

TECHNICAL REPORT

according to ECE-Regulation

**UNIFORM PROVISIONS CONCERNING THE APPROVAL OF DEVICES FOR THE
ILLUMINATION OF REAR REGISTRATION PLATES OF POWER-DRIVEN
VEHICLES AND THEIR TRAILERS**

ECE-Regulation 4

including all amendments until

series of Amendments: 00

Supplement 14

dated:

October 02, 2008

Previously granted		
ECE - certificate	:	E4-4R-00 4289

Structure of report:

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

Test object(s) and general test information

Test object(s)

identification number : 26800-V
version : Rear registration plate lamp

General test information

Order issued by
(if different from manufacturer) : ---
Test object / test vehicle received on : not applicable
Test date : September 09, 2010
Test site : Lucidity Enterprise Co., Ltd.
Tainan, Taiwan, R.O.C.
Remark : —

Test minutes

- Test facilities : The test facilities are in compliance with the requirements of the regulation.
- Test results : ~~The type has been examined according to the amendments mentioned in appendix 0. See attached.~~

~~An actual test of the type was not required. The results of the previous tests are still valid. delete if unnecessary~~
- Temperature : 26.5° C
- Markings : The trade mark is marked clearly legible and indelible 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).

General specifications : The devices for the illumination of rear registration plates shall be so constructed that the whole surface of the plate will be visible within the angles given in Annex 4.

~~All measurements shall be made with the standard filament lamp of the category prescribed by the manufacturer, the supply voltage being so regulated as to produce the reference luminous flux.~~ All measurements on the devices with non-replaceable light sources shall be made at 6.75 V, 13.5 V or 28.0 V respectively.

For any rear registration plate illuminating device, except those equipped with filament lamp(s), the luminance values measured after one minute and after 30 minutes of operation shall comply with the minimum requirements. The luminance distribution after one minute of operation can be calculated by applying at each test point the ratio of luminance values measured in one point after one minute and after 30 minutes of operation.

The light of the lamp used in the illuminating device must be sufficiently colourless not to cause any appreciable change in the colour of the registration plate.

Photometric tests : The light emitted was obtained by means of LEDs of the category stated in Appendix L-9, ~~producing the required luminous flux.~~

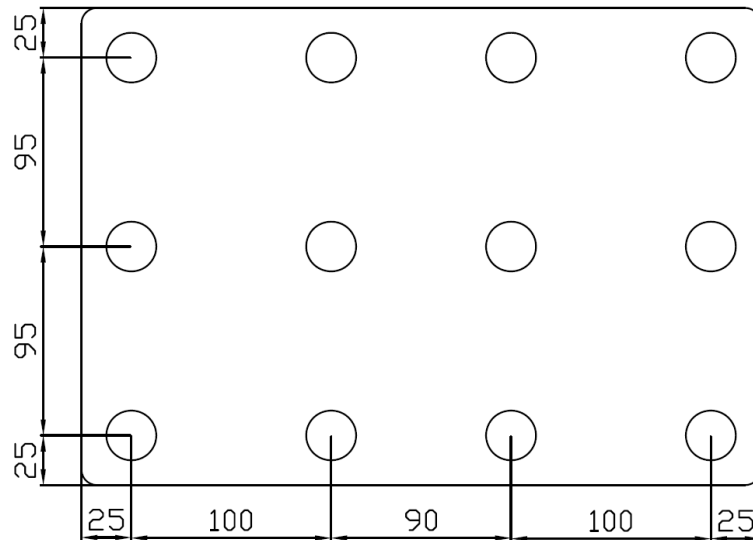
The angle of incidence of the light on the surface of the plate shall not exceed 82 degrees at any point of the surface to be illuminated, this angle being measured from the extremity of the device's illuminating area which is furthest from the surface of the plate. If there is more than one illuminating device, the foregoing requirement shall apply only to that part of the plate intended to be illuminated by the device concerned.

Luminance measurements shall be made on a diffuse colourless surface with known diffuse reflection factor , of the same dimensions as the registration plate, place in the position normally occupied by it and 2 mm in front of its holder.

Luminance measurements shall be made perpendicularly to the surface of the diffuse colourless surface with the tolerance of 5 degrees in each direction at the points shown in Annex 3 to this Regulation, each point representing a circular area of 25 mm in diameter. The measured luminance shall be corrected for the diffuse reflection factor 1.0.

The Photometric characteristics prescribed in paragraph 9 of the Regulation.

Result of photometric tests of the rear registration plate lamp
(devices for illuminating a tall plate (340 x 240 mm))

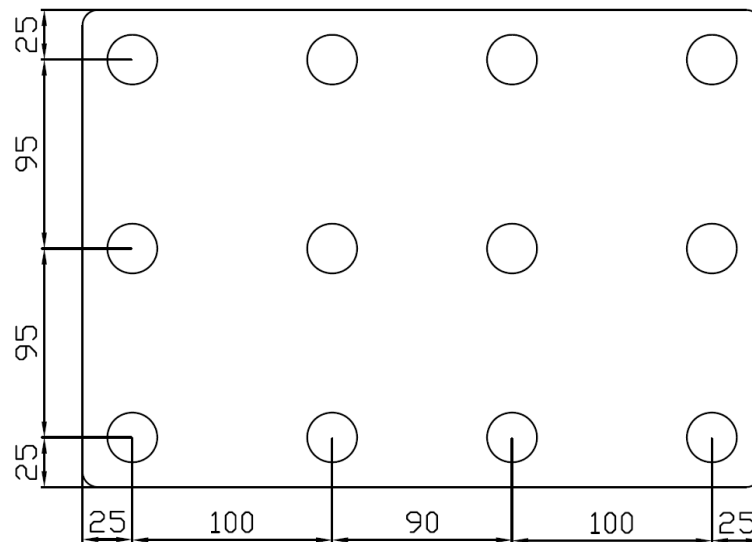


(Sample 12V)

Luminance B of the measuring points of the plate [cd/m ²]						
X-axis[mm]		25	125	215	315	Required value
vertical angle sample 1	25	6.78	9.98	10.11	6.65	2.5
	120	4.87	12.16	14.20	5.90	2.5
	215	3.99	5.30	6.29	3.12	2.5
vertical angle sample 2	25	7.54	9.84	10.41	6.24	2.5
	120	4.19	13.86	14.06	5.76	2.5
	215	3.50	6.78	6.97	3.30	2.5

	Sample 1	Sample 2	Require value
Minimum luminance Bo	3.12	3.30	
Maximum gradient	0.833	0.967	<2xBo

Result of photometric tests of the rear registration plate lamp
(devices for illuminating a tall plate (340 x 240 mm))

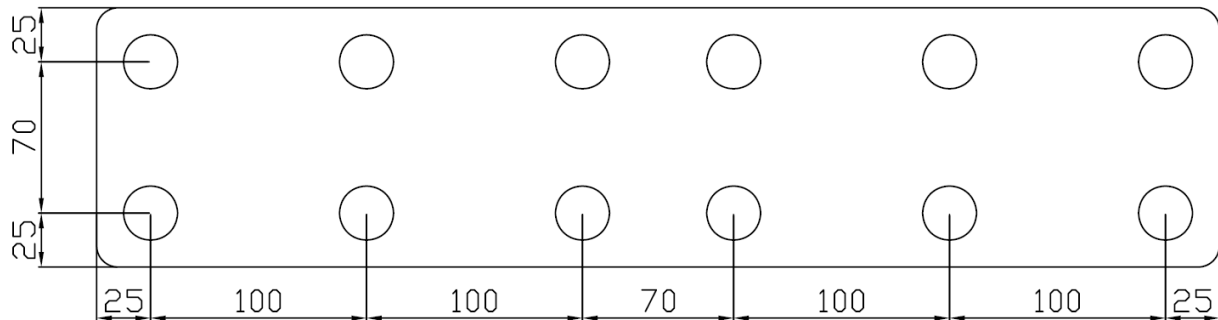


(Sample 24V)

Luminance B of the measuring points of the plate [cd/m ²]						
X-axis[mm]		25	125	215	315	Required value
vertical angle sample 1	25	6.68	10.76	12.15	6.66	2.5
	120	3.93	11.54	13.04	6.44	2.5
	215	4.12	6.36	7.04	3.74	2.5
vertical angle sample 2	25	6.73	8.75	9.33	5.57	2.5
	120	3.72	12.23	12.47	5.15	2.5
	215	3.08	5.98	6.17	2.94	2.5

	Sample 1	Sample 2	Require value
Minimum luminance Bo	3.74	2.94	
Maximum gradient	0.761	0.851	<2xBo

Result of photometric tests of the rear registration plate lamp
(devices for illuminating a wide plate (520 x 120 mm))



(Sample 12V)

Luminance B of the measuring points of the plate [cd/m ²]								
X-axis[mm]		25	125	225	295	395	495	Required value
vertical angle sample 1	25	10.23	6.07	7.89	8.31	7.53	16.34	2.5
	95	10.68	6.74	5.91	7.91	8.21	30.30	2.5
vertical angle sample 2	25	15.00	5.50	7.59	7.80	6.47	19.44	2.5
	95	8.02	6.62	7.54	7.16	7.22	14.42	2.5

	Sample 1	Sample 2	Require value
Minimum luminance Bo	5.91	6.47	
Maximum gradient	2.209	1.297	<2xBo

(Sample 24V)

Luminance B of the measuring points of the plate [cd/m ²]								
X-axis[mm]		25	125	225	295	395	495	Required value
vertical angle sample 1	25	12.02	7.08	9.29	9.72	8.57	19.15	2.5
	95	12.55	7.98	6.98	9.39	9.54	36.10	2.5
vertical angle sample 2	25	14.47	8.42	10.71	10.00	8.16	16.47	2.5
	95	18.43	8.96	7.86	9.11	8.37	30.80	2.5

	Sample 1	Sample 2	Require value
Minimum luminance Bo	6.98	7.86	
Maximum gradient	2.656	2.243	<2xBo

Explanatory note : not applicable

Remark concerning tested object(s)

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

Appendices

- | | | |
|---|------------------------|----------------|
| 0 | List of modifications | : not attached |
| 1 | Information folder no. | : 26800-V-00 |

Statement of conformity

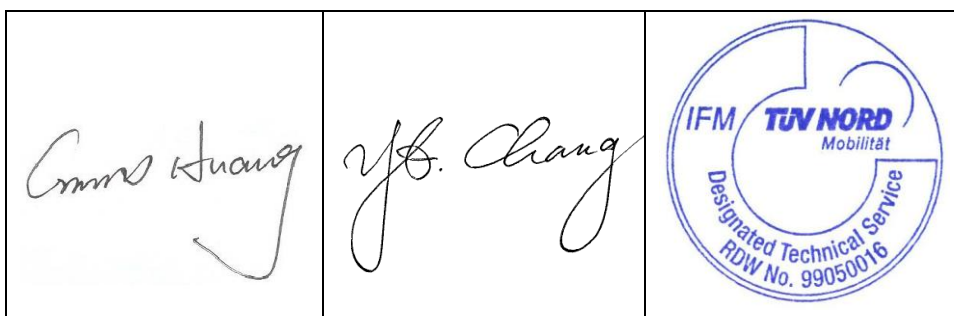
The information folder and the type described there comply with the requirements in the above mentioned ~~directive~~ regulation.

The test laboratory is accredited for the above mentioned tests by the RDW, Vehicle Technology and Information Centre, the Netherlands:

Certification Number: RDW-99050016

The technical report comprises the pages 1 to 9 and shall not be reproduced except in full without the written approval of the test laboratory.

Taipei, September 15, 2010
IFM/#



Cronus Huang
Engineer

Yin-Tsun Chang
Reviewer

Technical information about the lamp type according to Annex 2
for the communication of the ECE-type approval

Appendix L

1. Trade name or mark of the device : LUCIDITY
2. Manufacturer's name for the type of device : 26800-V, Rear registration plate lamp
3. Manufacturer's name and address : Lucidity Enterprise Co., Ltd.
No.18, Gong-Ye Road Section 1,
Tainan Science Industrial Zone
70955-Tainan City-- Taiwan/R.O.C.
4. If applicable, name and address of manufacturer's representative : not applicable
5. Submitted for approval on : July 27, 2010
7. Date of test report : September 15, 2010
9. Concise description

Device for illuminating : Devices for illuminating a tall plate and a wide plate

Number and category of filament lamp(s) : 6xLED

Voltage and Wattage : 12V : 0.8W / 24V : 1.7W
10. Location of approval mark : on the lens
11. Reason(s) for extension : not applicable

1. Specification Data

September 09, 2010

Type		26800-V
Function		Rear registration plate lamp */
Light Color		White
Rate	Voltage	12V / 24V
	Wattage	0.8W / 1.7W
Application Regulation (ECE)		ECE R4.00
Location of marking	Filament lamp category	LED*6
	Trade mark	LUCIDITY
		On the lens
	Approval mark	On the lens

*/ The installation of this device have two versions: Devices for illuminating a tall plate and a wide plate

2. Construction and Material :

Construction	Material	Remarks
Lens	PC	Clear
Frame	ABS	Black/Chromed

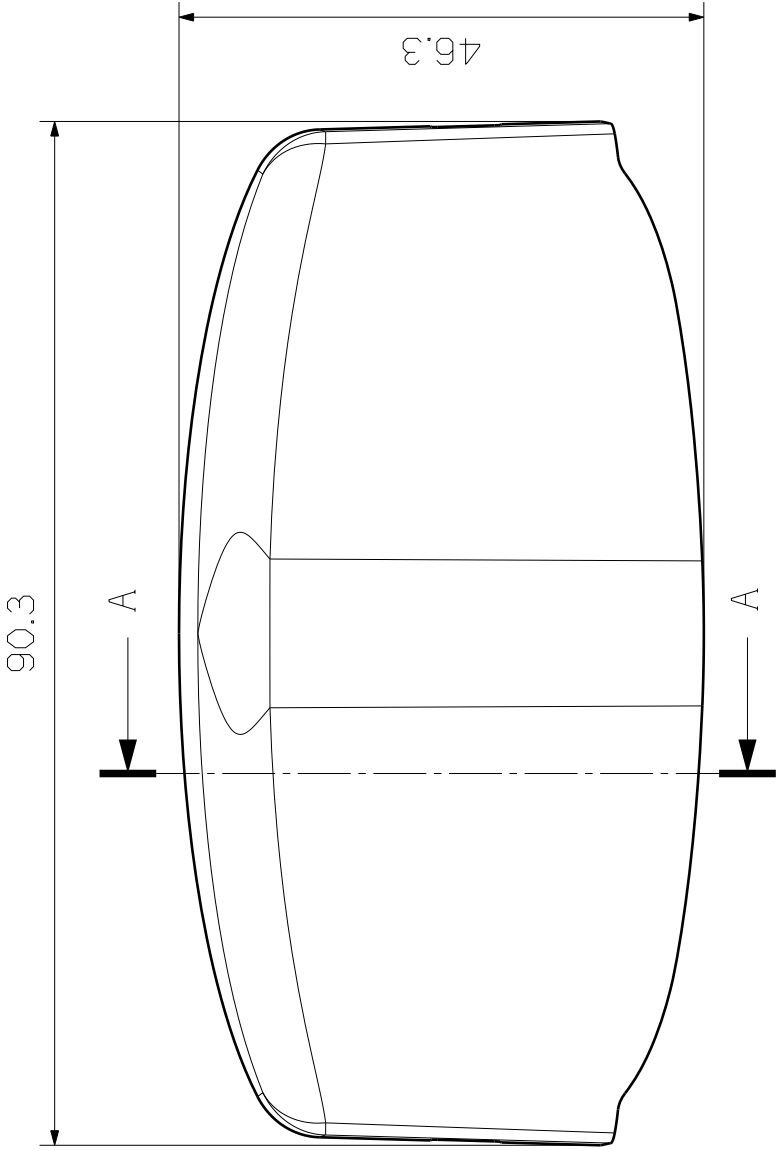
3. Name and Address of Manufactory :

Lucidity Enterprise Co., Ltd.
No.18, Gong-Ye Road Section 1,
Tainan Science Industrial Zone
70955-Tainan City-- Taiwan/R.O.C.

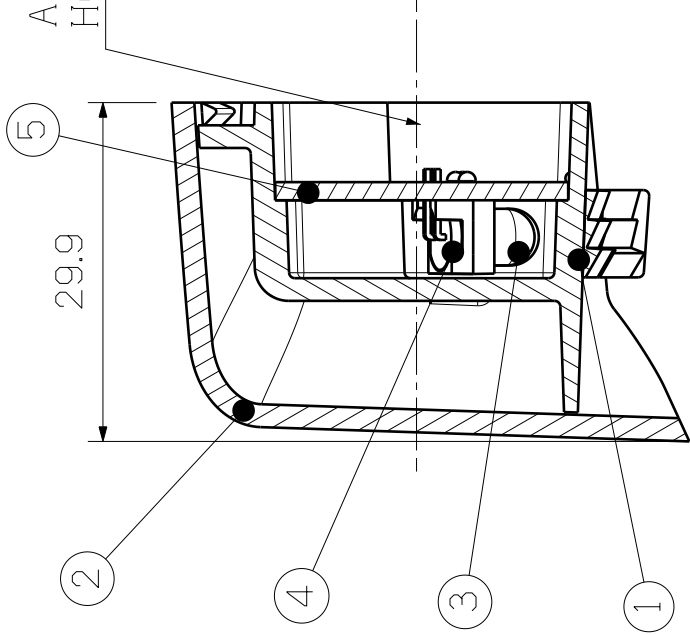
4. Name and address of representative of manufacturer: Not applicable



GENERAL TOLERANCE	
ASSEMBLY PARTS	
DIMENSION TOLERANCE	
≤4	±0.04
>4~≤12	±0.08
>12~≤40	±0.12
>40	±0.16
GENERAL TOLERANCES FOR NOMINAL DIMENSIONS WITHOUT SPECIFIED TOLERANCE	



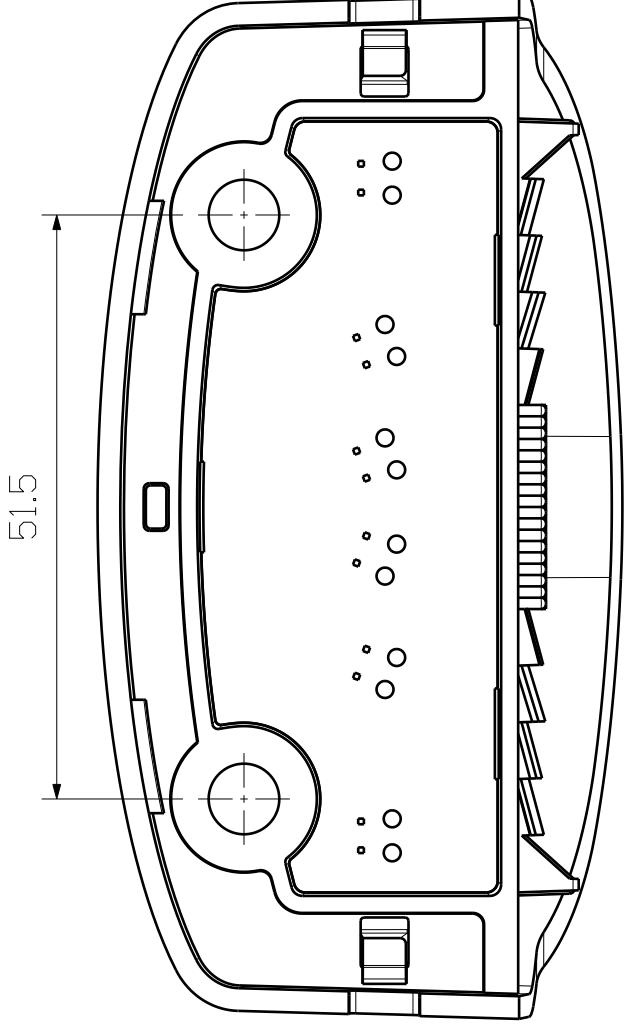
MAIN VIEW (3 : 2)



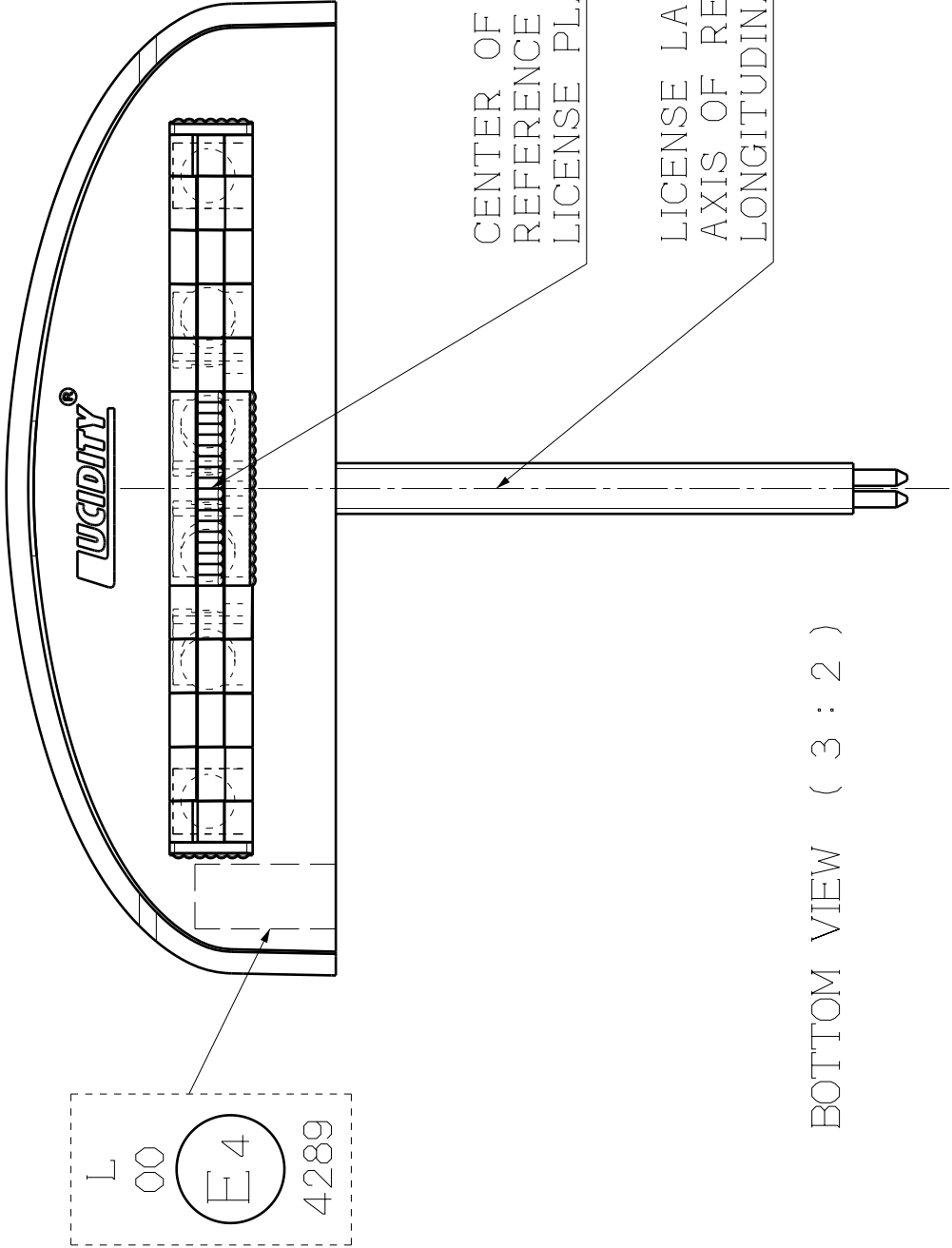
SECTION A-A (3 : 2)



AXIS OF REFERENCE
HORIZONTAL PLANE OF VEHICLE



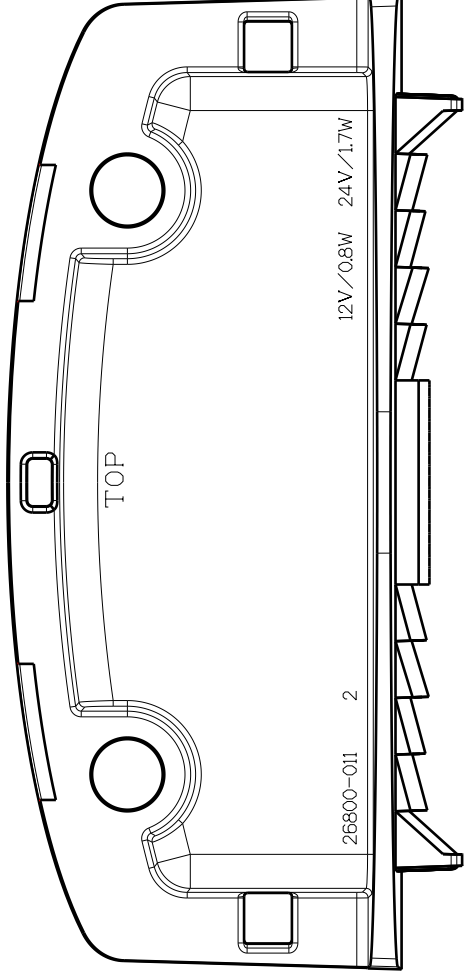
BACK VIEW (3 : 2)



BOTTOM VIEW (3 : 2)

CENTER OF
REFERENCE (LED)
LICENSE PLATE LAMP

LICENSE LAMP
AXIS OF REFERENCE
LONGITUDINAL PLANE OF VEHICLE



FRONT VIEW (3 : 2) – LENS ONLY

5	PCB		1	
4	HOLDER	PC	6	CLEAR
3	LED	5φ	6	WHITE
2	FRAME	ABS	1	BLACK/CHROMED
1	LENS	PC	1	CLEAR
SYS	PART NAME	MATERIAL & SPECIFICATION	QTY	REMARK

SCALE	3 : 2	APPR BY		DWG NAME	26800-V	ECE APPROVED
FILE NAME	26800-V-5500	CHK BY				
CUSTOM PART NO		DESNR BY	BENNY SHEN	DWG NO.	26800-V-5500	SYM
3RD ANGLE		DRAWN BY	BENNY SHEN			○
UNIT:mm		DWG DATE	09-16-10			
LUCIDITY® LUCIDITY ENTERPRISE CO.,LTD. NO.18, GONGYE 1ST RD., ANWAN DIST. TAIWAN, Taiwan, R.O.C.						

NOTE:
1.THIS DRAWING SHOW LH AND RH IS THE SAME
2.THE BASE AND LENS ARE FIXED
BY CLIP

Information folder no.: 26800-V-00

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

COMMUNICATION

Concerning ⁽¹⁾:

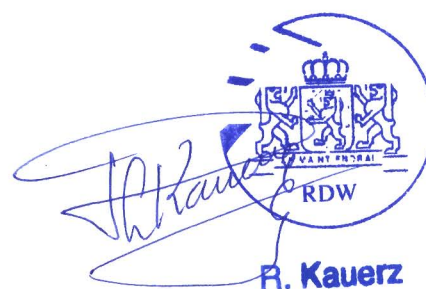
- approval granted
- ~~- approval extended~~
- ~~- approval refused~~
- ~~- approval withdrawn~~
- ~~- production definitely discontinued~~

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 No.: E4-4R-004289**Extension No.: 00***Approval mark*

1. Trade name or mark of the device : LUCIDITY
2. Manufacturer's name for the type of device : 26800-V, Rear registration plate lamp
3. Manufacturer's name and address : Lucidity Enterprise Co., Ltd.
No.18, Gong-Ye Road Section 1,
Tainan Science Industrial Zone
70955-Tainan City-- Taiwan/R.O.C.
4. If applicable, name and address of the manufacturer's representative : ---
5. Submitted for approval on : July 27, 2010
6. Technical service responsible for conducting approval tests : TÜ V NORD Mobilität GmbH & Co. KG
Institut für Fahrzeugtechnik und Mobilität
Adlerstrasse 7, D-45307 Essen

7. Date of report issued by that service : September 15, 2010
8. Number of report issued by that service : TW004-A0-100262
9. Concise description ⁽²⁾ : ---
- Device for illuminating : a tall plate/a wide plate/a plate for agricultural or forestry tractor ⁽¹⁾
- Number and category of filament lamp(s) : 6 x LED (12V 0.8W / 24V 1.7W)
- Light source module : yes/no ⁽¹⁾
- Light source module specific identification code : ---
- 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) : Refer to the drawing
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 : 23-SEP-2010
15. Signature :



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.

⁽¹⁾ Strike out what does not apply.

⁽²⁾ for lamps with non-replaceable source indicate the number and the total wattage of the light sources