March 25, 2019

RDW rijksdenst voor het wegverkeer
Certification and Supervision
Europaweg 205
2700 AT Zoetermeer
The Netherlands

Subject for UN-type approval

Dear Sir:
We hereby apply for type approval according to:

Function	UN approval number	EEC approval number
Rear Registration Plate Lamp	E4*4R00/19*4705*00	---

Trade name or trade mark :

Manufacturer's name for type of device : 68 LED

Name and address of manufacturer AEB NV
Z.5 Mollem 400, 1730 Asse, België

We herewith declare that we have not applied and will not apply for approval with another Contracting Party of the UN for the same type of product. Nor has any other member state granted a corresponding approval.

Sincerely

JE MAINTIENDRAI
RDW

THE NETHERLANDS
(N E D E R L A N D)

E4

JE MAINTIENDRAI

COMMUNICATION

Concerning [1]:

- APPROVAL GRANTED
- ~~APPROVAL EXTENDED~~
- ~~APPROVAL REFUSED~~
- ~~APPROVAL WITHDRAWN~~
- ~~PRODUCTION DEFINITELY DISCONTINUED~~

of a type of device for the illumination of rear registration plates of motor vehicles (except motor cycles) and their trailers pursuant to Regulation number 4.

Approval number: E4*4R00/19*4705*00

1.	Trade name or mark of the device	:
2.	Manufacturer's name for the type of device	: 68 LED
3.	Manufacturer's name and address	: AEB NV Z.5 Mollem 400, 1730 Asse, België
4.	If applicable, name and address of the manufacturer's representative	: ---
5.	Submitted for approval on	: March 25, 2019
6.	Technical service responsible for conducting approval tests	: TÜV Rheinland Kraftfahrt GmbH Technologiezentrum Verkehrssicherheit Am Grauen Stein D-51105 Köln (Poll)
7.	Date of report issued by that service	: April 16, 2019
8.	Number of report issued by that service	: 87-R4-702/19-00
9.	Concise description [2]	
	Device for illuminating	: Category 1a, 1b~~, 1c, 2a, 2b~~ [1]
	Number and category(ies) of light source(s)	: 3 LEDs, non-replaceable light source
	Light source module	: ~~yes /~~ no [1]
	Light source module specific identification code	: ---

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Tel. + 31 (0)79 345 83 02
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Type-approval Department

	Geometrical conditions of installation (position(s) and inclination(s) of the device in relation to the space to be occupied by the registration plate and/or different inclinations of this space)	:	see information folder for more details
10.	Position of the approval mark	:	on the lens
11.	Reason(s) for extension (if applicable)	:	---
12.	Approval	:	granted ~~/ extended / refused / withdrawn~~ (1)
13.	Place	:	Zoetermeer
14.	Date	:	01 May
15.	Signature	:	2019

Uwe Löbig

16. The list of documents deposited with the Administrative Service which has granted approval is annexed to this communication and may be obtained upon request.

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1) Strike out what does not apply.
2) For lamps with non-replaceable light sources indicate the number and the total wattage of the light sources.

Application date : March 25, 2019

1. Specification data

Type		68 LED	
Function		Rear Registration Plate	
Emitted colour		Lamp Colourless	
Rated	Voltage	12V	
	Wattage	2*0.3W	
Applicable Regulation (UN)		R4.00 Category 1a and 1b	
Number and category of filament lamp (light source)		2*3 LEDs, Non-replaceable light source	
Location of marking	Rated voltage	Marked on Housing	
	Trade mark		Marked on Housing
	Approval mark	Marked on Lens	

2. Construction and material

Construction	Material	Remarks
Out Lens	PC	Clear/Textured
Reflector	PCB Plate	White
Housing	ABS	Black
Electrical wiring	Copper covered with insulation	---

3. Name and address of manufacturer AEB NV
Z.5 Mollem 400, 1730 Asse, België

4. Name and address of representative of manufacturer : Not applicable

This information document consists of **2** pages.

JE MAINTIENDRAI
RDW

Manufacturer :

Type :

TEST REPORT

according to UN-Regulation

Uniform provisions concerning the approval of device for the illumination of rear registration plates of power-driven vehicles and their trailers

UN Regulation No.4

including all amendments until

series of Amendments: 00
Supplement 19

Approval status		
UN - Approval	:	---

Structure of report:

0. General information
1. Test object(s) and general test information
2. Test minutes
3. Remarks concerning tested object(s)
4. Appendices
5. Statement of conformity

Manufacturer :

Type :

0. General information

0.1. Trademark or trade name of the lamp :

0.2. Manufacturer's name for the type of the lamp : 68 LED

0.3. Name and address of the manufacturer : AEB NV
Z.5 Mollem 400, 1730 Asse, België

0.4. Name and address of manufacturer's authorized representative : ---

0.5. No. of information folder : 68 LED
date of issue : March 25, 2019
date of last amendment : ---

1. Test object(s) and general test information

1.1. Test object(s)

1.1.1. ~~Vehicle~~ / object

Commercial description : Not Applicable

Type(s) /~~variant(s) /version(s)~~ : 68 LED

Remark : 2*3 LEDs, 12V 2*0.3W, non-replaceable light source

1.1.2. Condition of ~~vehicle(s)~~ / Object(s) : new, <u>used, pretested</u>

1.2. Worst case selection : The determination of the worst case was done according to internal procedures of the Technical Service (QMA 1.301.005, section 6.2.2.2.).

1.2.1. Test date : April 15, 2019

1.2.2. Test site : Automotive Component Testing Center of Ningbo
No. 99, Jingu South Road, Yinzhou Investment & Business Incubation, 315104, Ningbo,
P.R. China

1.2.3. Remark : The results of the test refer exclusively to the object(s) mentioned under point 1.1 of this report.

2. Test minutes

2.1.	Test facilities	: The test facilities are in compliance with the requirements of the regulation.
2.2.	Test results	: ~~The type has been examined according to the amendments mentioned in appendix 0.~~ ~~An actual test of the type was not required. The results of the previous tests are still valid.~~
	Markings	: The trade mark is marked clearly legible and indelible ~~on the lens and~~ on the housing of the lamp. The rated voltage is clearly legible and indelible marked ~~on the lens and~~ on the housing of the lamp. Space for the approval mark and for additional symbols is provided on the lens (the lens can not be separated from the housing).
2.3.	General specifications	: The device for the illumination of rear registration plates is so constructed that the whole surface of the plate is visible within the angles given in Annex 4 of the regulation. The light of the illuminating device is sufficiently COLOURLESS.
2.4.	Photometric tests	: The light intensity was measured after 1 minute burning period and after 30 minutes burning in reference axis. The distribution of the light intensity after 1 minute burning period was calculated using the ratio of the two described measurements. The light intensity and its distribution are in compliance with the requirement after 1 minute burning period and after 30 minutes burning period. The angle of incidence of the light on the surface of the plate does not exceed 82º at any point on the surface to be illuminated. No light is emitted towards the rear of the vehicle. The luminance have been measured in accordance with Annex 3 of the regulation, based on the position in which the device is to be fitted in relation to the space to be occupied by the registration plate. The luminance measurements have been made on a piece of clean white blotting paper with known diffuse reflection factor, of the same dimensions as the registration plate, placed in the position normally occupied by it and 2 mm in front of its holder, as checked in accordance with provision of Annex 5 of the regulation. All light sources are connected in a series as one light source

Manufacturer :

Type :

Results of photometric tests of the **illumination of rear registration plate, Category 1a** (tested with 13.5V)

measured after **1 minute** burning period when all light sources lit

	light intensity of the lamps in (X:25, Y:25) [cd]	allowable maximum	required minimum
sample no. 1	15.86	-	2.5
sample no. 2	15.90	-	2.5

measured after **30 minutes** burning period when all light sources lit

X - axis [mm]		25	125	215	315	required value
Y - axis [mm]	25	15.17	12.24	11.87	13.38	≥ 2.5
sample no. 1	120	205.3	19.20	22.42	231.7	≥ 2.5
	215	14.92	12.17	12.71	14.05	≥ 2.5
Y - axis [mm]	25	14.95	11.17	11.61	13.54	≥ 2.5
sample no. 2	120	207.2	19.65	22.95	207.9	≥ 2.5
	215	12.37	10.99	11.06	12.94	≥ 2.5

	sample no. 1	sample no. 2	required value
minimum luminance Bo [cd/m²]	11.87	10.99	≥ 2.5
maximum gradient[(cd/m²)/cm]	22.98	20.52	≤ 2 x Bo/cm

Results of photometric tests of the **illumination of rear registration plate, Category 1b** (tested with 13.5V)

measured after **1 minute** burning period when all light sources lit

	light intensity of the lamps in (X:25, Y:25) [cd]	allowable maximum	required minimum
sample no. 1	23.54	-	2.5
sample no. 2	23.36	-	2.5

measured after **30 minutes** burning period when all light sources lit

luminance B of the measuring points of the plate [cd/m²]								
X - axis [mm]		25	125	225	295	395	495	required value
Y - axis [mm]	25	21.96	186.3	16.48	15.01	179.4	19.28	≥ 2.5
sample no. 1	95	11.20	40.79	10.42	10.94	40.87	12.36	≥ 2.5
Y - axis [mm]	25	22.21	172.5	17.08	15.52	168.5	19.65	≥ 2.5
sample no. 2	95	12.07	41.45	11.72	9.979	39.76	10.80	≥ 2.5

	sample no. 1	sample no. 2	required value
minimum luminance Bo [cd/m²]	10.42	9.979	≥ 2.5
maximum gradient[(cd/m²)/cm]	20.79	18.72	≤ 2 x Bo/cm

2.5. Explanatory note : Not applicable

2.6. Variants and components : ---

3. Remark concerning tested object(s)

All versions of the lamps as stated in the information document are covered with the tested version(s) and test object(s) respectively.

4. Appendices

0 List of modifications

Information folder no. : LPL0901-00

5. Statement of conformity

The in point 0.5. mentioned information folder and the type described in that comply with the requirements mentioned on page 1.

With regard to the required level of performance to be achieved, the tested items were representative for the type to be approved (see point 1.2).

The mentioned test results refer to the ~~vehicle(s)~~/object(s) described under point 1.1. of this report.

Engineering Centre Shanghai, April 16, 2019
DG/ EY/TY

Daniel Gu
Expert Technical Service

Manufacturer :

Type :

List of modifications **Appendix 0**

Correction of : ---

Modification of : ---

Addition of : ---

Deletion of : ---