

ECE TYPE-APPROVAL CERTIFICATE



Communication concerning:² ~~Approval granted~~
~~Approval extended~~
~~Approval refused~~
~~Approval withdrawn~~
~~Production definitely discontinued~~

of a type device pursuant to Regulation No. 7

Approval No: E24*7R02/26*0290*00

Reason for extension:

N/A

1. Trade name or mark of the device:



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

Versions:

N/A

3. Manufacturer's name and address:

4. If applicable, name and address of manufacturer's representative:

N/A

5. Submitted for approval on:

12.02.2018

6. Technical service responsible for conducting approval tests:

**TÜV SÜD Auto Service GmbH
Westendstraße 199
D-80686 München**

7. Date of test report issued by that service:

06.02.2018

8. Number of report issued by that service:

¹ Distinguishing number of the country which has granted/refused/withdrawn approval (see approval provisions in the Regulation).

² Strike out which does not apply.



Approval No: E24*7R02/26*0290*00

9. Concise description:

9.1 By Category of lamps:

Rear position lamp: R1
Stop lamp: S1

For mounting either outside or inside or both²

Outside

Colour of light emitted: red/white²

Red

Number, category and kind of light source(s):

*30*LEDs*

Voltage and wattage:

*Rear position lamp:
12V/24V and 0.24W*

*Stop Lamp:
12V/24V and 1.56W*

Light source module specific identification code:

N/A

Only for limited mounting height of equal to or less than 750 mm above the ground (yes/no):

No

Geometric conditions of installation and relating variations (if any):

See manufacturer's information document

Application of an electronic light source control gear/variable intensity control

(a) being part of the lamp: yes/no²

Yes

(b) being not part of the lamp: yes/no²

No

Input voltage(s) supplied by an electronic light source control gear/variable intensity control:

12V and 24V

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):

N/A



NSAI

Certification

Approval No: E24*7R02/26*0290*00

Variable luminous intensity: yes/no²

No

The ~~front position lamp~~², rear position lamp², stop lamp², ~~end-outline marker lamp~~³, is only for use on a vehicle fitted with a tell-tale indication failure: yes/no²

*Rear Position Lamp:
Stop Lamp:*

*No
No*

9.2 Function(s) produced by an interdependent lamp forming part of an interdependent lamp system:

Front position lamp	yes/no ²	
R1 Rear position lamp	yes/no ²	<i>No</i>
R2 Rear position lamp	yes/no ²	
S1 stop lamp	yes/no ²	<i>No</i>
S2 stop lamp	yes/no ²	
S3 stop lamp	yes/no ²	
S4 stop lamp	yes/no ²	
End-outline marker lamp	yes/no ²	

10. Position of the approval mark:

On the lens

11. Reason(s) for extension (if applicable):

N/A

12. Approval granted/~~extended~~/~~refused~~/~~withdrawn~~²:


Granted

13. Place:

Dublin

14. Date:

7th March, 2018.

15. Signature: 



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



Index to the Information Package

Date of issue: *7th March, 2018.*

Date of latest amendment: *N/A*

Reason for extension/revision: *N/A*

1. Additional conditions, and advisory notes on legal alternatives.

2. Test report(s)

- numbers(s):

- date of issue: *06.02.2018*

- date of latest amendment: *N/A*

3. Information document

- number(s):

- date of issue: *25.12.2018*

- date of latest amendment: *N/A*

Documentation: *31 pages*



Technical Report No.:
Manufacturer:
Type:

TECHNICAL REPORT

No.:

Test according to ECE regulation relating to

Rear position lamp R1 and stop lamp S1

ECE Regulation No.: 7

supplement 26 to the 02 series of amendments

Approvals granted up to now		
ECE	Number of approval	Date
	---	---


Technical Report No.:

Manufacturer:

Type:

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I. Technical description

- 0.1. Make (trade name of manufacturer) : 
- 0.2. Type :
- 0.2.1. Variants : N/A
- 0.3. Means of identification of type : By digits and letters
- 0.4. By category of lamp : Rear position lamp R1 and stop lamp S1
- For mounting either outside or inside or both : Outside
- Color of light emitted : Red
- Number, category and kind of light source(s) : 30*LEDs
- Voltage and wattage : Stop lamp: 12V/24V and 1.56W;
Rear position lamp: 12V/24V and 0.24W
- Light source module specific identification code : N/A
- Only for limited mounting height of equal to or less than 750 mm above the ground : No
- Geometrical conditions of installation and relating variations, if any : See manufacturer's information document
- Application of an electronic light source control gear/~~variable intensity control~~
- Being part of the lamp : Yes
- Being not part of the lamp : No



Technical Report No.:

Manufacturer:

Type:

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Input voltage(s) supplied by an electronic light source control gear/ variable intensity control : 12V and 24V

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) : N/A

Variable luminous intensity : No

The rear position lamp, stop lamp is only for use on a vehicle fitted with a tell-tale indicating failure : No

Function(s) produced by an interdependent lamp forming part of an interdependent lamp system:

R1 Rear position lamp : No

S1 Stop lamp : No

0.5. Name and address of manufacturer : |

0.8. Address of assembly plant :

0.9. Location of the approval mark : On the lens

0.10. If applicable, name and address of the manufacturer's representative : N/A



Technical Report No.:

Manufacturer:

Type:

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II. Test record

1. Test conditions

- 1.1. Technical data of the test samples : Two samples were tested.
Sample No. 1, left side mounting.
Sample No. 2, right side mounting.
For information about the form of the lamp, the position of the reference point and the reference axis, see information document.
- 1.2. Test procedures used : According to ECE Regulation No.: 7.02.
- 1.3. Measuring and test equipment : Full automatic photometric test system for automobile lamps
EVERFINE PHOTO-E-INFO CO., LTD.
Type GO-HD5

2. Test results

2.1. General Specifications

The devices have been designed and constructed that in normal conditions of use, and notwithstanding the vibrations to which they may be subjected in such use, their satisfactory operation remains assured and they retain the characteristics prescribed by this Regulation.

No light source module or light generator is used.

2.2. Intensity of light emitted - Mounting position 1

2.2.1. Rear position lamp

2.2.1.1 Sample No. 1, normal mode, 30 LEDs lit together, test voltage 11.999V.

No.	Point of the measurement		Limits [cd]		Measured values [cd]		Conclusion
			Min.	Max.	30 Minutes	1 Minute	
1	5L	10U	0.80	17.00	10.49	11.51	Complies
2	5R	10U	0.80	17.00	7.58	8.32	Complies
3	20R	5U	0.40	17.00	1.81	1.99	Complies
4	10R	5U	0.80	17.00	5.89	6.46	Complies
5	H	5U	2.80	17.00	10.44	11.45	Complies
6	10L	5U	0.80	17.00	8.79	9.64	Complies
7	20L	5U	0.40	17.00	1.37	1.50	Complies
8	10L	V	1.40	17.00	7.18	7.88	Complies
9	5L	V	3.60	17.00	11.26	12.35	Complies
10	H	V	4.00	17.00	11.55	12.67	Complies
11	5R	V	3.60	17.00	8.98	9.85	Complies
12	10R	V	1.40	17.00	5.09	5.58	Complies
13	20R	5D	0.40	17.00	1.65	1.81	Complies
14	10R	5D	0.80	17.00	2.67	2.93	Complies
15	H	5D	2.80	17.00	8.58	9.41	Complies
16	10L	5D	0.80	17.00	3.46	3.80	Complies
17	20L	5D	0.40	17.00	1.93	2.12	Complies
18	5L	10D	0.80	17.00	2.61	2.86	Complies
19	5R	10D	0.80	17.00	1.97	2.16	Complies
20	All directions Min.		0.05	---	0.25	0.27	Complies
21	All directions Max.		---	17.00	12.52	13.73	Complies

Technical Report No.: _____
 Manufacturer: _____
 Type: _____

2.2.1.2 Sample No. 2, normal mode, 30LEDs lit together, test voltage 23.999V.

No.	Point of the measurement		Limits [cd]		Measured values [cd]		Conclusion
			Min.	Max.	30 Minutes	1 Minute	
1	5L	10U	0.80	17.00	6.15	6.70	Complies
2	5R	10U	0.80	17.00	6.98	7.60	Complies
3	20R	5U	0.40	17.00	2.43	2.65	Complies
4	10R	5U	0.80	17.00	7.00	7.63	Complies
5	H	5U	2.80	17.00	11.68	12.73	Complies
6	10L	5U	0.80	17.00	5.68	6.19	Complies
7	20L	5U	0.40	17.00	1.82	1.98	Complies
8	10L	V	1.40	17.00	7.99	8.70	Complies
9	5L	V	3.60	17.00	11.62	12.66	Complies
10	H	V	4.00	17.00	12.07	13.15	Complies
11	5R	V	3.60	17.00	11.32	12.33	Complies
12	10R	V	1.40	17.00	8.95	9.75	Complies
13	20R	5D	0.40	17.00	2.68	2.92	Complies
14	10R	5D	0.80	17.00	8.77	9.55	Complies
15	H	5D	2.80	17.00	11.48	12.51	Complies
16	10L	5D	0.80	17.00	6.66	7.26	Complies
17	20L	5D	0.40	17.00	1.94	2.11	Complies
18	5L	10D	0.80	17.00	7.50	8.17	Complies
19	5R	10D	0.80	17.00	8.67	9.45	Complies
20	All directions Min.		0.05	---	0.27	0.29	Complies
21	All directions Max.		---	17.00	12.86	14.01	Complies

Technical Report No.: 49 0555
 Manufacturer:
 Type:

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2.2.1.3 Sample No. 1, failure mode, 27 LEDs lit together, test voltage 11.999V.

No.	Point of the measurement		Limits [cd]		Measured values [cd]		Conclusion
			Min.	Max.	30 Minutes	1 Minute	
1	5L	10U	0.80	17.00	8.80	9.64	Complies
2	5R	10U	0.80	17.00	6.52	7.14	Complies
3	20R	5U	0.40	17.00	1.48	1.62	Complies
4	10R	5U	0.80	17.00	5.14	5.63	Complies
5	H	5U	2.80	17.00	8.67	9.50	Complies
6	10L	5U	0.80	17.00	7.47	8.18	Complies
7	20L	5U	0.40	17.00	1.05	1.15	Complies
8	10L	V	1.40	17.00	6.23	6.83	Complies
9	5L	V	3.60	17.00	9.50	10.41	Complies
10	H	V	4.00	17.00	9.94	10.89	Complies
11	5R	V	3.60	17.00	7.99	8.75	Complies
12	10R	V	1.40	17.00	4.46	4.89	Complies
13	20R	5D	0.40	17.00	1.21	1.33	Complies
14	10R	5D	0.80	17.00	2.38	2.61	Complies
15	H	5D	2.80	17.00	7.37	8.07	Complies
16	10L	5D	0.80	17.00	2.99	3.28	Complies
17	20L	5D	0.40	17.00	1.38	1.51	Complies
18	5L	10D	0.80	17.00	2.11	2.31	Complies
19	5R	10D	0.80	17.00	1.50	1.64	Complies
20	All directions Min.		0.05	---	0.21	0.23	Complies
21	All directions Max.		---	17.00	10.46	11.46	Complies

Technical Report No.:

Manufacturer:

Type:

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2.2.1.4 Sample No. 2, failure mode, 27 LEDs lit together, test voltage 23.999V.

No.	Point of the measurement		Limits [cd]		Measured values [cd]		Conclusion
			Min.	Max.	30 Minutes	1 Minute	
1	5L	10U	0.80	17.00	5.04	5.51	Complies
2	5R	10U	0.80	17.00	5.72	6.25	Complies
3	20R	5U	0.40	17.00	2.00	2.19	Complies
4	10R	5U	0.80	17.00	5.73	6.26	Complies
5	H	5U	2.80	17.00	9.49	10.37	Complies
6	10L	5U	0.80	17.00	4.64	5.07	Complies
7	20L	5U	0.40	17.00	1.42	1.55	Complies
8	10L	V	1.40	17.00	6.46	7.06	Complies
9	5L	V	3.60	17.00	9.48	10.36	Complies
10	H	V	4.00	17.00	10.44	11.41	Complies
11	5R	V	3.60	17.00	9.74	10.64	Complies
12	10R	V	1.40	17.00	7.32	8.00	Complies
13	20R	5D	0.40	17.00	2.21	2.42	Complies
14	10R	5D	0.80	17.00	7.13	7.79	Complies
15	H	5D	2.80	17.00	9.87	10.79	Complies
16	10L	5D	0.80	17.00	5.43	5.93	Complies
17	20L	5D	0.40	17.00	1.50	1.64	Complies
18	5L	10D	0.80	17.00	6.09	6.66	Complies
19	5R	10D	0.80	17.00	7.08	7.74	Complies
20	All directions Min.		0.05	---	0.23	0.25	Complies
21	All directions Max.		---	17.00	11.16	12.20	Complies

Technical Report No.:
 Manufacturer:
 Type:

2.2.2. Stop lamp

2.2.2.1 Sample No. 1, normal mode, 30 LEDs lit together, test voltage 11.999V.

No.	Point of the measurement		Limits [cd]		Measured values [cd]		Conclusion
			Min.	Max.	30 Minutes	1 Minute	
1	5L	10U	12.00	260.00	76.84	78.87	Complies
2	5R	10U	12.00	260.00	56.50	57.99	Complies
3	20R	5U	6.00	260.00	11.22	11.52	Complies
4	10R	5U	12.00	260.00	46.41	47.64	Complies
5	H	5U	42.00	260.00	156.67	160.81	Complies
6	10L	5U	12.00	260.00	83.48	85.68	Complies
7	20L	5U	6.00	260.00	14.62	15.01	Complies
8	10L	V	21.00	260.00	131.14	134.60	Complies
9	5L	V	54.00	260.00	188.10	193.07	Complies
10	H	V	60.00	260.00	192.33	197.41	Complies
11	5R	V	54.00	260.00	149.61	153.56	Complies
12	10R	V	21.00	260.00	93.36	95.83	Complies
13	20R	5D	6.00	260.00	12.96	13.30	Complies
14	10R	5D	12.00	260.00	99.96	102.60	Complies
15	H	5D	42.00	260.00	191.11	196.16	Complies
16	10L	5D	12.00	260.00	131.48	134.95	Complies
17	20L	5D	6.00	260.00	21.27	21.83	Complies
18	5L	10D	12.00	260.00	152.51	156.54	Complies
19	5R	10D	12.00	260.00	99.38	102.00	Complies
20	All directions Min.		0.30	---	3.06	3.14	Complies
21	All directions Max.		---	260.00	204.09	209.48	Complies

Technical Report No.:
 Manufacturer:
 Type:

2.2.2.2 Sample No. 2, normal mode, 30 LEDs lit together, test voltage 23.999V.

No.	Point of the measurement		Limits [cd]		Measured values [cd]		Conclusion
			Min.	Max.	30 Minutes	1 Minute	
1	5L	10U	12.00	260.00	57.82	59.45	Complies
2	5R	10U	12.00	260.00	60.65	62.36	Complies
3	20R	5U	6.00	260.00	18.12	18.63	Complies
4	10R	5U	12.00	260.00	57.90	59.53	Complies
5	H	5U	42.00	260.00	146.39	150.52	Complies
6	10L	5U	12.00	260.00	50.30	51.72	Complies
7	20L	5U	6.00	260.00	16.12	16.57	Complies
8	10L	V	21.00	260.00	120.93	124.34	Complies
9	5L	V	54.00	260.00	173.80	178.70	Complies
10	H	V	60.00	260.00	183.10	188.26	Complies
11	5R	V	54.00	260.00	154.09	158.43	Complies
12	10R	V	21.00	260.00	94.32	96.98	Complies
13	20R	5D	6.00	260.00	20.32	20.89	Complies
14	10R	5D	12.00	260.00	83.03	85.37	Complies
15	H	5D	42.00	260.00	170.15	174.95	Complies
16	10L	5D	12.00	260.00	117.36	120.67	Complies
17	20L	5D	6.00	260.00	17.07	17.55	Complies
18	5L	10D	12.00	260.00	66.05	67.91	Complies
19	5R	10D	12.00	260.00	71.81	73.83	Complies
20	All directions Min.		0.30	---	3.22	3.31	Complies
21	All directions Max.		---	260.00	193.22	198.67	Complies



Technical Report No.:

Manufacturer:

Type:

2.2.2.3. Sample No. 1, failure mode, 27 LEDs lit together, test voltage 11.999V.

No.	Point of the measurement		Limits [cd]		Measured values [cd]		Conclusion
			Min.	Max.	30 Minutes	1 Minute	
1	5L	10U	12.00	260.00	61.62	63.17	Complies
2	5R	10U	12.00	260.00	48.95	50.18	Complies
3	20R	5U	6.00	260.00	8.51	8.72	Complies
4	10R	5U	12.00	260.00	37.71	38.66	Complies
5	H	5U	42.00	260.00	126.02	129.18	Complies
6	10L	5U	12.00	260.00	65.68	67.33	Complies
7	20L	5U	6.00	260.00	10.56	10.83	Complies
8	10L	V	21.00	260.00	104.31	106.93	Complies
9	5L	V	54.00	260.00	154.78	158.67	Complies
10	H	V	60.00	260.00	153.75	157.61	Complies
11	5R	V	54.00	260.00	124.37	127.49	Complies
12	10R	V	21.00	260.00	73.78	75.63	Complies
13	20R	5D	6.00	260.00	10.53	10.79	Complies
14	10R	5D	12.00	260.00	82.12	84.18	Complies
15	H	5D	42.00	260.00	153.08	156.92	Complies
16	10L	5D	12.00	260.00	105.03	107.67	Complies
17	20L	5D	6.00	260.00	16.90	17.32	Complies
18	5L	10D	12.00	260.00	118.34	121.31	Complies
19	5R	10D	12.00	260.00	84.67	86.80	Complies
20	All directions Min.		0.30	---	2.56	2.62	Complies
21	All directions Max.		---	260.00	159.66	163.67	Complies

Technical Report No.:
 Manufacturer:
 Type:

2.2.2.4. Sample No. 2, failure mode, 27 LEDs lit together, test voltage 23.999V.

No.	Point of the measurement		Limits [cd]		Measured values [cd]		Conclusion
			Min.	Max.	30 Minutes	1 Minute	
1	5L	10U	12.00	60.00	42.46	43.51	Complies
2	5R	10U	12.00	260.00	49.27	50.49	Complies
3	20R	5U	6.00	260.00	14.08	14.43	Complies
4	10R	5U	12.00	260.00	48.38	49.57	Complies
5	H	5U	42.00	260.00	112.81	115.59	Complies
6	10L	5U	12.00	260.00	39.60	40.58	Complies
7	20L	5U	6.00	260.00	11.97	12.27	Complies
8	10L	V	21.00	260.00	95.85	98.22	Complies
9	5L	V	54.00	260.00	142.16	145.67	Complies
10	H	V	60.00	260.00	149.88	153.58	Complies
11	5R	V	54.00	260.00	125.43	128.53	Complies
12	10R	V	21.00	260.00	72.27	74.05	Complies
13	20R	5D	6.00	260.00	16.08	16.48	Complies
14	10R	5D	12.00	260.00	61.64	63.16	Complies
15	H	5D	42.00	260.00	136.21	139.57	Complies
16	10L	5D	12.00	260.00	86.05	88.17	Complies
17	20L	5D	6.00	260.00	12.83	13.15	Complies
18	5L	10D	12.00	260.00	52.43	53.72	Complies
19	5R	10D	12.00	260.00	60.03	61.51	Complies
20	All directions Min.		0.30	---	2.76	2.83	Complies
21	All directions Max.		---	260.00	157.58	161.47	Complies



Technical Report No.:

Manufacturer:

Type:

2.2.3. Sample No. 1 and No. 2, the ratio between the luminous intensities actually measured of the two lamps when turned on simultaneously at the intensity of the rear position lamp when turned on alone.

No.	Point of the measurement		Limits [cd]		Measured values [cd]		Conclusion
			Min.	Max.	Sample No. 1	Sample No. 2	
1	10R	5U	5.00	---	8.69	9.09	Complies
2	H	5U	5.00	---	15.88	13.38	Complies
3	10L	5U	5.00	---	10.33	9.60	Complies
4	10L	V	5.00	---	19.11	15.95	Complies
5	5L	V	5.00	---	17.60	15.81	Complies
6	H	V	5.00	---	17.55	16.04	Complies
7	5R	V	5.00	---	17.46	14.50	Complies
8	10R	V	5.00	---	19.14	11.37	Complies
9	10R	5D	5.00	---	37.92	10.32	Complies
10	H	5D	5.00	---	23.07	15.72	Complies
11	10L	5D	5.00	---	38.47	18.46	Complies

Technical Report No.:
 Manufacturer:
 Type:

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2.3. Intensity of light emitted-Mounting position 2

2.3.1. Rear position lamp

2.3.1.1 Sample No. 1, normal mode, 30 LEDs lit together, test voltage 11.999V.

No.	Point of the measurement		Limits [cd]		Measured values [cd]		Conclusion
			Min.	Max.	30 Minutes	1 Minute	
1	5L	10U	0.80	17.00	8.24	9.11	Complies
2	5R	10U	0.80	17.00	7.94	8.78	Complies
3	20R	5U	0.40	17.00	2.45	2.71	Complies
4	10R	5U	0.80	17.00	7.94	8.78	Complies
5	H	5U	2.80	17.00	10.88	12.03	Complies
6	10L	5U	0.80	17.00	8.02	8.86	Complies
7	20L	5U	0.40	17.00	2.59	2.86	Complies
8	10L	V	1.40	17.00	8.28	9.15	Complies
9	5L	V	3.60	17.00	10.84	11.98	Complies
10	H	V	4.00	17.00	11.01	12.17	Complies
11	5R	V	3.60	17.00	10.39	11.48	Complies
12	10R	V	1.40	17.00	9.28	10.26	Complies
13	20R	5D	0.40	17.00	2.28	2.52	Complies
14	10R	5D	0.80	17.00	7.28	8.05	Complies
15	H	5D	2.80	17.00	10.32	11.41	Complies
16	10L	5D	0.80	17.00	8.49	9.38	Complies
17	20L	5D	0.40	17.00	2.59	2.86	Complies
18	5L	10D	0.80	17.00	7.97	8.81	Complies
19	5R	10D	0.80	17.00	7.38	8.16	Complies
20	All directions Min.		0.05	---	0.19	0.21	Complies
21	All directions Max.		---	17.00	11.81	13.05	Complies



Technical Report No.:
Manufacturer:
Type:

2.3.1.2 Sample No. 2, normal mode, 30 LEDs lit together, test voltage 23.999V.

No.	Point of the measurement		Limits [cd]		Measured values [cd]		Conclusion
			Min.	Max.	30 Minutes	1 Minute	
1	5L	10U	0.80	17.00	5.51	6.07	Complies
2	5R	10U	0.80	17.00	7.41	8.16	Complies
3	20R	5U	0.40	17.00	2.40	2.64	Complies
4	10R	5U	0.80	17.00	7.06	7.78	Complies
5	H	5U	2.80	17.00	10.59	11.66	Complies
6	10L	5U	0.80	17.00	6.15	6.77	Complies
7	20L	5U	0.40	17.00	2.00	2.20	Complies
8	10L	V	1.40	17.00	11.38	12.53	Complies
9	5L	V	3.60	17.00	12.32	13.57	Complies
10	H	V	4.00	17.00	12.03	13.25	Complies
11	5R	V	3.60	17.00	11.45	12.61	Complies
12	10R	V	1.40	17.00	10.83	11.93	Complies
13	20R	5D	0.40	17.00	2.36	2.60	Complies
14	10R	5D	0.80	17.00	9.32	10.27	Complies
15	H	5D	2.80	17.00	10.01	11.03	Complies
16	10L	5D	0.80	17.00	9.70	10.68	Complies
17	20L	5D	0.40	17.00	2.06	2.27	Complies
18	5L	10D	0.80	17.00	9.08	10.00	Complies
19	5R	10D	0.80	17.00	8.86	9.76	Complies
20	All directions Min.		0.05	---	0.31	0.34	Complies
21	All directions Max.		---	17.00	13.79	15.19	Complies

Technical Report No.:
Manufacturer:
Type:

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2.3.1.3 Sample No. 1, failure mode, 27 LEDs lit together, test voltage 11.999V.

No.	Point of the measurement		Limits [cd]		Measured values [cd]		Conclusion
			Min.	Max.	30 Minutes	1 Minute	
1	5L	10U	0.80	17.00	7.24	7.90	Complies
2	5R	10U	0.80	17.00	6.94	7.57	Complies
3	20R	5U	0.40	17.00	2.10	2.29	Complies
4	10R	5U	0.80	17.00	7.02	7.66	Complies
5	H	5U	2.80	17.00	9.43	10.29	Complies
6	10L	5U	0.80	17.00	7.12	7.77	Complies
7	20L	5U	0.40	17.00	2.05	2.24	Complies
8	10L	V	1.40	17.00	7.19	7.85	Complies
9	5L	V	3.60	17.00	9.26	10.10	Complies
10	H	V	4.00	17.00	10.20	11.13	Complies
11	5R	V	3.60	17.00	9.22	10.06	Complies
12	10R	V	1.40	17.00	8.17	8.91	Complies
13	20R	5D	0.40	17.00	1.86	2.03	Complies
14	10R	5D	0.80	17.00	6.13	6.69	Complies
15	H	5D	2.80	17.00	9.38	10.24	Complies
16	10L	5D	0.80	17.00	7.68	8.38	Complies
17	20L	5D	0.40	17.00	2.08	2.27	Complies
18	5L	10D	0.80	17.00	6.93	7.56	Complies
19	5R	10D	0.80	17.00	6.21	6.78	Complies
20	All directions Min.		0.05	---	0.15	0.16	Complies
21	All directions Max.		---	17.00	10.51	11.47	Complies

Technical Report No.:
 Manufacturer:
 Type:

2.3.1.4 Sample No. 2, failure mode, 27 LEDs lit together, test voltage 23.999V.

No.	Point of the measurement		Limits [cd]		Measured values [cd]		Conclusion
			Min.	Max.	30 Minutes	1 Minute	
1	5L	10U	0.80	17.00	4.68	5.06	Complies
2	5R	10U	0.80	17.00	6.08	6.57	Complies
3	20R	5U	0.40	17.00	1.9	2.05	Complies
4	10R	5U	0.80	17.00	6.22	6.73	Complies
5	H	5U	2.80	17.00	9.87	10.67	Complies
6	10L	5U	0.80	17.00	5.26	5.69	Complies
7	20L	5U	0.40	17.00	1.67	1.81	Complies
8	10L	V	1.40	17.00	9.81	10.61	Complies
9	5L	V	3.60	17.00	10.35	11.19	Complies
10	H	V	4.00	17.00	10.95	11.84	Complies
11	5R	V	3.60	17.00	9.55	10.33	Complies
12	10R	V	1.40	17.00	9.06	9.80	Complies
13	20R	5D	0.40	17.00	1.94	2.10	Complies
14	10R	5D	0.80	17.00	8.32	9.00	Complies
15	H	5D	2.80	17.00	8.94	9.67	Complies
16	10L	5D	0.80	17.00	8.43	9.12	Complies
17	20L	5D	0.40	17.00	1.6	1.73	Complies
18	5L	10D	0.80	17.00	8.13	8.79	Complies
19	5R	10D	0.80	17.00	8.02	8.67	Complies
20	All directions Min.		0.05	---	0.25	0.27	Complies
21	All directions Max.		---	17.00	11.82	12.78	Complies

Technical Report No.:
 Manufacturer:
 Type:

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2.3.2. Stop lamp

2.3.2.1 Sample No. 1, normal mode, 30 LEDs lit together, test voltage 11.999V.

No.	Point of the measurement		Limits [cd]		Measured values [cd]		Conclusion
			Min.	Max.	30 Minutes	1 Minute	
1	5L	10U	12.00	260.00	61.58	63.69	Complies
2	5R	10U	12.00	260.00	58.51	60.51	Complies
3	20R	5U	6.00	260.00	18.08	18.70	Complies
4	10R	5U	12.00	260.00	58.83	60.84	Complies
5	H	5U	42.00	260.00	145.61	150.59	Complies
6	10L	5U	12.00	260.00	61.83	63.95	Complies
7	20L	5U	6.00	260.00	19.03	19.68	Complies
8	10L	V	21.00	260.00	78.54	81.23	Complies
9	5L	V	54.00	260.00	157.35	162.73	Complies
10	H	V	60.00	260.00	168.08	173.83	Complies
11	5R	V	54.00	260.00	143.48	148.39	Complies
12	10R	V	21.00	260.00	86.67	89.63	Complies
13	20R	5D	6.00	260.00	16.33	16.89	Complies
14	10R	5D	12.00	260.00	85.28	88.20	Complies
15	H	5D	42.00	260.00	154.58	159.87	Complies
16	10L	5D	12.00	260.00	115.57	119.52	Complies
17	20L	5D	6.00	260.00	19.17	19.83	Complies
18	5L	10D	12.00	260.00	112.20	116.04	Complies
19	5R	10D	12.00	260.00	85.67	88.60	Complies
20	All directions Min.		0.30	---	3.47	3.59	Complies
21	All directions Max.		---	260.00	176.57	182.61	Complies

Technical Report No.:
 Manufacturer:
 Type:

2.3.2.2 Sample No. 2, normal mode, 30 LEDs lit together, test voltage 23.999V.

No.	Point of the measurement		Limits [cd]		Measured values [cd]		Conclusion
			Min.	Max.	30 Minutes	1 Minute	
1	5L	10U	12.00	260.00	66.73	68.66	Complies
2	5R	10U	12.00	260.00	87.52	90.05	Complies
3	20R	5U	6.00	260.00	16.56	17.04	Complies
4	10R	5U	12.00	260.00	83.19	85.59	Complies
5	H	5U	42.00	260.00	161.51	166.17	Complies
6	10L	5U	12.00	260.00	74.88	77.04	Complies
7	20L	5U	6.00	260.00	11.97	12.32	Complies
8	10L	V	21.00	260.00	136.51	140.45	Complies
9	5L	V	54.00	260.00	185.05	190.39	Complies
10	H	V	60.00	260.00	179.50	184.68	Complies
11	5R	V	54.00	260.00	186.76	192.15	Complies
12	10R	V	21.00	260.00	129.78	133.53	Complies
13	20R	5D	6.00	260.00	16.34	16.81	Complies
14	10R	5D	12.00	260.00	112.33	115.57	Complies
15	H	5D	42.00	260.00	182.36	187.62	Complies
16	10L	5D	12.00	260.00	117.17	120.55	Complies
17	20L	5D	6.00	260.00	12.75	13.12	Complies
18	5L	10D	12.00	260.00	109.31	112.46	Complies
19	5R	10D	12.00	260.00	108.32	111.45	Complies
20	All directions Min.		0.30	---	4.26	4.38	Complies
21	All directions Max.		---	260.00	195.65	201.30	Complies

Technical Report No.:
 Manufacturer:
 Type:

2.3.2.3. Sample No. 1, failure mode, 27 LEDs lit together, test voltage 11.999V.

No.	Point of the measurement		Limits [cd]		Measured values [cd]		Conclusion
			Min.	Max.	30 Minutes	1 Minute	
1	5L	10U	12.00	260.00	51.07	52.52	Complies
2	5R	10U	12.00	260.00	48.84	50.22	Complies
3	20R	5U	6.00	260.00	14.79	15.21	Complies
4	10R	5U	12.00	260.00	49.58	50.98	Complies
5	H	5U	42.00	260.00	123.05	126.53	Complies
6	10L	5U	12.00	260.00	51.53	52.99	Complies
7	20L	5U	6.00	260.00	15.47	15.91	Complies
8	10L	V	21.00	260.00	65.63	67.49	Complies
9	5L	V	54.00	260.00	129.10	132.76	Complies
10	H	V	60.00	260.00	136.30	140.16	Complies
11	5R	V	54.00	260.00	114.88	118.13	Complies
12	10R	V	21.00	260.00	73.37	75.45	Complies
13	20R	5D	6.00	260.00	13.82	14.21	Complies
14	10R	5D	12.00	260.00	74.23	76.33	Complies
15	H	5D	42.00	260.00	127.22	130.82	Complies
16	10L	5D	12.00	260.00	95.95	98.67	Complies
17	20L	5D	6.00	260.00	15.87	16.32	Complies
18	5L	10D	12.00	260.00	84.37	86.76	Complies
19	5R	10D	12.00	260.00	72.64	74.70	Complies
20	All directions Min.		0.30	---	3.97	4.08	Complies
21	All directions Max.		---	260.00	141.54	145.55	Complies



Technical Report No.:
 Manufacturer:
 Type:

2.3.2.4. Sample No. 2, failure mode, 27 LEDs lit together, test voltage 23.999V.

No.	Point of the measurement		Limits [cd]		Measured values [cd]		Conclusion
			Min.	Max.	30 Minutes	1 Minute	
1	5L	10U	12.00	260.00	53.16	54.74	Complies
2	5R	10U	12.00	260.00	69.70	71.78	Complies
3	20R	5U	6.00	260.00	13.95	14.37	Complies
4	10R	5U	12.00	260.00	70.22	72.31	Complies
5	H	5U	42.00	260.00	134.97	138.99	Complies
6	10L	5U	12.00	260.00	61.02	62.84	Complies
7	20L	5U	6.00	260.00	9.46	9.74	Complies
8	10L	V	21.00	260.00	112.47	115.82	Complies
9	5L	V	54.00	260.00	153.71	158.29	Complies
10	H	V	60.00	260.00	149.00	153.44	Complies
11	5R	V	54.00	260.00	154.35	158.95	Complies
12	10R	V	21.00	260.00	109.01	112.26	Complies
13	20R	5D	6.00	260.00	13.10	13.49	Complies
14	10R	5D	12.00	260.00	91.08	93.79	Complies
15	H	5D	42.00	260.00	148.97	153.41	Complies
16	10L	5D	12.00	260.00	102.14	105.18	Complies
17	20L	5D	6.00	260.00	9.30	9.58	Complies
18	5L	10D	12.00	260.00	91.84	94.58	Complies
19	5R	10D	12.00	260.00	90.91	93.62	Complies
20	All directions Min.		0.30	----	3.73	3.84	Complies
21	All directions Max.		----	260.00	162.35	167.19	Complies

2.3.3. Sample No. 1 and No. 2, the ratio between the luminous intensities actually measured of the two lamps when turned on simultaneously at the intensity of the rear position lamp when turned on alone.

No.	Point of the measurement		Limits [cd]		Measured values [cd]		Conclusion
			Min.	Max.	Sample No. 1	Sample No. 2	
1	10R	5U	5.00	---	8.19	12.57	Complies
2	H	5U	5.00	---	14.23	16.13	Complies
3	10L	5U	5.00	---	8.52	12.89	Complies
4	10L	V	5.00	---	10.29	12.84	Complies
5	5L	V	5.00	---	15.39	15.89	Complies
6	H	V	5.00	---	16.10	15.81	Complies
7	5R	V	5.00	---	14.65	17.17	Complies
8	10R	V	5.00	---	10.22	12.85	Complies
9	10R	5D	5.00	---	12.46	12.91	Complies
10	H	5D	5.00	---	15.80	19.09	Complies
11	10L	5D	5.00	---	14.43	12.95	Complies

2.4. Colour – Red

2.4.1. Rear position lamp

Sample	Measured values		Limits		Conclusion
	x	y	$y \leq 0.335$	$y \geq 0.980 - x$	
No. 1	0.6930	0.3032	Yes	Yes	Complies
No. 2	0.6934	0.3028	Yes	Yes	Complies

2.4.2. Stop lamp

Sample	Measured values		Limits		Conclusion
	x	y	$y \leq 0.335$	$y \geq 0.980 - x$	
No. 1	0.6921	0.3035	Yes	Yes	Complies
No. 2	0.6927	0.3041	Yes	Yes	Complies

Technical Report No.:

Manufacturer:

Type:

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2.5. Apparent surface

2.5.1. Rear position lamp - Mounting position 1

Limit (I)	Limit (O)	Limit (U)	Limit (D)
44mm	38mm	40mm	40mm

2.5.2. Stop lamp - Mounting position 1

Limit (I)	Limit (O)	Limit (U)	Limit (D)
44mm	38mm	40mm	40mm

2.5.3. Rear position lamp - Mounting position 2

Limit (I)	Limit (O)	Limit (U)	Limit (D)
40mm	40mm	38mm	44mm

2.5.4. Stop lamp - Mounting position 2

Limit (I)	Limit (O)	Limit (U)	Limit (D)
40mm	40mm	38mm	44mm

3. Specimen submitted to test on : 2017-12-25 (YYYY-MM-DD)

4. Place of test : Jiangsu Huachen Vehicle Inspection Co.,
Ltd., Zhenjiang City, P.R. China

Date of test : 2018-01-04 (YYYY-MM-DD)

Technical Report No.:
Manufacturer:
Type:

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III. Enclosures

Manufacturer's information :
document No.
Dated on : 2017-12-25 (YYYY-MM-DD)

IV. Statement of conformity

The information folder as mentioned under No. III and the type described therein are in compliance with the test specification mentioned above. The worst-case was selected in accordance with document "Preparation of Test Reports".

The test report may be reproduced and published in full and by the client only. It can be reproduced partially with the written permission of the test laboratory only.

München, 2018-02-06
(YYYY-MM-DD)



Joe Zhou


Test Laboratory / DIN EN ISO 17025

Genehmigungsbehörde/ Approval authority	Land/Country	Registriernummer/ Registration- number	Aktueller Benennungsumfang/ Actual scope list
Kraftfahrt-Bundesamt (KBA)	Deutschland/ Germany	KBA-P 00100-10	www.kba.de
Vehicle Certification Agency (VCA)	Vereintes Königreich/ United Kingdom	VCA-TS-006	http://ec.europa.eu/enterprise/sectors/automotive/approval-authorities-technical-services/technical-services/index_en.htm
Approval Authority of the Netherlands (RDW)	Niederlande/ The Netherlands	RDWT-082-XX	
National Standards Au- thority of Ireland (NSAI)	Irland/ Ireland	Technical Service Number: 49	
Vehicle Safety Certifica- tion Center (VSCC)	Taiwan/ Taiwan	DE04-06-2	http://www.vsc.org.tw/English/Default.aspx

Information folder No. :

First application date : December 25, 2017

1. Specification data

Type		Rear group lamp		
Function		Rear direction indicator lamp	Stop lamp	Rear position lamp
Color		Amber	Red	Red
Rated	Voltage	12V/24V*	12V/24V*	12V/24V*
	Wattage	1.6W	1.56W	0.24W
Application Regulation ECE		R6.01 Cat. 2a	R7.02 Cat. S1	R7.02 Cat. R1
Location of marking	Number and category of light source	30*LED	30*LED	
		Non-replaceable light source		
		Marked on housing		
	Trade mark			
	Approval mark	Marked on lens		
Remark		The lamp is only for use on a vehicle fitted with a tell-tale indicating failure: No		
		Sequential activation of light sources: No		
		*: Application of an electronic light source control gear: Being part of the lamp Input voltage: 12V/24V		

2. Construction and material

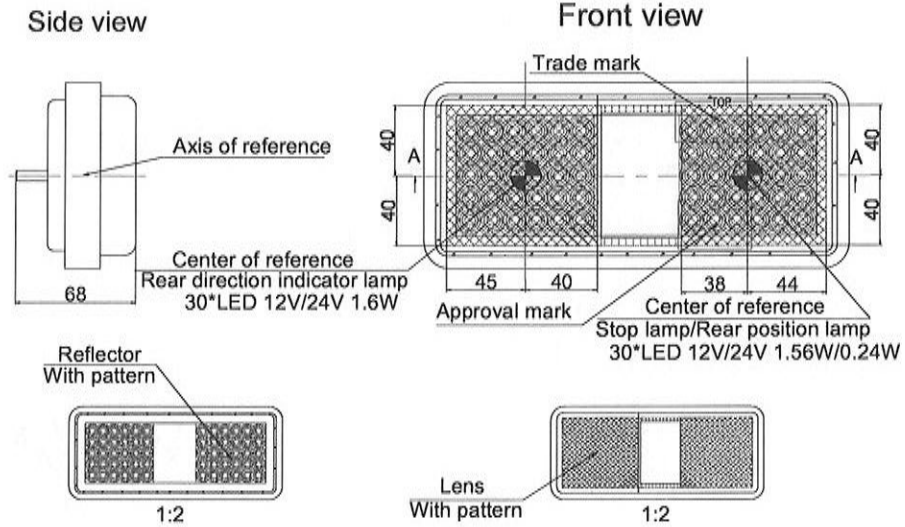
Construction	Material	Remarks
Lens	PMMA	Rear direction indicator lamp: Amber Stop lamp + Rear position lamp: Red
Reflector	ABS	AL vacuum vapour coating Painting on the inside surface Colour: Metal silver
Housing	PVC	Colour: Black
Electrical Wiring	Copper covered with insulation	--

3. Name and address of manufacturer :

4. Name and address of the assembly plant :

5. Name and address of the manufacturer's representative : N/A

Mounting Position 1

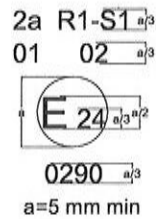


NOTE:
 1. "a": Horizontal Plane of Vehicle
 2. "b": Longitudinal Plane of Vehicle

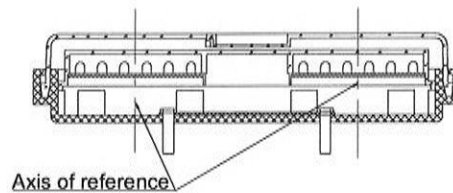
Trade mark



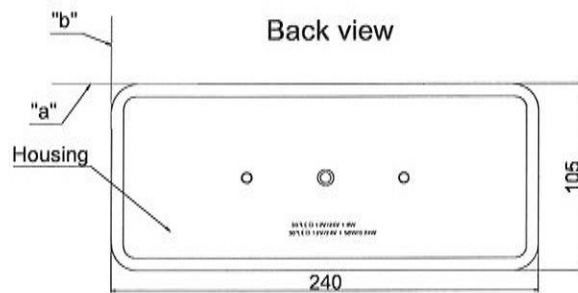
Approval mark



Section A-A



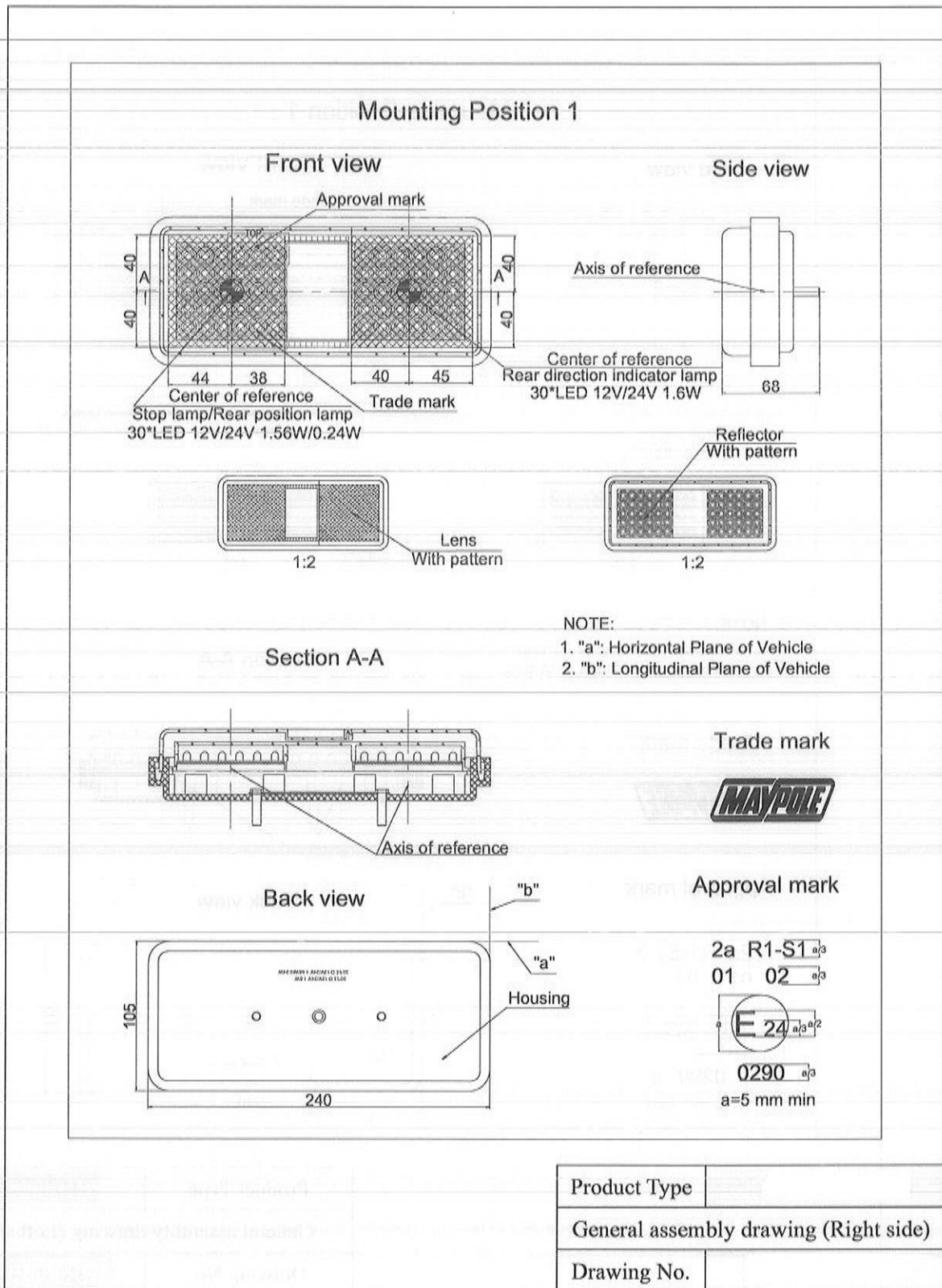
Back view



Product Type	
General assembly drawing (Left side)	
Drawing No.	

Information folder No. :

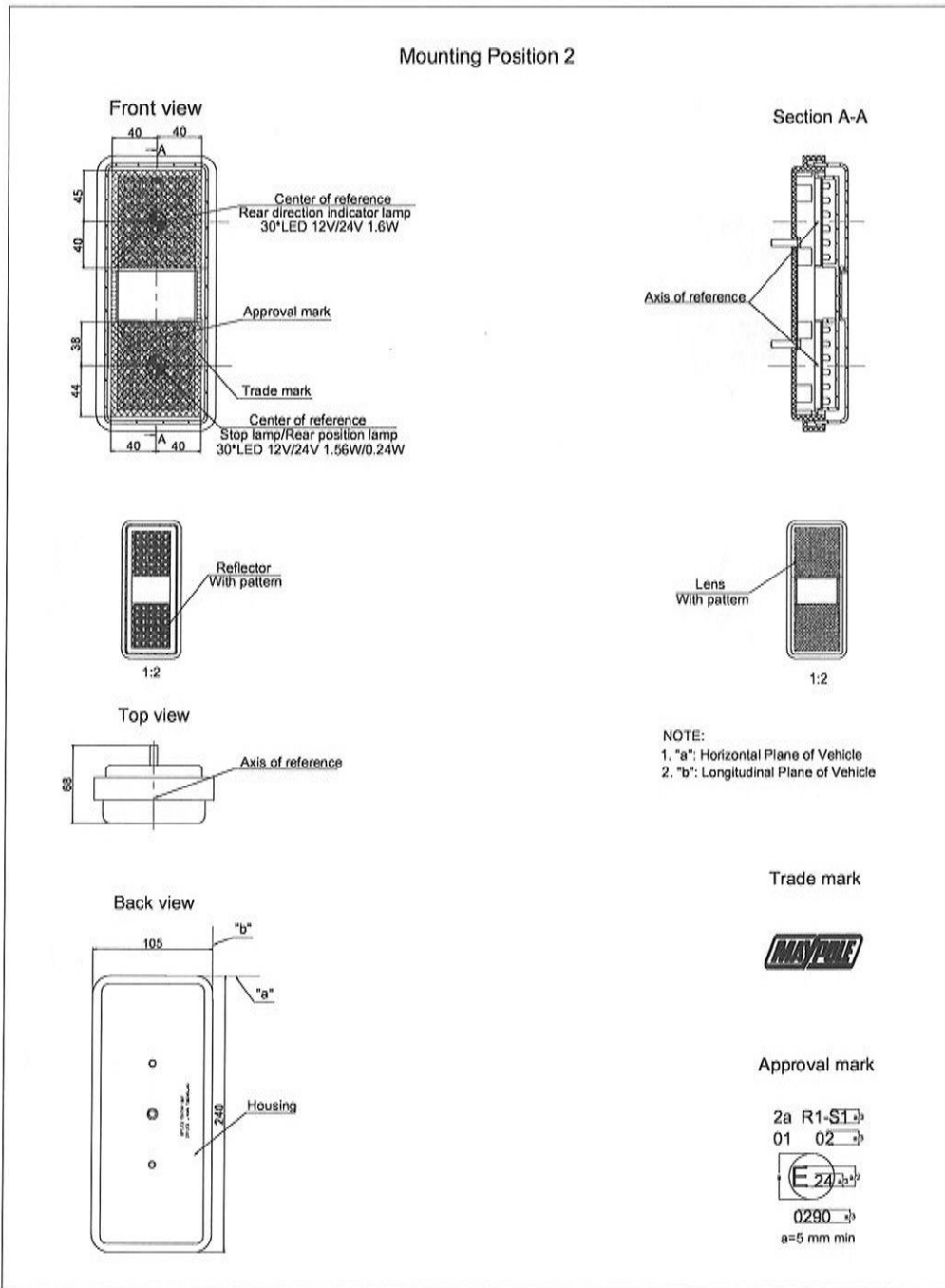
First application date : December 25, 2017



Information folder No. :

First application date : December 25, 2017

Mounting Position 2

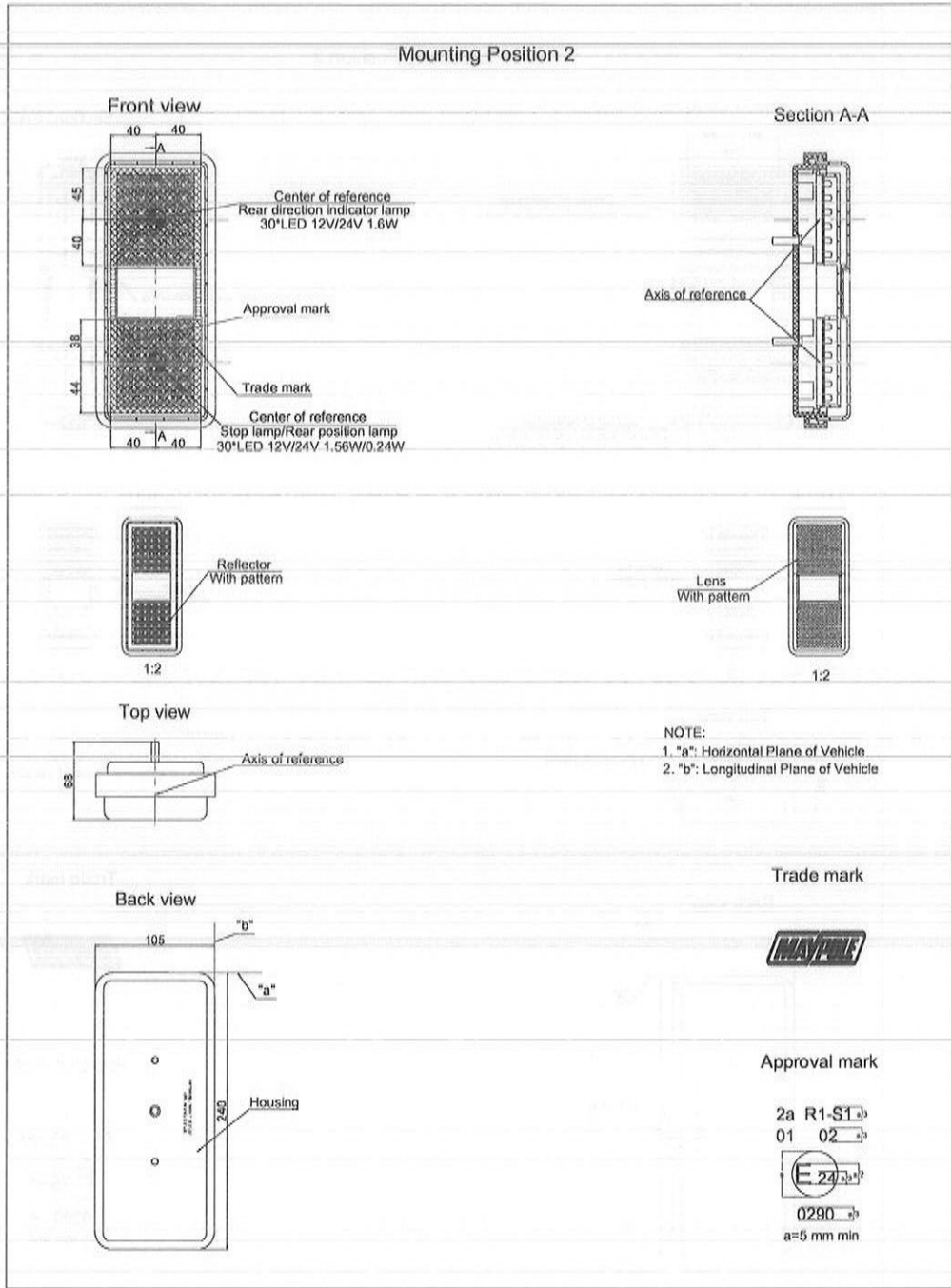


Product Type	
General assembly drawing (Left side)	
Drawing No.	

Information folder No. :

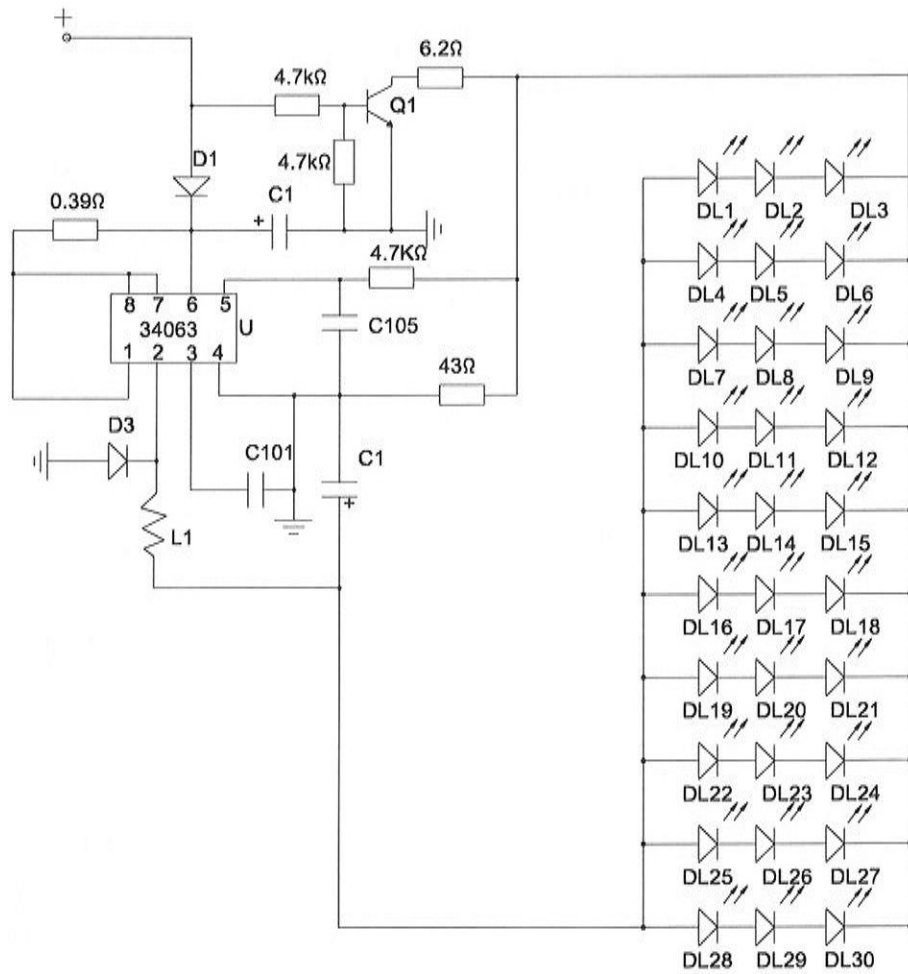
First application date : December 25, 2017

Mounting Position 2



Product Type	
General assembly drawing (Right side)	
Drawing No.	

Rear direction indicator lamp
30* LED 12V/24V 1.6W



Product Type	
LED circuit Diagram	
Drawing No.	

Information folder No. :

First application date : December 25, 2017

