



THE NETHERLANDS
(NEDERLAND)



COMMUNICATION

Concerning ⁽¹⁾:

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- ~~- approval withdrawn~~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

of a type of device pursuant to Regulation number 7.

Approval number: E4-7R-0214730

Extension number: 00

Approval mark:

2a R1-S1
01 02



14730

1. Trade name or mark of the device : _____
2. Manufacturer's name for the type of device : _____
3. Manufacturer's name and address : _____
4. If applicable, name and address of the manufacturer's representative : not applicable
5. Submitted for approval on : April 19, 2010



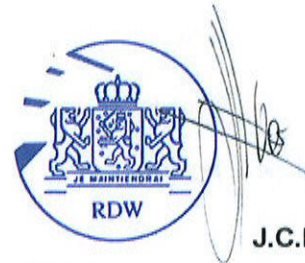
6. Technical service responsible for conducting approval tests : TÜV NORD Mobilität GmbH & Co. KG
Institut für Fahrzeugtechnik und Mobilität
Adlerstrasse 7, D-45307 Essen
7. Date of report issued by that service : April 23, 2010
8. Number of report issued by that service : KR007-A0-1030205
9. Concise description :
- By category of lamp : R1-S1
- For mounting either outside or inside or both⁽¹⁾ : outside
- Colour of light emitted : red/white⁽¹⁾
- Number, category and kind of light source(s) : 7 LEDs, 12V 1.6W/0.5W, non-replaceable light source
- Voltage and wattage : Rear position: 12V 0.5W
Stop: 12V 1.6W
- Light source module specific identification code : not applicable
- Only for limited mounting height of equal to or less than 750 mm above the ground : yes/no⁽¹⁾
- Geometrical conditions of installation and relating variations, if any : not applicable
- Application of an electronic light source control gear/variable intensity control : no
- (a) Being part of the lamp : yes/no⁽¹⁾
- (b) Being not part of the lamp : yes/no⁽¹⁾
- Input voltage(s) supplied by an electronic light source control gear/variable intensity control : not applicable
- Electronic light source control gear/variable intensity control manufacturer and identification number (when the light source control gear is part of the lamp but is not included into the lamp body) : not applicable



Approval number: E4-7R-0214730

Extension number: 00

- Variable luminous intensity : ~~yes~~/~~no~~⁽¹⁾
10. Position of the approval mark : on the lens
11. Reason(s) for extension (if applicable) : not applicable
12. Approval : ~~granted/extended/refused/withdrawn~~⁽¹⁾
13. Place : Zoetermeer
14. Date : 19-MAY-2010
15. Signature :



J.C.M. Hoes

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

⁽¹⁾ Strike out what does not apply.

Re Application date : April 19, 2010

1. Specification data

Type		206		
Function		Rear Direction Indicator	Rear Position Lamp	Stop Lamp
Emitted color		Amber	Red	Red
Rated	Voltage	12V		
	Wattage	1.6W	0.5W	1.6W
Applicable Regulation (ECE)		R6.01 Category 2a	R7.02 Category R1-S1	
Number and category of filament lamp(light source)		7LEDs, Non-replaceable light source	7LEDs, Non-replaceable light source	
Location of marking	Rated Voltage and Wattage	Marked on Base		
	Trade mark	Marked on Lens		
	Approval mark	Marked on Lens		
Special supply voltage		Not applicable		
Application of additional supply system		Yes / No		
Light source module		Yes /No		

2. Construction and material

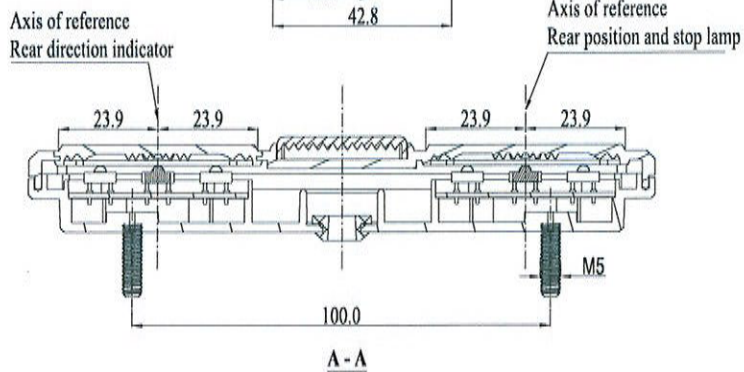
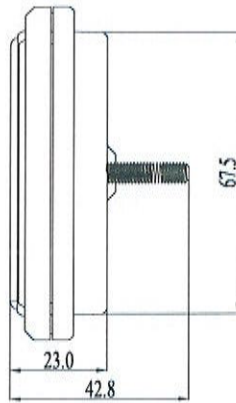
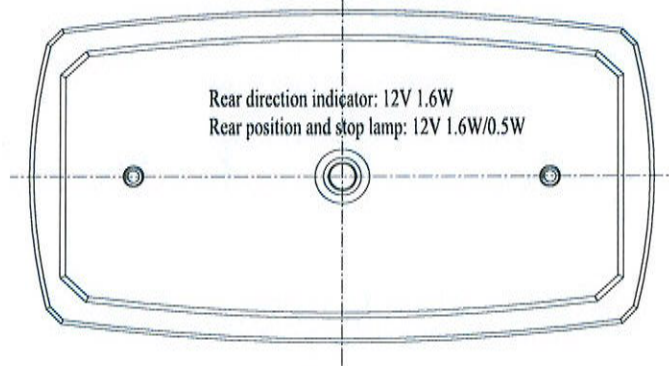
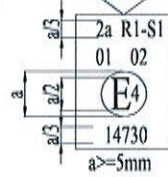
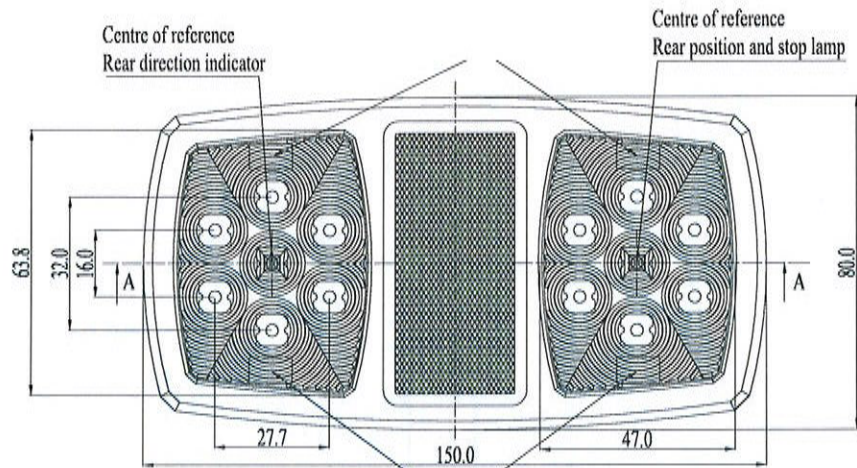
Construction	Material	Remarks
Outer lens	PC	Rear direction indicator: Amber Rear position and stop lamp: Red
Base	ABS	Black
Electrical wiring	Copper covered with insulation	-

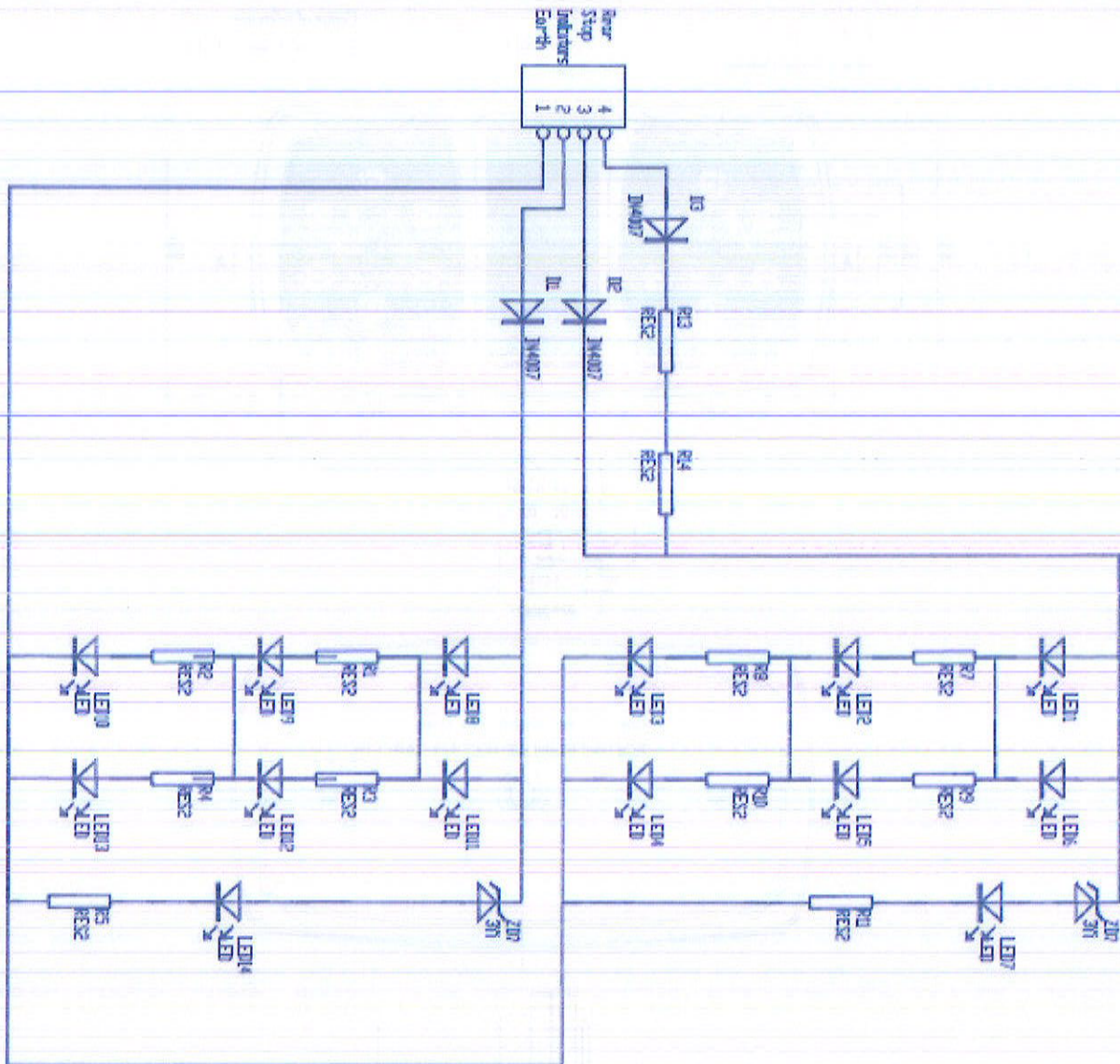
3. Name and address of manufacturer :

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

This information document consists of 3 pages.







Rear direction indicator: 12V 1.6W (LED8~LED14)

Rear position and stop lamp: 12V 1.6W/0.5W (LED1~LED7)

14LEDs, Non-replaceable light source



Typ / Type :

Hersteller / Manufacturer :

Prüfbericht Test Report

Gemäß dem Übereinkommen über die Annahme Einheitlicher Technischer Vorschriften für Radfahrzeuge, Ausrüstungsgegenstände und Teile, die in Radfahrzeuge(n) eingebaut und/oder verwendet werden können, und die Bedingungen für die gegenseitige Anerkennung von Genehmigungen, die nach diesen Vorschriften erteilt wurden

Agreement concerning the adoption of uniform technical prescriptions for the wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions

Uniform provisions concerning the approval of front and rear position (side) lamps, stop-lamps and end-outline marker lamps for power-driven vehicles and their trailers

ECE-R7

zuletzt geändert *as last amended*

02 series of amendment, Supplement 14

Genehmigungsstand <i>Approval status</i>	
	Genehmigungsnummer <i>Number of approval</i>
ECE	---

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

Typ / Type :

Hersteller / Manufacturer :

Test object(s) and general test information

1.1. Test object(s)

identification number : 206

Version : ---

1.2. General test information

1.2.1. Order issued by : ---
(if different from manufacturer)

1.2.2. Test object / test vehicle received : not applicable
on

1.2.3. Test date : April 21, 2010

1.2.4. Test site :

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

Typ / Type :

Hersteller / Manufacturer :

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 of the lamp.
- The filament lamp type or rated voltage and wattage is clearly legible and indelible marked on the base of the lamp.
- Space for the approval mark and for additional symbols is provided on the lens of the lamp.
- 2.3. General specifications : The lamps are designed and made that under normal use their satisfactory operation is ensured and they retain the required characteristics.
- The colour of the light emitted is within the limits of the coordinates for white prescribed in Annex 5 of the Regulation.
- 2.4. Photometric tests : The light emitted was obtained by means of an ~~uncolored standard lamp of the category stated in Appendix L-9~~ or 13.5V/28V for non-replaceable light source, producing the required luminous flux.
- The light distribution angles and levels of intensity have been measured in accordance with Annex 4 of the Regulation, based on the manufacturer's indication of the centre of reference and axis of reference.
- The rear position (side) lamp is reciprocally incorporated with the stop lamp. The ratio between the luminous intensities of the two lamps when turned on simultaneously at the intensity of the position lamp when turned on alone is greater than 5:1 in the field required.

Typ / Type : :

Hersteller / Manufacturer :

Results of photometric tests of the **Stop lamp: category S1**

distribution of the intensity of the lamps [cd]								
horizontal angle		L20°	L10°	L5°	V	R5°	R10°	R20°
vertical angle	U10°	-	-	33.97	-	32.45	-	-
	U5°	7.23	29.45	-	86.54	-	37.28	7.33
sample 1	H	-	39.65	114.20	175.70	115.20	50.24	-
	D5°	7.54	41.70	-	125.10	-	45.32	7.52
	D10°	-	-	42.28	-	43.18	-	-
vertical angle	U10°	-	-	28.36	-	28.12	-	-
	U5°	6.75	27.35	-	70.65	-	31.65	6.95
sample 2	H	-	35.62	101.50	148.50	94.68	41.98	-
	D5°	7.03	38.62	-	105.85	-	36.14	7.32
	D10°	-	-	39.54	-	35.55	-	-

	sample 1	sample 2	allowable maximum	required minimum
maximum intensity [cd]	181.85	153.70	260	60
minimum intensity in the fields defined in annex 1 of the Regulation [cd]	4.83	4.12	-	0.3

Typ / Type :

Hersteller / Manufacturer :

**Results of photometric tests of the Stop lamp: category S1
 – one light source failure**

distribution of the intensity of the lamps [cd]								
horizontal angle		L20°	L10°	L5°	V	R5°	R10°	R20°
vertical angle	U10°	-	-	30.97	-	30.56	-	-
	U5°	6.70	27.10	-	83.14	-	36.14	6.55
sample 1	H	-	41.90	104.30	170.70	111.50	49.83	-
	D5°	6.82	37.70	-	121.90	-	42.13	6.78
	D10°	-	-	39.28	-	42.57	-	-
vertical angle	U10°	-	-	26.13	-	25.86	-	-
	U5°	6.45	22.80	-	69.95	-	30.38	6.30
sample 2	H	-	35.17	87.20	142.30	92.62	41.26	-
	D5°	6.56	31.01	-	100.40	-	34.69	6.57
	D10°	-	-	32.04	-	34.73	-	-

	sample 1	sample 2	allowable maximum	required minimum
maximum intensity [cd]	176.67	147.28	260	60
minimum intensity in the fields defined in annex 1 of the Regulation [cd]	4.93	4.25	-	0.3

Typ / Type :

Hersteller / Manufacturer :

Results of photometric tests of the **Rear position lamp: category R1**

distribution of the intensity of the lamps [cd]								
horizontal angle		L20°	L10°	L5°	V	R5°	R10°	R20°
vertical angle	U10°	-	-	3.74	-	3.69	-	-
	U5°	1.72	3.29	-	5.68	-	4.02	1.72
sample 1	H	-	4.38	7.15	10.87	7.08	4.67	-
	D5°	1.84	4.01	-	9.59	-	4.45	1.83
	D10°	-	-	3.50	-	3.82	-	-
vertical angle	U10°	-	-	3.41	-	3.38	-	-
	U5°	1.75	3.05	-	5.01	-	3.67	1.74
sample 2	H	-	3.97	6.25	9.40	6.22	4.27	-
	D5°	1.94	3.74	-	8.43	-	4.11	1.90
	D10°	-	-	3.34	-	3.62	-	-

	sample 1	sample 2	allowable maximum	required minimum
maximum intensity [cd]	11.25	9.73	17	4
minimum intensity in the fields defined in annex 1 of the Regulation [cd]	1.67	1.65	-	0.05

Typ / Type :

Hersteller / Manufacturer :

**Results of photometric tests of the Rear position lamp: category R1
 – one light source failure**

distribution of the intensity of the lamps [cd]								
horizontal angle		L20°	L10°	L5°	V	R5°	R10°	R20°
vertical angle	U10°	-	-	3.08	-	3.07	-	-
	U5°	0.96	2.57	-	5.70	-	3.40	0.89
sample 1	H	-	3.86	7.09	11.19	6.79	4.07	-
	D5°	1.15	3.29	-	8.58	-	3.82	1.10
	D10°	-	-	2.89	-	3.22	-	-
vertical angle	U10°	-	-	2.67	-	2.66	-	-
	U5°	0.83	2.23	-	4.91	-	2.96	0.78
sample 2	H	-	3.35	6.12	9.66	5.86	3.53	-
	D5°	1.00	2.86	-	7.42	-	3.31	0.96
	D10°	-	-	2.50	-	2.79	-	-

	sample 1	sample 2	allowable maximum	required minimum
maximum intensity [cd]	11.58	10.00	17	4
minimum intensity in the fields defined in annex 1 of the Regulation [cd]	0.74	0.65	-	0.05

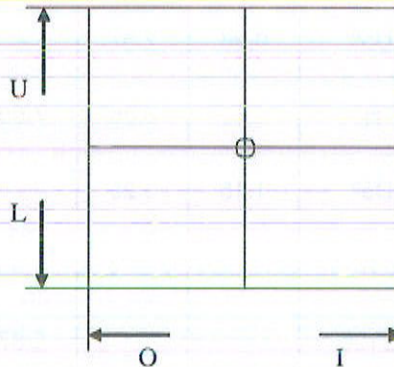
Typ / Type :

Hersteller / Manufacturer :

- 2.5. Illuminating surface : Vertical and horizontal outlines of the illuminating surface of the light-signalling device in relation to the centre of reference.

Definition of the illuminating surface of the device

⊕ centre of reference



function	upper boundary (U) [mm]	lower boundary (L) [mm]	inner boundary (I) [mm]	outer boundary (O) [mm]
Stop	18	18	16	16
Rear position	18	18	16	16

- 2.6. Explanatory note : This grouped lamp was examined according to following Regulation(s)

ECE-R6
 ECE-R7

Typ / Type :

Hersteller / Manufacturer :

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

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

- 0 List of modifications : not attached

- 1 Information folder no. : 206 - 00

5. 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 (including Appendix-L) consists of pages 1 to 10 and shall not be reproduced except in full without the written approval of the testing laboratory.

Essen, den April 23, 2010
IFM/#



Dipl.-Ing. K.-S. Kim

Typ / Type :

Hersteller / Manufacturer :

**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 :

2. Manufacturer's name for the type of device :

3. Manufacturer's name and address :

4. If applicable, name and address of the manufacturer's representative : not applicable
5. Submitted for approval on : April 19, 2010
7. Date of report issued by that service : April 23, 2010
9. Concise description :
 - By category of lamp : R1-S1
 - For mounting either outside or inside or both (1) : outside
 - Colour of light emitted : red/white⁽¹⁾
 - Number, category and kind of light source(s) : 7 LEDs, 12V 1.6W/0.5W, non-replaceable light source
 - Voltage and wattage : Rear position: 12V 0.5W
Stop: 12V 1.6W
 - Light source module specific identification code : not applicable
 - Only for limited mounting height of equal to or less than 750 mm above the ground : yes/no⁽¹⁾
 - Geometrical conditions of installation and relating variations, if any : not applicable
 - Application of an electronic light source control gear/variable intensity control : no
 - (a) Being part of the lamp : yes/no⁽¹⁾
 - (b) Being not part of the lamp : yes/no⁽¹⁾
 - input voltage(s) supplied by an electronic light source control gear/variable intensity control : not applicable
 - Electronic light source control gear/variable intensity control manufacturer and identification number (when the light source control gear is part of the lamp but is not included into the lamp body) : not applicable
 - Variable luminous intensity : yes/no⁽¹⁾
- 1 Position of the approval mark : on the lens
- 0.
- 1 Reason(s) for extension (if applicable) : not applicable
- 1.



RDW

Vehicle Technology Division

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 direction indicator pursuant to Regulation number 6.

Approval number: E4-6R-0114730

Extension number: 00

Approval mark:

2a R1-S1
01 02



14730

1. Trade name or mark of the device : _____
2. Manufacturer's name for the type of device :
3. Manufacturer's name and address : _____
4. If applicable, name and address of the manufacturer's representative : not applicable
5. Submitted for approval on : April 19, 2010
6. Technical service responsible for conducting approval tests : TÜV NORD Mobilität GmbH & Co. KG
Institut für Fahrzeugtechnik und Mobilität
Adlerstrasse 7, D-45307 Essen

P.O. Box 777
2700 AT Zoetermeer
The Netherlands

Tel. + 31 (0)79 345 81 43
Fax + 31 (0)79 345 80 43
www.rdw.nl

Vehicle Approval and Information



7. Date of test report issued by that service : April 23, 2010
8. Number of test report issued by that service : KR006-A0-1030204
9. Concise description :
- Category : 1/1a/1b/2a/2b/3/4/5/6 ⁽¹⁾⁽²⁾
- Number, category and kind of light source(s) : 7 LEDs, 12V 1.6W, non-replaceable light source
- Voltage and wattage : 12V 1.6W
- Light source module specific identification code : not applicable
- Only for limited mounting height of equal to or less than 750 mm above the ground : yes/no ⁽¹⁾
- Geometrical conditions of installation and relating variations, if any : not applicable
- Application of an electronic light source control gear/variable intensity control : No
- (a) being part of the lamp : yes/no ⁽¹⁾
- (b) being not part of the lamp : yes/no ⁽¹⁾
- Input voltage(s) supplied by an electronic light source control gear/variable intensity control : not applicable
- Electronic light source control gear/variable intensity control manufacturer and identification number (when the light source control gear is part of the lamp but is not included into the lamp body) : not applicable
- Variable luminous intensity : yes/no ⁽¹⁾
10. Position of the approval mark : on the lens
11. Reason(s) for extension (if applicable) : not applicable
12. Approval : granted/~~extended~~/~~refused~~/~~withdrawn~~ ⁽¹⁾
13. Place : Zoetermeer
14. Date : 19-MAY-2010

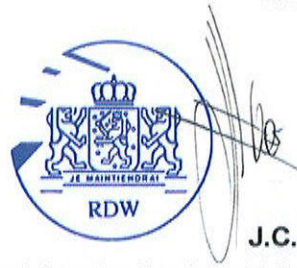


Approval number: E4-6R-0114730

Extension number: 00

15. Signature

:



J.C.M. Hoes

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

⁽¹⁾ Strike out what does not apply.

⁽²⁾ For the direction indicator lamps of categories 1, 1a, 1b, 2a and 2b, information regarding the signal according to paragraph 6.4.2.

Re Application date : April 19, 2010

1. Specification data

Type		206		
Function		Rear Direction Indicator	Rear Position Lamp	Stop Lamp
Emitted color		Amber	Red	Red
Rated	Voltage	12V		
	Wattage	1.6W	0.5W	1.6W
Applicable Regulation (ECE)		R6.01 Category 2a	R7.02 Category R1-S1	
Number and category of filament lamp(light source)		7LEDs, Non-replaceable light source	7LEDs, Non-replaceable light source	
Location of marking	Rated Voltage and Wattage	Marked on Base		
	Trade mark		Marked on Lens	
	Approval mark	Marked on Lens		
Special supply voltage		Not applicable		
Application of additional supply system		Yes / No		
Light source module		Yes / No		

2. Construction and material

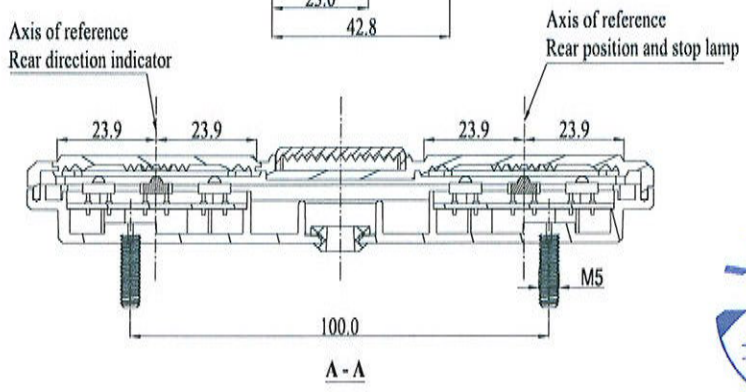
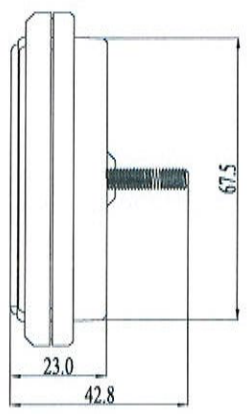
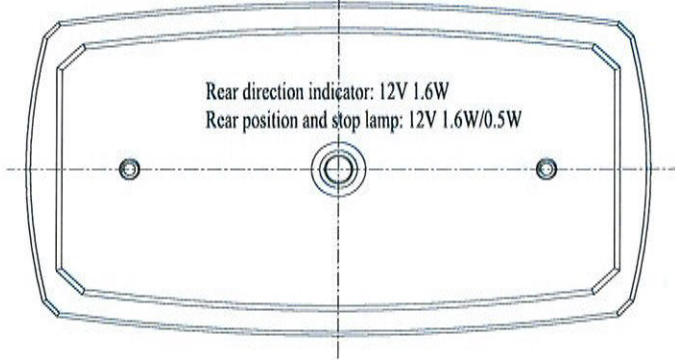
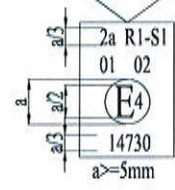
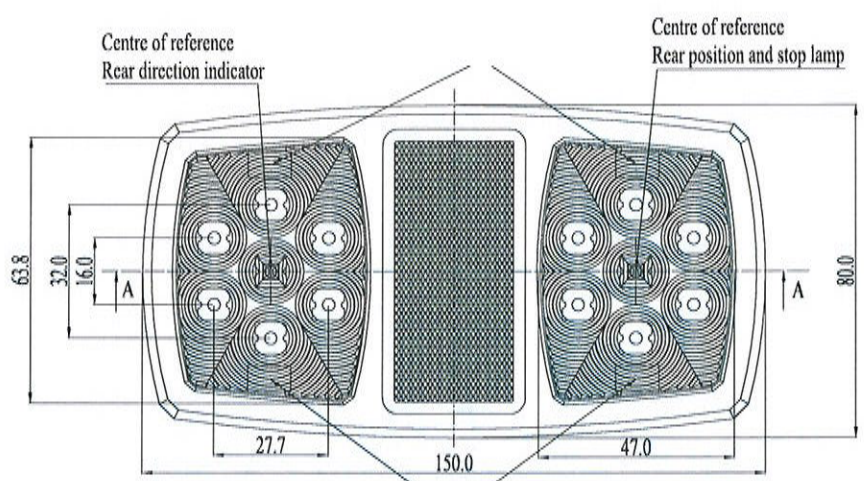
Construction	Material	Remarks
Outer lens	PC	Rear direction indicator: Amber Rear position and stop lamp: Red
Base	ABS	Black
Electrical wiring	Copper covered with insulation	-

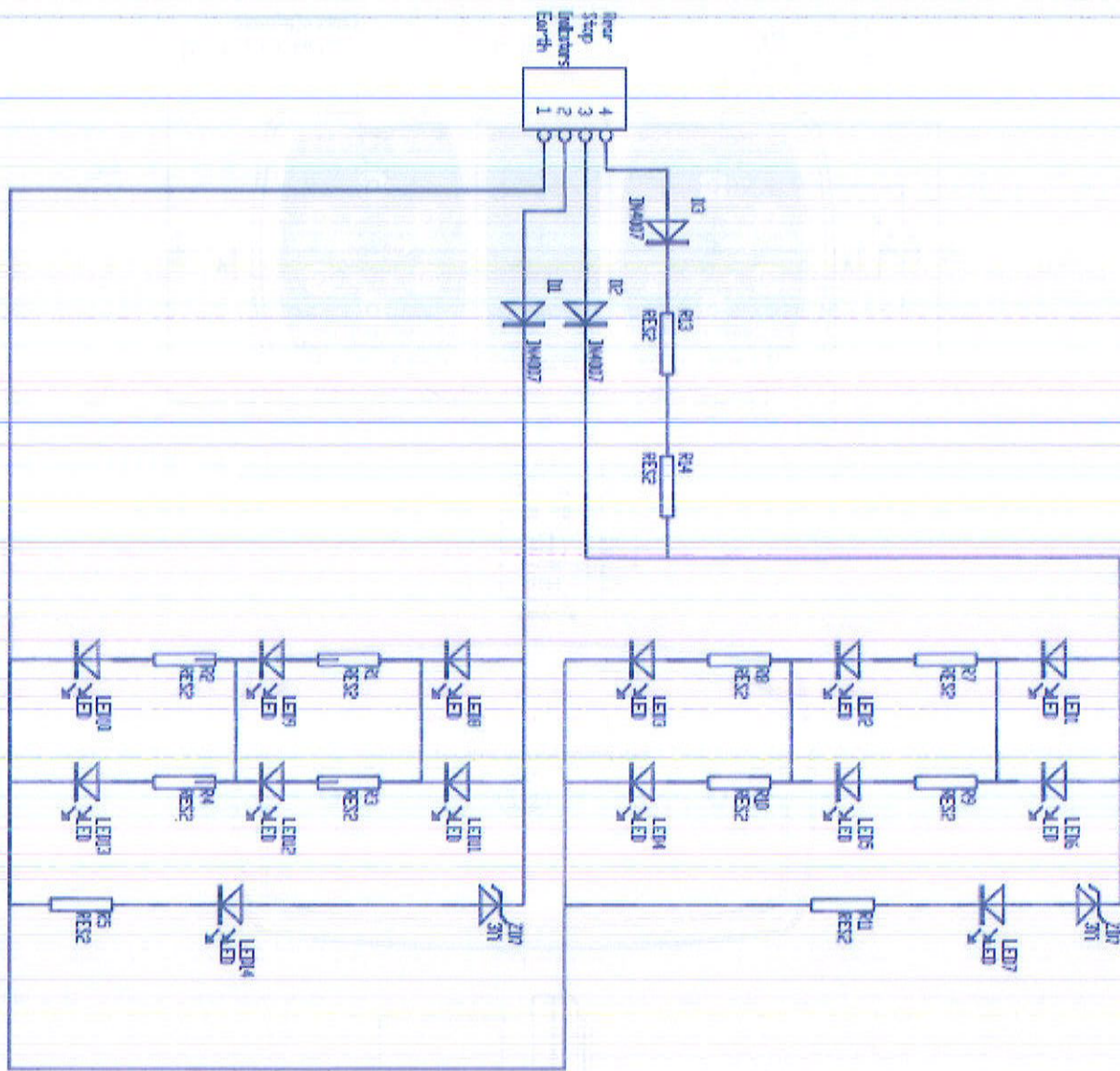
3. Name and address of manufacturer :

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

This information document consists of 3 pages.







Rear direction indicator: 12V 1.6W (LED8~LED14)

Rear position and stop lamp: 12V 1.6W/0.5W (LED1~LED7)

14LEDs, Non-replaceable light source



Typ / Type :

Hersteller / Manufacturer : .. .

Prüfbericht Test Report

Gemäß dem Übereinkommen über die Annahme Einheitlicher Technischer Vorschriften für Radfahrzeuge, Ausrüstungsgegenstände und Teile, die in Radfahrzeuge(n) eingebaut und/oder verwendet werden können, und die Bedingungen für die gegenseitige Anerkennung von Genehmigungen, die nach diesen Vorschriften erteilt wurden

Agreement concerning the adoption of uniform technical prescriptions for the wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions

Uniform provisions concerning the approval of direction indicators for power-driven vehicles and their trailers

ECE-R6

zuletzt geändert *as last amended*

01 series of amendment, Supplement 17

Genehmigungsstand <i>Approval status</i>	
	Genehmigungsnummer <i>Number of approval</i>
ECE	----

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

Typ / Type : :

Hersteller / Manufacturer : --

Test object(s) and general test information

1.1. Test object(s)

identification number : ---

version : ---

1.2. General test information

1.2.1. Order issued by : ---
(if different from manufacturer)

1.2.2. Test object / test vehicle received : not applicable
on

1.2.3. Test date : April 21, 2010

1.2.4. Test site :

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

Typ / Type :

Hersteller / Manufacturer :

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.
- The filament lamp type or rated voltage and wattage is clearly legible and indelible marked on the base of the lamp.
- Space for the approval mark and for additional symbols is provided on the lens of the lamp.
- 2.3. General specifications : The lamps are designed and made that under normal use their satisfactory operation is ensured and they retain the required characteristics.
- The colour of the light emitted is within the limits of the coordinates for amber prescribed in Annex 5 of the Regulation.
- 2.4. Photometric tests : The light emitted was obtained by means of ~~an standard lamp of the category stated in Appendix L-9 or~~ 13.5V/28V for non-replaceable light source, producing the required luminous flux.
- The light distribution angles and levels of intensity have been measured in accordance with Annex 4 of the regulation, based on the manufacturer's indication of the centre of reference and axis of reference.

Typ / Type :

Hersteller / Manufacturer :

Results of photometric tests of the rear direction indicator; category 2a

distribution of the intensity of the lamps [cd]								
horizontal angle		L20°	L10°	L5°	V	R5°	R10°	R20°
vertical angle	U10°	-	-	43.54	-	25.39	-	-
	U5°	11.86	59.95	-	91.09	-	18.99	5.66
sample 1	H	-	87.47	204.30	137.10	55.13	22.67	-
	D5°	11.77	60.95	-	77.07	-	16.65	5.30
	D10°	-	-	44.57	-	24.21	-	-
vertical angle	U10°	-	-	47.96	-	21.69	-	-
	U5°	13.06	81.72	-	69.57	-	10.71	5.10
sample 2	H	-	84.12	145.80	67.69	48.12	20.01	-
	D5°	11.98	44.32	-	43.76	-	11.77	5.29
	D10°	-	-	29.09	-	14.25	-	-

	sample 1	sample 2	allowable maximum	required minimum
maximum intensity [cd]	211.45	150.90	500	50
minimum intensity in the fields defined in annex 1 of the regulation [cd]	0.50	0.39	-	0.3

Typ / Type :

Hersteller / Manufacturer :

Results of photometric tests of the **rear direction indicator; category 2a**

- one light source failure

distribution of the intensity of the lamps [cd]								
horizontal angle		L20°	L10°	L5°	V	R5°	R10°	R20°
vertical angle	U10°	-	-	47.79	-	35.43	-	-
	U5°	10.12	56.85	-	108.80	-	29.05	5.92
sample 1	H	-	69.66	190.00	166.20	72.30	34.99	-
	D5°	9.73	46.62	-	90.59	-	28.30	5.17
	D10°	-	-	40.92	-	32.19	-	-
vertical angle	U10°	-	-	45.14	-	30.44	-	-
	U5°	8.55	51.38	-	98.49	-	26.99	5.64
sample 2	H	-	51.13	129.90	106.10	49.45	25.93	-
	D5°	6.83	30.84	-	50.24	-	17.62	5.15
	D10°	-	-	23.20	-	18.17	-	-

	sample 1	sample 2	allowable maximum	required minimum
maximum intensity [cd]	196.65	134.45	500	50
minimum intensity in the fields defined in annex 1 of the regulation [cd]	0.39	0.35	-	0.3

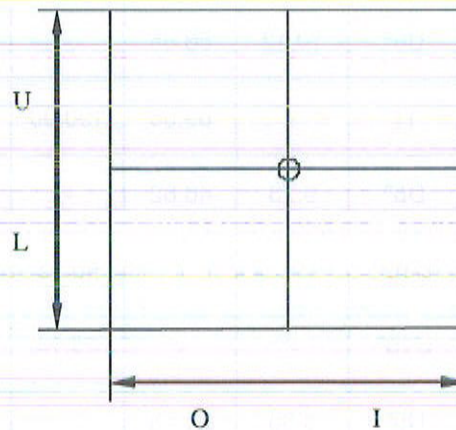
Typ / Type :

Hersteller / Manufacturer :

- 2.5. Illuminating surface : Vertical and horizontal outlines of the illuminating surface of the light-signalling device in relation to the centre of reference.

Definition of the illuminating surface of the device

⊕ centre of reference



function	upper boundary (U) [mm]	lower boundary (L) [mm]	inner boundary (I) [mm]	outer boundary (O) [mm]
rear direction indicator	18	18	16	16

- 2.6. Explanatory note : This grouped lamp was examined according to following Regulation(s)

ECE-R6
 ECE-R7

Typ / Type :

Hersteller / Manufacturer :

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

- L Technical information about the lamp type according to Annex 2 for the communication of the ECE-type approval
- 0 List of modifications : not attached
- 1 Information folder no. : 206 - 00

5. 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 (including appendix L) consists of pages 1 to 8 and shall not be reproduced except in full without the written approval of the testing laboratory.

Essen, den April 23, 2010
IFM/#



Dipl.-Ing. K.-S. Kim

Typ / Type :

Hersteller / Manufacturer :

**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 :

2. Manufacturer's name for the type of device :
3. Manufacturer's name and address :

4. If applicable, name and address of manufacturer's representative : not applicable
5. Submitted for approval on : April 19, 2010
7. Date of test report : April 23, 2010
9. Concise description ⁽²⁾ :
 Category : 4/1a/1b/2a/2b/3/4/5/6 ⁽¹⁾⁽²⁾
 Number, category and kind of light source(s) : 7 LEDs, 12V 1.6W, non-replaceable light source

 Voltage and wattage : 12V 1.6W

 Light source module specific identification code : not applicable
 Only for limited mounting height of equal to or less than 750 mm above the ground : yes/no ⁽¹⁾
 Geometrical conditions of installation and relating variations, if any : not applicable
 Application of an electronic light source control gear/variable intensity control : not applicable
 (a) being part of the lamp : yes/no ⁽¹⁾
 (b) being not part of the lamp : yes/no ⁽¹⁾
 Input voltage(s) supplied by an electronic light source control gear/variable intensity control : not applicable
 Electronic light source control gear/variable intensity control manufacturer and identification number (when the light source control gear is part of the lamp but is not included into the lamp body : not applicable

 Variable luminous intensity : yes/no ⁽¹⁾
 10. Location of approval mark : on the lens

 11. Reason(s) for extension : not applicable



RDW

Vehicle Technology Division

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 retro-reflecting device pursuant to Regulation number 3.

Approval number: E4-3R-023417

Extension number: 00

Approval mark:

02 IA



3417

1. Trade name or mark of the device :
2. Manufacturer's name for the type of device :
3. Manufacturer's name and address :
4. If applicable, name and address of the manufacturer's representative : not applicable
5. Submitted for approval on : April 19, 2010
6. Technical service responsible for conducting approval tests : TÜV NORD Mobilität GmbH & Co. KG
Institut für Fahrzeugtechnik und Mobilität
Adlerstrasse 7, D-45307 Essen



P.O. Box 777
2700 AT Zoetermeer
The Netherlands

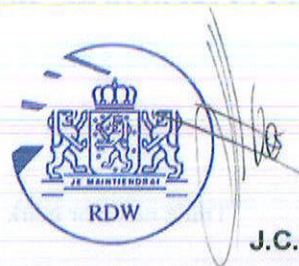
Tel. + 31 (0)79 345 81 43
Fax + 31 (0)79 345 80 43
www.rdw.nl

Vehicle Approval and Information

Approval number: E4-3R-023417

Extension number: 00

7. Date of test report : April 23, 2010
8. Number of test report : KR003-A0-1030212
9. Concise description :
- In isolation/part of an assembly of devices ⁽¹⁾ : In isolation/part of an assembly of devices ⁽¹⁾
- Colour of light emitted : white/red/amber ⁽¹⁾
- Installation as an integral part of a lamp which is integrated into the body of a vehicle : yes/no ⁽¹⁾
- Geometric conditions of installation and relating variations, if any : see the manufacturer's information folder
10. Position of the approval mark : on the lens
11. Reason(s) for extension (if applicable) : not applicable
12. Approval : granted/refused/extended/withdrawn ⁽¹⁾
13. Place : Zoetermeer
14. Date : 19-MAY-2010
15. Signature :



J.C.M. Hoes

16. The following documents, bearing the approval number shown above, are available on request:
-

⁽¹⁾ Strike out what does not apply.

Application date : April 19, 2010

1. Specification data

Type			
Function		Retro-reflector	
Emitted color		Red/Amber/White	
Rated	Voltage	-	
	Wattage	-	
Applicable Regulation (ECE)		R3.02 Category IA	
Number and category of filament lamp(light source)		-	
Location of marking	Rated Voltage and Wattage	-	
	Trade mark		Marked on Lens
	Approval mark	Marked on Lens	
Remark		The reflector may use as single or installed into a body of another grouped lamp.	

2. Construction and material

Construction	Material	Remarks
Outer lens	PC	Red/Amber/White
Base	ABS	Black
Electrical wiring	Copper covered with insulation	-

3. Name and address of manufacturer : --

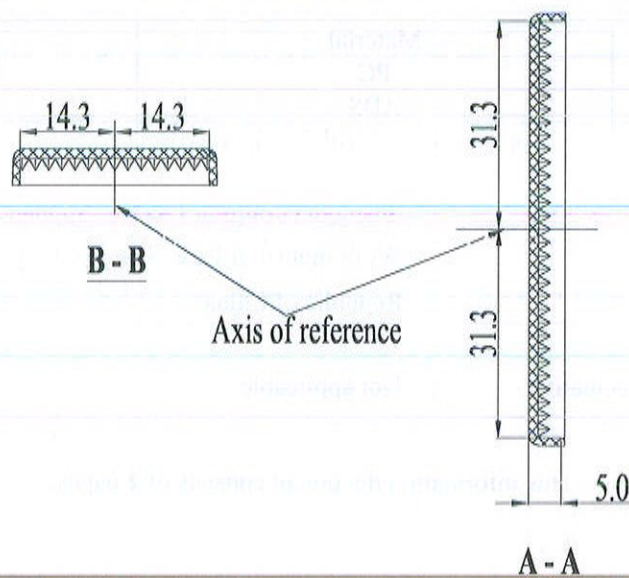
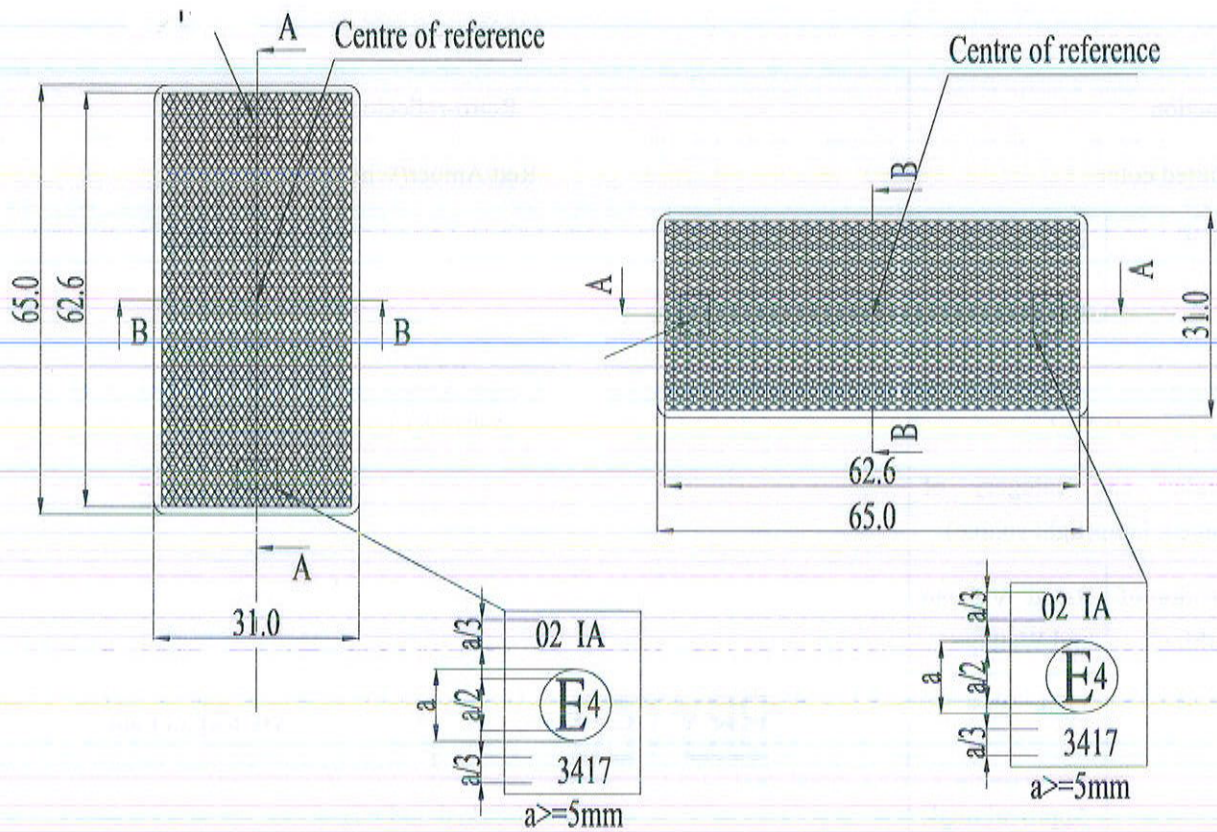
4. Name and address of representative of manufacturer : Not applicable

This information document consists of 2 pages.



Installation condition 1: Vertical orientation

Installation condition 2: Horizontal orientation



Typ / Type :

Hersteller / Manufacturer :

Prüfbericht **Test Report**

Gemäß dem Übereinkommen über die Annahme Einheitlicher Technischer Vorschriften für Radfahrzeuge, Ausrüstungsgegenstände und Teile, die in Radfahrzeuge(n) eingebaut und/oder verwendet werden können, und die Bedingungen für die gegenseitige Anerkennung von Genehmigungen, die nach diesen Vorschriften erteilt wurden

Agreement concerning the adoption of uniform technical prescriptions for the wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions

Uniform provisions concerning the approval of retro-reflecting devices for power-driven vehicles and their trailers

ECE-R3

zuletzt geändert *as last amended*

02 series of amendment, Supplement 10

Genehmigungsstand <i>Approval status</i>	
	Genehmigungsnummer <i>Number of approval</i>
ECE	---

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

Typ / Type :

Hersteller / Manufacturer :

Test object(s) and general test information

1.1. Test object(s)

identification number :

version : ---

1.2. General test information

1.2.1. Order issued by : ---
(if different from manufacturer)

1.2.2. Test object / test vehicle received : not applicable
on

1.2.3. Test date : April 21, 2010

1.2.4. Test site :

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

Typ / Type :

Hersteller / Manufacturer :

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 of the lamp.
- Space for the approval mark and for additional symbols is provided on the lens of the lamp
- 2.3. General specifications : The retro reflector is designed and made that under normal use their satisfactory operation is ensured and they retain the required characteristics.
- The components are not capable of being easily dismantled, and the optical unit is not replaceable.
- The test samples have been tested in the chronological order indicated in Annex 12 of the Regulation, and in accordance with the test procedure stated in Annex 4 of the Regulation.
- Two samples in amber and white colour for simultaneous extension of the approval to devices meet the colorimetric requirements under Annex 6. (refer to paragraph 5.2. of the Regulation)

Typ / Type :

Hersteller / Manufacturer : --

2.4. Special tests: Category IA

number of Annex	test	test samples	result of examination	remark
5	shape and dimensions	all	complying	-
6	colorimetry	all	complying	-
10	heat	all	complying	-
7	photometry	all	complying	20', V=H=0°
7	photometry	c and d	see 2.5.	complete
8 (1.1)	water submersion	g and h	complying	-
8	motor fuels	g and h	complying	-
	oils	g and h	complying	-
4	colormetry	g and h	complying	20', V=H=0°
	photometry	g and h	complying	
8	corrosion	e and f	-	not applicable *)
	abraasive - strength	e and f	-	
9	stability of optical properties with ageing	-	-	not examined
11	colour-fastness	-	-	not examined

*) Remark : the device does not incorporate any metal component, the rear face of the device is not accessible

Typ / Type :

Hersteller / Manufacturer :

2.5. Photometric test: Color - red : Results of photometric tests of reflex (retro) reflector, class IA coefficients of luminous intensity (CIL) in accordance with Annex 7 of the Regulation.

- Reflector in vertical orientation

distribution of the intensity of the retro reflector [mcd/lux]								
		sample 1			sample 2			required min.
horizontal angle		L20°	V	R20°	L20°	V	R20°	
vertical angle $\alpha=20'$	U10°	-	445.90	-	-	321.30	-	200
	U5°	229.70	-	206.60	177.90	-	180.40	100
	H	-	569.30	-	-	398.70	-	300
	D5°	220.20	-	211.10	167.20	-	171.10	100
	D10°	-	416.40	-	-	342.10	-	200
vertical angle $\alpha=1'30'$	U10°	-	30.89	-	-	33.35	-	2.8
	U5°	26.46	-	27.21	25.99	-	29.05	2.5
	H	-	53.19	-	-	58.00	-	5
	D5°	26.05	-	27.17	25.70	-	27.85	2.5
	D10°	-	32.42	-	-	34.23	-	2.8

Typ / Type :

Hersteller / Manufacturer :

- Reflector in horizontal orientation

distribution of the intensity of the retro reflector [mcd/lux]								
horizontal angle		sample 1			sample 2			required min.
		L20°	V	R20°	L20°	V	R20°	
vertical angle	U10°	-	484.70	-	-	412.30	-	200
$\alpha=20'$	U5°	224.20	-	381.70	161.50	-	312.40	100
	H	-	546.80	-	-	477.20	-	300
	D5°	180.80	-	379.10	158.30	-	361.70	100
vertical angle	D10°	-	437.10	-	-	401.10	-	200
	U10°	-	31.53	-	-	31.56	-	2.8
	U5°	25.01	-	26.82	26.04	-	27.87	2.5
$\alpha=1^{\circ}30'$	H	-	42.14	-	-	45.71	-	5
	D5°	24.16	-	28.48	24.79	-	29.22	2.5
	D10°	-	29.70	-	-	31.42	-	2.8

2.6. Explanatory note

: This grouped lamp was examined according to following Regulation(s)

Typ / Type : !

Hersteller / Manufacturer :

3. 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.

4. Appendices

- L Technical information about the reflector type according to Annex 2 for the communication of the ECE-type approval
- 0 List of modifications : not attached
- 1 Information folder no. :

5. 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 (including appendices L and 0) consists of pages 1 to 8 and shall not be reproduced except in full without the written approval of the testing laboratory.

Essen, den April 23, 2010
IFM/#



Dipl.-Ing. K.-S. Kim

Typ / Type :

Hersteller / Manufacturer :

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

Appendix L

1. Trade name or mark of the device :
2. Manufacturer's name for the type of device :
3. Manufacturer's name and address :
4. If applicable, name and address of the manufacturer's representative : not applicable
5. Submitted for approval on : April 19, 2010
7. Date of test report : April 23, 2010
9. Concise description
- In isolation/part of an assembly of devices ⁽¹⁾ : In isolation/part of an assembly of devices ⁽¹⁾
- Colour of light emitted : white/red/amber
10. Position of the approval mark : on the lens
11. Reason(s) for extension : not applicable