- 5 o 0 2
- 4 o 0 3
- Pin 1: Daytime running light
- Pin 2: Low beam
- Pin 3: High beam
- Pin 4: Position light
- Pin 5: Direction indicator light / cat. 5
- Pin 6: Ground