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Edition 3.0 2017-11

INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 2
AMENDEMENT 2

Lamps for road vehicles – Dimensional, electrical and luminous requirements

Lampes pour véhicules routiers – Exigences dimensionnelles, électriques et lumineuses

IEC 60809:2014-12/AMD2:2017-11(en-fr)

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FOREWORD

This amendment has been prepared by subcommittee 34A: Lamps, of IEC technical committee 34: Lamps and related equipment.

The text of this amendment is based on the following documents:

FDIS	Report on voting
34A/2032/FDIS	34A/2038/RVD

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table.

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

5.6.2.2 Lamps ≤ 2 000 lm

Replace the title of 5.6.2.2 with the following new title

5.6.2.2 Lamps ≤ 2 000 lm without black stripes

Add, at the end of 5.6.2.2, the following two new subclauses:

5.6.2.3 Lamps ≤ 2 000 lm with black stripes

When measured according to the conditions specified in Annex H, a gas-discharge lamp having a rated luminous flux which does not exceed 2 000 lm but does contain black stripes shall emit at least:

– after 1 s: 700 lm,
– after 4 s: 900 lm.

The rated luminous flux is as indicated on the relevant data sheet.

5.6.2.4 Lamps with more than one rated value, and one of them ≤ 2 000 lm

When measured according to the conditions specified in Annex H, a discharge lamp having more than one rated luminous flux and at least one of them does not exceed 2 000 lm shall emit at least:

– after 1 s: 800 lm,

– after 4 s: 1 000 lm.

The rated luminous flux is as indicated on the relevant data sheet

6.5 Lamp dimensions

Add, at the end of the subclause, the following new text:

The values of light centre lengths of Lx3A, Lx3B, Lx4A, Lx4B, Lx5A and Lx5B[1], are measured as follows.

Measurements shall be made on finished light sources, at an ambient temperature of 23 °C ± 5 °C.

Measurement shall be made at test voltage as specified in the relevant LED light source category sheet.

LED light sources shall first be aged at their test voltage for at least forty-eight hours.

For multi-function LED light sources, each function shall be aged separately.

Before starting a test, the LED light source shall be operated for 30 min at test voltage.

For LED light sources with two functions, both functions shall be operated at the same time during the measurement, unless specified otherwise in the relevant data sheet.

In the case of LR4A and LR4B, the minor function and major function shall also be operated and measured separately, and the light centre length of the minor function shall be 2,5 mm (tolerance of ±0,5 mm under consideration) and the light centre length of the major function shall be 3,0 mm ± 0,3 mm.

In Annex K an example[2] of a method of measuring the value of the light centre length is given.

8.2 List of specific lamp types

Add below the row for IEC sheet no. 60809-IEC-9620 and UN sheet no. R37-H17 the following three new rows:

-	R37-H18	H18	12	65	PY26d-1
-	R37-H19	H19	12	55 / 60	PU43t-3
-	R37-H20	H20	12	70	PY26d-6

1 The x represents R, Y and W.

2 Any method to determine the value of the light centre length verified to be equivalent to that described in Annex K can be used.

Add below the row for IEC sheet no. 60809-IEC-9620 and UN sheet no. R99-D8S the following two new rows:

-	R99-D8R	D8R	12	25	PK32d-8
	R99-D9S	D9S	12	27 / 35	PK32d-9

Add the following new rows to the table:

-	R128-L3	LR3A / LR3B	12	3	PGJ18.5d-1
-	R128-L3	LW3A / LW3B	12	4	PGJ18.5d-24
-	R128-L3	LY3A / LY3B	12	4	PGJ18.5d-15
-	R128-LR4	LR4A / LR4B	12	3 / 0,75	PGJ18.5t-5
-	R128-L5	LR5A / LR5B	12	3	PGJ18.5d-10
	R128-L5	LW5A / LW5B	12	6	PGJ18.5d-28
	R128-L5	LY5A / LY5B	12	6	PGJ18.5d-19

C.2.2 Luminous flux

Replace the existing third paragraph with the following new text:

In case of item a), unless otherwise specified, this value shall be not more than 100 % and not less than 80 % of the value measured after 1 min.

Annex I

Replace the existing table with the following new table I.1:

Table I.1 – Overview of lamp types and their applications

Automotive lamps																Bicycle lamps	
Lamps for headlights and/or fog lamps										Lamps for signal lights							
Filament lamps								Discharge lamps		Filaments lamps				LED light sources			
Double filament				Single filament						Double filament		Single filament					
Cars and trucks	Data sheet	Motorcycles and mopeds	Data sheet	Cars and trucks	Data sheet	Motorcycles and mopeds	Data sheet		Data sheet		Data sheet		Data sheet		Data sheet		Data sheet
H4	R37-H4	S2	R37-S1/S2	H1	R37-H1	HS2	R37-HS2	D1S	R99-DxS	P21/4W	R37-P21/4W	WY16W	R37-W16W	LR1	R128-LR1	B1.13W	60809-IEC-9310
H13 /	R37-H13	HS1	R37-HS1	H3	R37-H3			D2S	R99-DxS	P21/5W	R37-P21/5W	W21W	R37-W21W	LW2	R128-LW2	B0.6W	60809-IEC-9610
H13A		H17[a]	R37-H17	H7	R37-H7			D3S	R99-DxS	PR21/5W	R37-PR21/5W	H10W/1	R37-H10W	LR3A	R128-L3	B2.4W	60809-IEC-9620
H15	R37-H15			H8 / H8B	R37-H8			D4S	R99-DxS	P27/7W	R37-P27/7W	HY10W/1	R37-H10W	LR3B			
H19	R37-H19			H9 / H9B	R37-H9			D1R	R99-DxR	PY27/7W	R37-PY27/7W	HY21W	R37-HY21W	LY3A			
				H10	R37-H10			D2R	R99-DxR	W15/5W	R37-W15/5W	HY6W	R37-H6W	LY3B			
				H11 / H11B	R37-H11			D3R	R99-DxR	W21/5W	R37-W21/5W	P13W	R37-P13W	LW3A			
				H12	R37-H12			D4R	R99-DxR	WT21/7W	R37-WT21/7W	P24W	R37-P24W	LW3B			
				H16 / H16B	R37-H16			D5S	R99-D5S	WTY21/7W	R37-WT21/7W	PY24W	R37-P24W	LR4A	R128-LR4		
				PSX26W [b]	R37-PSX26W			D8S	R99-D8S	WR21/5W	R37-WR21/5W	PR21W	R37-PR21W	LR4B			
				HB3	R37-HB3			D8R	R99-D8R			PS19W	R37-P19W	LR5A	R128-L5		
				HB4	R37-HB4			D9S	R99-D9S			PS24W	R37-P24W	LR5B			
				H27W	R37-H27W							PSY19W	R37-P19W	LY5A			
				HIR2	R37-HIR2					Single filament		PSY24W	R37-P24W	LY5B			
				PSX24W [b]	R37-P24W					C5W	R37-C5W	PW13W	R37-P13W	LW5A			
				H18	R37-H18					H6W	R37-H6W	PW16W	R37-PC16W	LW5B			
				H20	R37-H20					H21W	R37-H21W	PWY16W	R37-PC16W				
										P21W	R37-P21W	PW19W	R37-P19W				
										PY21W	R37-PY21W	PWY19W	R37-P19W				
										P27W	R37-P27W	PW24W	R37-P24W				
										R5W	R37-R5W	PWY24W	R37-P24W				
										R10W	R37-R10W	WT21W	R37-WT21W				
										T4W	R37-T4W	WTY21W	R37-WT21W				
										W2.3W	R37-W2.3W	WY21W	R37-WY21W				
										W3W	R37-W3W	RY10W	R37-R10W				
										W5W	R37-W5W	W10W	R37-W10W				
										WY5W	R37-W5W	WY10W	R37-W10W				
										W16W	R37-W16W						

Key

NOTE 1 Light sources listed under "Cars and trucks" can generally also be used on motorcycles and mopeds.

NOTE 2 For more detailed usage restrictions see UN R37, UN R99 and UN R128.

[a] No use restriction.

[b] Typical use for front fog application.

Add, after Annex J, the following new Annex K:

Annex K
(informative)

Method(s) to determine the value of the light centre length[3] for Lx3A, Lx3B, Lx4A, Lx4B, Lx5A and Lx5B[4]

K.1 Measurement and calculation method based on ray tracing

A near-field goniophotometer [5] measurement of the luminance distribution should be performed with an imaging-photometer, in the range -90° < γ < +90° and 0° < C < 180°, with an angular resolution of 1° or smaller for both C and γ (see Figures K.1 and K.2).

From this measurement data, a software tool, simulating the luminance distribution of the measurement, should generate a set of at least one million light rays originating from the light emitting area.

From an arbitrary point in space, the squared distance to each individual light ray of this set of light rays should be calculated. The light centre length should be calculated as the distance from the reference plane to the point, where the sum of all squared distances is at a minimum.

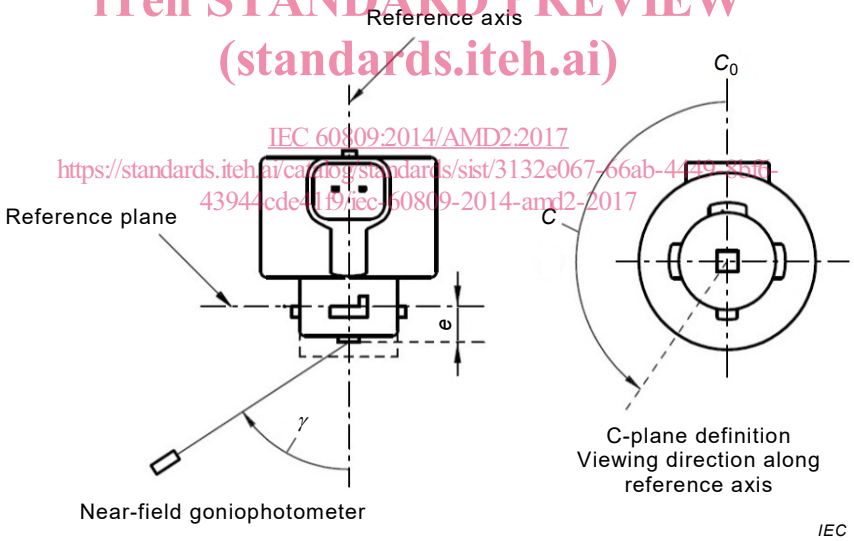

Figure K.1 – Set-up to measure the luminance distribution of the A versions of the LED light sources

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3 The light centre length corresponds to the parameter e in the corresponding data sheets of UN Regulation No. 128.

4 x represents R, Y and W.

5 CIE Publication 070-1987: The Measurement of Absolute Luminous Intensity Distributions.

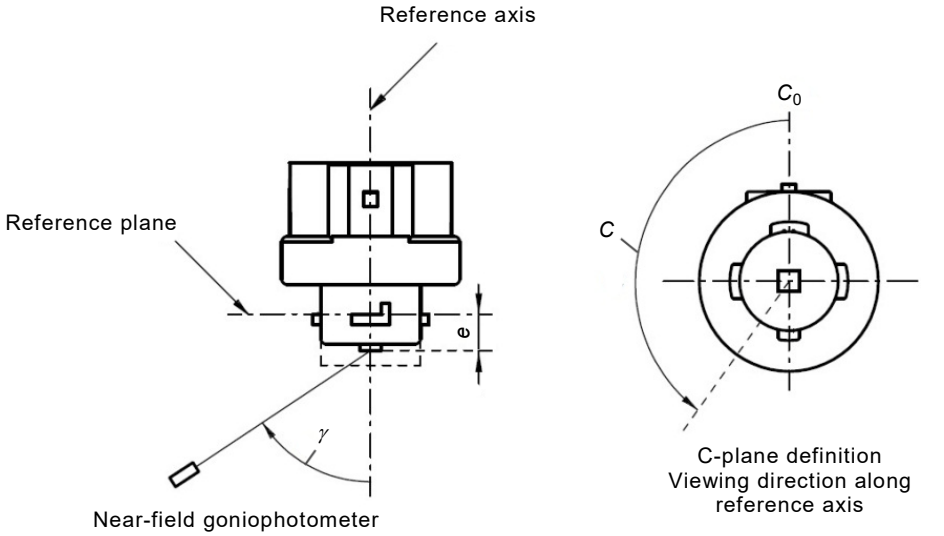

Figure K.2 – Set-up to measure the luminance distribution of the B versions of the LED light sources

K.2 Alternative method

Under consideration.

Add the following Bibliography

Bibliography

CIE Publication 070-1987, *The Measurement of Absolute Luminous Intensity Distributions*