

Shangyu Groupstar Electric Appliance Co., Ltd.

June 1, 2012

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

Subject for ECE-type approval

Dear Sir:

We hereby apply for type approval according to:

Function	ECE approval number	EEC approval number
Rear registration plate lamp	E4-10R-032358	---

Trade name or trade mark :

Manufacturer's name for type of device :

Name and address of manufacturer :

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

Sincerely

Signature:



.....
Name:





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- ~~approval withdrawn~~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 electrical/electronic sub-assembly⁽¹⁾ with regard to Regulation number 10.

Approval number: E4-10R-032358

Extension number: 00

1. Make (trade name of manufacturer) :
2. Type and general commercial description(s) : Rear registration plate lamp
Version(s) :
3. Means of identification of type, if marked on the vehicle/component/
~~separate technical unit~~⁽¹⁾ : Moulded on the lens of the lamp
- 3.1. Location of that marking : Refer to information folder page 3
4. Category of vehicle : n.a.
5. Name and address of manufacturer :
6. In the case of components and separate technical units, location and method of affixing of the ECE approval mark : Moulded on the lens of the lamp



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. Address(es) of assembly plant(s) :
8. Additional information (where applicable) : see Appendix
9. Technical service responsible for carrying out the tests : TÜV Rheinland Kraftfahrt GmbH
Technologiezentrum Verkehrssicherheit
Am Grauen Stein
D-51105 Köln
10. Date of test report : July 12, 2012
11. Number of test report : 85-R10-272/12
12. Remarks (if any) : see Appendix
13. Place : Zoetermeer
14. Date : 19-JUL-2012
15. Signature : 
16. The index to the information package lodged with the approval authority, which may be obtained on request, is attached.
17. Reasons for extension

⁽¹⁾ Strike out what does not apply.

APPENDIX

to type-approval communication form number: E4-10R-032358, Extension number: 00

concerning the type-approval of an ~~electrical~~/electronic sub-assembly⁽¹⁾ under Regulation number 10.

- | | | |
|--------|---|--|
| 1. | Additional information | |
| 1.1. | Electrical system rated voltage | : DC 24V pos./neg. ground ⁽¹⁾ |
| 1.2. | This ESA can be used on any vehicle type with the following restrictions | : no restrictions |
| 1.2.1. | Installation conditions, if any | : Connected to car battery |
| 1.3. | This ESA can be used only on the following vehicle types | : not applicable |
| 1.3.1. | Installation conditions, if any | : --- |
| 1.4. | The specific test method(s) used and the frequency ranges covered to determine immunity were | : Bulk current injection testing method (20- 400MHz)
Free field testing method (400-2000MHz) |
| 1.5. | Approved/accredited laboratory (for the purpose of this Regulation) responsible for carrying out the test | : TÜV Rheinland Kraftfahrt GmbH
Technologiezentrum Verkehrssicherheit
Am Grauen Stein
D-51105 Köln (Poll) |
| 2. | Remarks | : n.a. |

⁽¹⁾ Strike out what does not apply.



	INFORMATION DOCUMENT NO. 1 FOR TYPE APPROVAL OF AN ELECTRIC/ELECTRONIC SUB- ASSEMBLY WITH RESPECT TO ELECTROMAGNETIC COMPATIBILITY ACCORDING TO ECE R10.03 ANNEX 2B	Page: 1
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1. Make (trade name of manufacturer) :
2. Type : (Rear registration plate lamp)
3. Means of identification of type, if marked on the component/~~separate technical unit~~¹⁾ : Moulded on the lens of the lamp
- 3.1. Location of that marking : Refer to page 3
4. Name and address of manufacturer :
- Name and address of authorized representative, if any : Not applicable
5. In the case of components and separate technical units, location and method of affixing of the approval mark : Moulded on the lens of the lamp
6. Address (es) of assembly plant(s) : Same as above item 4.
7. This ESA shall be approved as a component.
8. Any restrictions of use and conditions for fitting : No restrictions
9. Electrical system rated voltage : DC 24V, negative ground

Appendix 1:

Description of the ESA chosen to represent the type (electronic block diagram and list of main component constituting the ESA (e.g. make and type of microprocessor, crystal, etc.).

List of contents

Appendix 1	Description of the ESA	page 2
Attachment 1	Photo of the ESA	page 3 to 4
Attachment 2	Photo of the PCB	page 5 to 6
Attachment 3	Electric Circuit Diagram	page 7
Attachment 4	Bill of Materials	page 8

This information document consists of pages 1 to 8 including Appendix and Attachments.



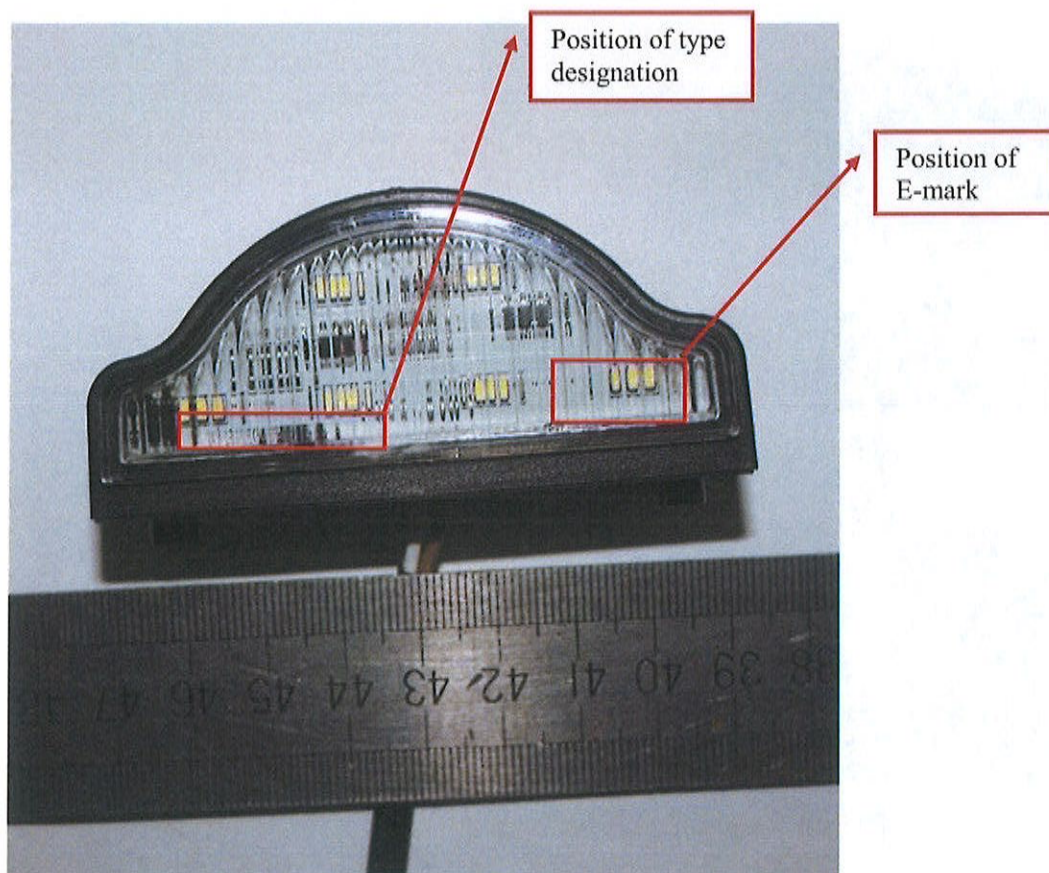
	Appendix 1 to Information document no. Description of the ESA	Page: 2
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1. Input range : DC 9V ~ 30V, negative ground
2. Consumption power : 24V 1.6W
3. Resource of X-tal or oscillator : No
4. EMC countermeasure component : Zener diode
5. Main dimensions : 80mm x 50mm x 33mm

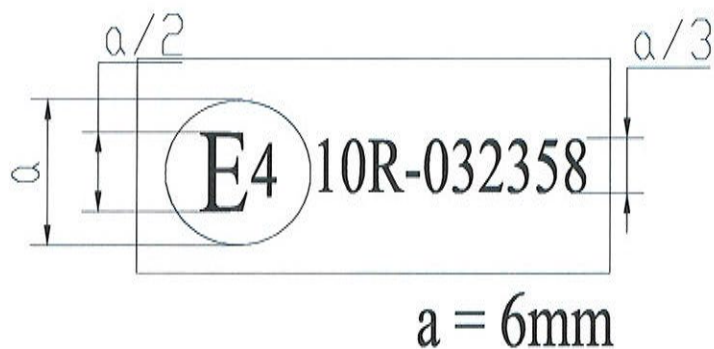


	Attachment 1, Appendix 1 to Information document no.	Page: 3
	Photo of the ESA	

Front View

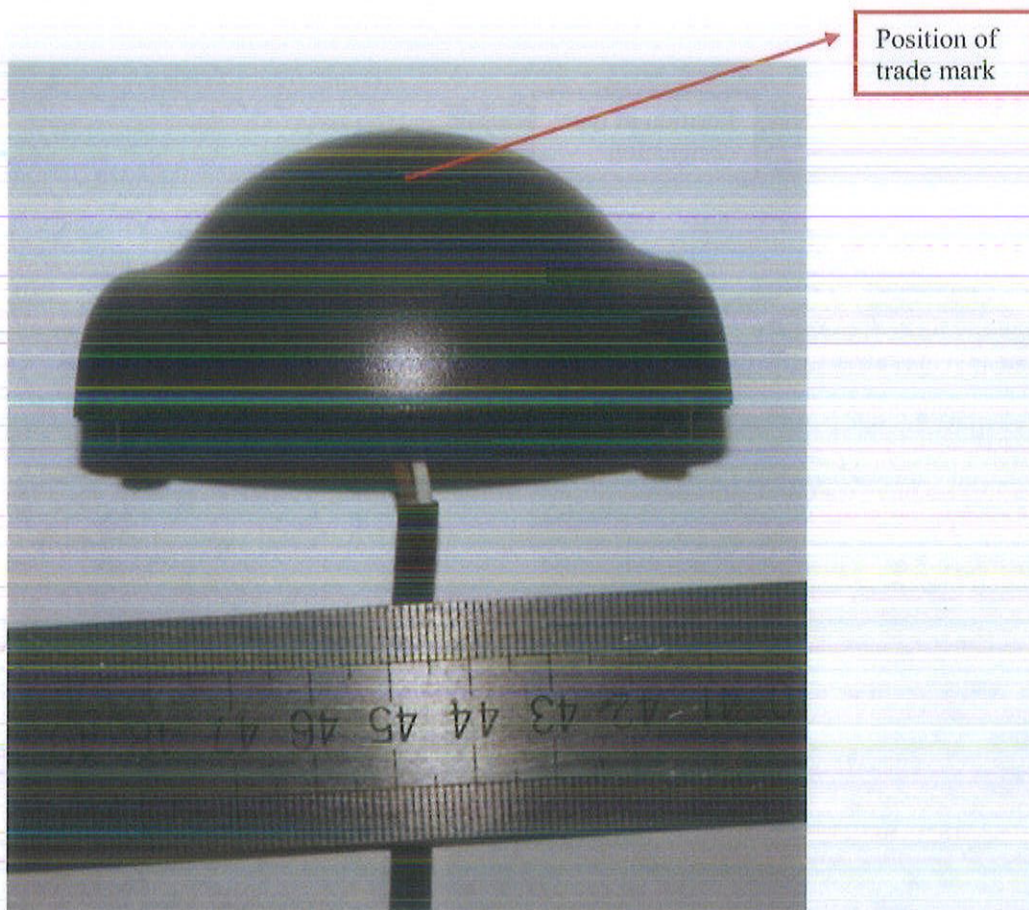


E-mark designation



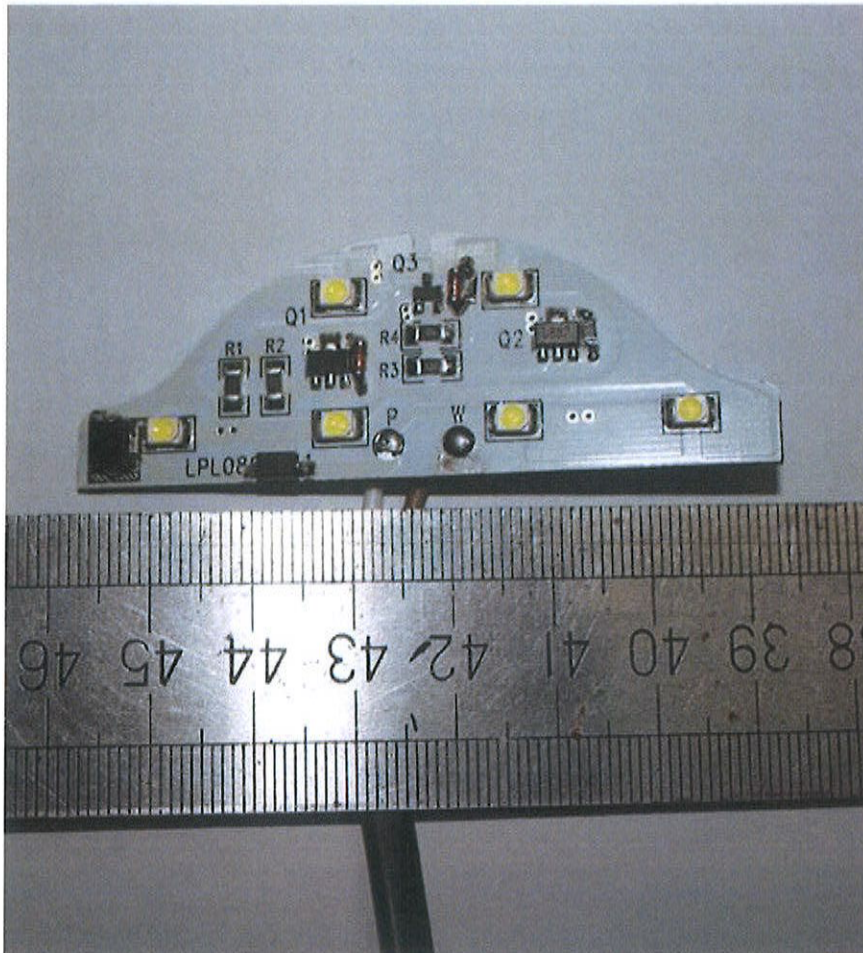
	Attachment 1, Appendix 1 to Information document no.	Page: 4
	Photo of the ESA	

Rear View



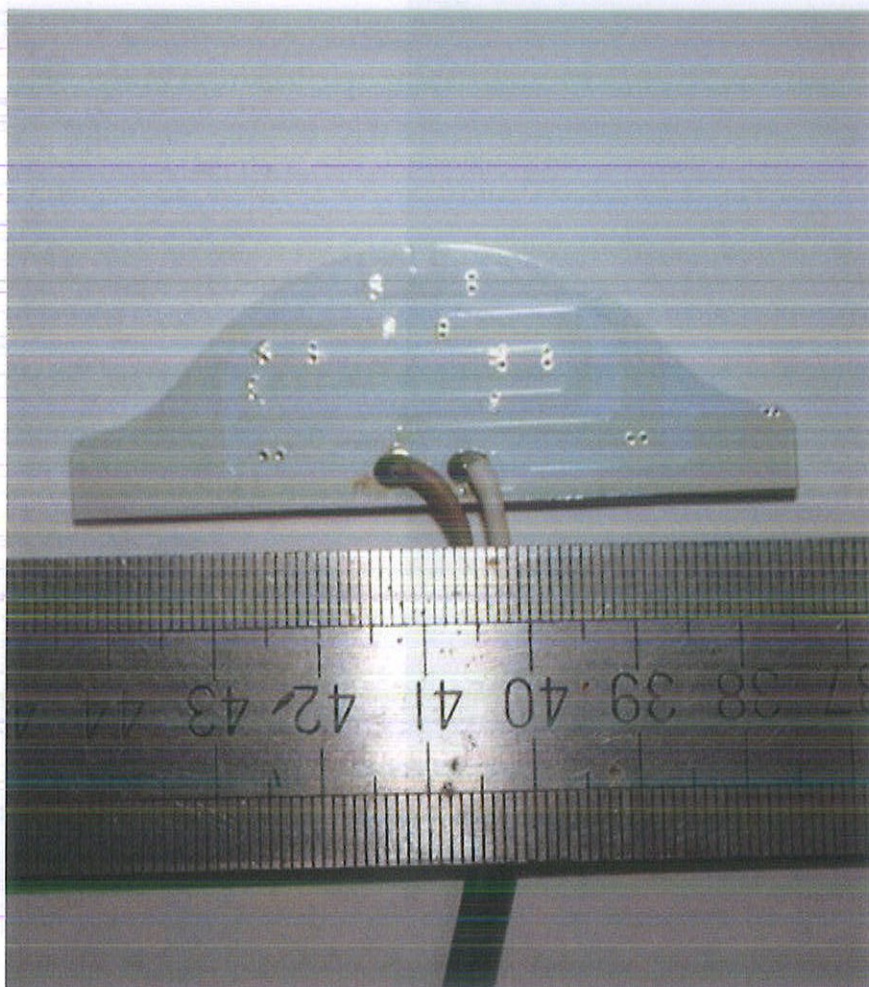
	Attachment 2, Appendix 1 to Information document no. . Photo of the PCB	Page: 5
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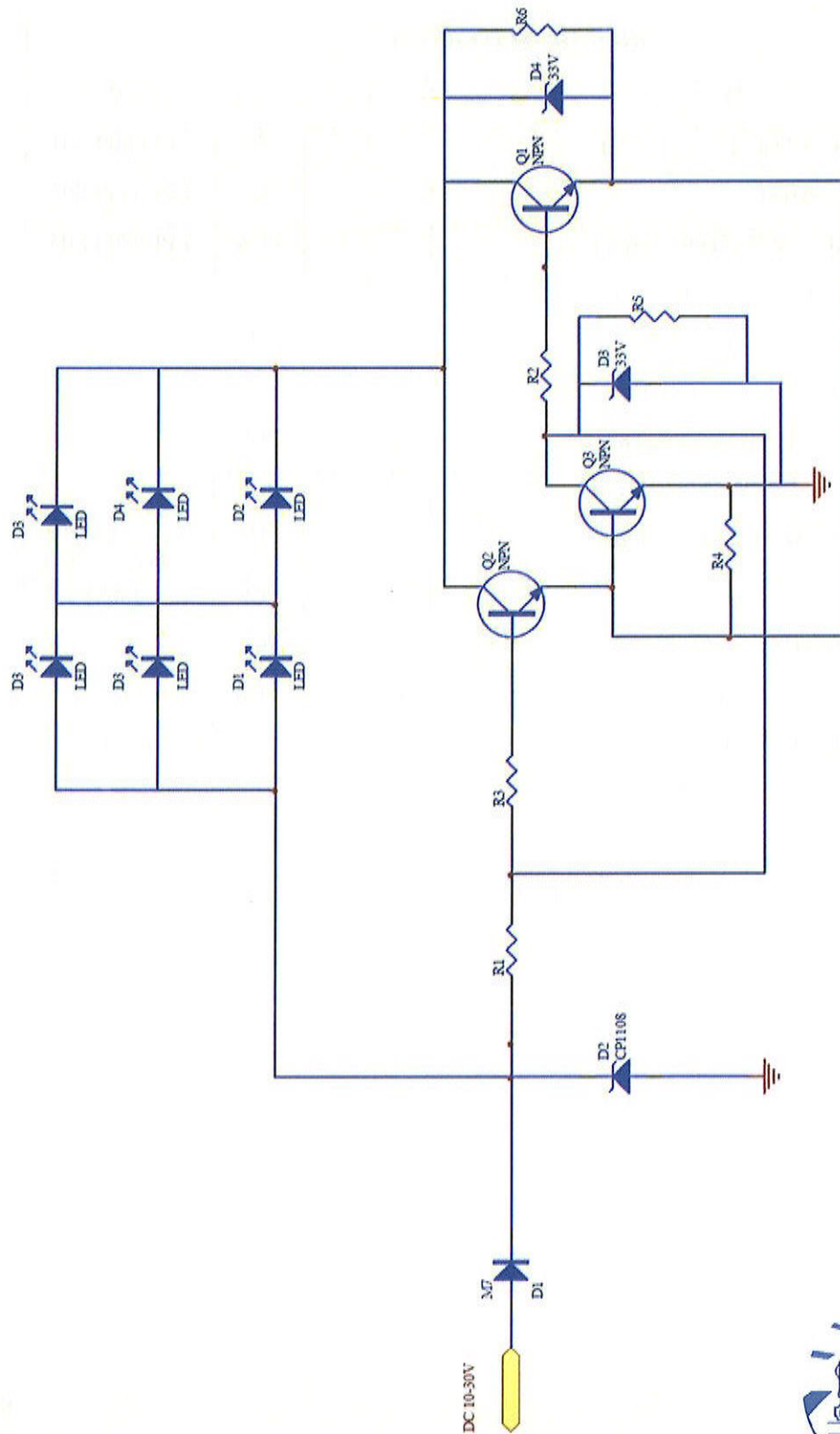
Top side



	Attachment 2, Appendix 1 to Information document no. Photo of the PCB	Page: 6
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Bottom side





	Attachment 4, Appendix 1 to Information document no. Bill of Materials	Page: 8
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BILL OF MATERIALS				
No.	Description	Amount	Unit	Symbol
1	Lens (PC: Clear 2000UR UV)	1	PCS	---
2	Housing (ABS)	1	PCS	---
3	Base (ABS+M5*12Hex Screw)	1	PCS	---
4	Chip Resistor (22K ohm 1206)	3	PCS	R1, R2, R3
5	Chip Resistor (15ohm 1206)	1	PCS	R4
6	Chip LED (Color Temperature 6500K 3528)	6	PCS	---
7	Chip Transistor (D882 SOT89-3)	2	PCS	Q1, Q2
8	Chip Transistor (Y1 SOT23WS)	1	PCS	Q3
9	Chip Zener Diode (33V 1206)	4	PCS	DZ1,DZ2, DZ3,DZ4
10	PCB	1	PCS	
11	Chip Diode (M7 1410)	1	PCS	D1
12	Chip Diode (CP1108 D0-214AB)	1	PCS	D1
13	Chip Resistor (1M ohm 1206)	2	PCS	R5, R6
	---END---	---	---	---

- Housing color may vary upon customer's request.



TECHNICAL REPORT

According to ECE-Regulation

UNIFORM PROVISIONS CONCERNING THE APPROVAL OF VEHICLES WITH REGARD TO ELECTROMAGNETIC COMPATIBILITY

ECE R10

including all amendments until

Corrigendum 1 to the 03 series of amendments

Previously granted	
ECE - certificate	: ---

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

Manufacturer :

Type :

0. General information

- 0.1. Trademark or trade name of the type
- 0.2. Manufacturer's name for the type of the device : Rear registration plate lamp
version(s) : Version 1:
- 0.3. Name and address of the manufacturer :
- 0.4. Name and address of the manufacturer's authorised representative : not applicable
- 0.5. No. of information document :
date of issue : June 01, 2012
date of last amendment : ---

Manufacturer :
Type :

1. Test object(s) and general test information

1.1. Test object(s)

- Identification no. : not applicable
- Model :
- Remark : ~~The test results showed no measurable disturbance over the whole frequency range.~~

1.2. General test information

- 1.2.1 Order issued by : ---
(if different from manufacturer)
- 1.2.2 Test object received on : ---
- 1.2.3 Test date : July 05, 2012
- 1.2.4 Test site : TÜV Rheinland (Guangdong) Ltd. EMC Laboratory
Guangzhou Auto Market, Yuan Gang Section of Guangshan Road
Guangzhou 510650 P.R. China
- 1.2.5 Remark : The results of the test refer exclusively to the objects
mentioned under point 1.1. of this report.

Manufacturer :
Type :

2. Test minutes

- | | | |
|-------|-------------------------|--|
| 2.1. | Test facilities | : The measurement equipment used was in compliance with the test requirements. |
| 2.2. | Test results | : The ESA has been tested according the amendments mentioned in Appendix 0.

The actual measurement test of the ESA was not required.
The test result of the previous test are still valid.

Tests of immunity and radiated narrowband / broadband electromagnetic emission have been conducted. |
| | Markings | : The approval mark is marked clearly legible and indelible on the housing. |
| 2.2.1 | Test data | : see Appendix |
| 2.3. | Variants and components | : not applicable |

Manufacturer :

Type :

3. Remark concerning tested object(s)

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

4. Appendices

0 List of modifications

1 Test protocol

2 Information folder No. :

(incl. apps.)

5. Statement of conformity

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

The test laboratory is accredited for the above mentioned tests by the accreditation body of the RDW, Vehicle Technology and Information Centre, as the competent Administrative Department for the Netherlands;
Certification No: RDW-99050014-05.

The technical report comprises the pages 1 to 18 (including appendices 0 to 1) and shall not be reproduced except in full without the written approval of the test laboratory.

July 12, 2012

QH



Cherry He

Manufacturer :
Type :

List of modifications

Appendix 0

Correction of

: 00 00 00

Modification of

: 00 00 00

Addition of

: 00 00 00

Deletion of

: 00 00 00

Manufacturer :
Type :

Test protocol

Appendix 1

Test object

Trade name

:

Version(s)

:

Technical data of the tested ESA type

Electrical system rated voltage

:

DC 24V, negative grounding

This ESA can be used on any vehicle type
with the following restrictions

:

no restrictions

Installation conditions

:

Connected to car battery

This ESA can be used on the
following vehicle types

:

not applicable

Installation conditions

:

not applicable

Manufacturer :
Type :

Test results

Rated voltage : DC 24V

1. Radiated narrow band / broadband electromagnetic emissions

Radiated broadband electromagnetic emissions : As shown in the table

Radiated narrowband electromagnetic emissions : As shown in the table

Antenna position : horizontal and vertical

Test mode : Lighting

Manufacturer :
Type :

Peak value scan graph (Horizontal):

TUV Rheinland (Guangdong) Ltd.

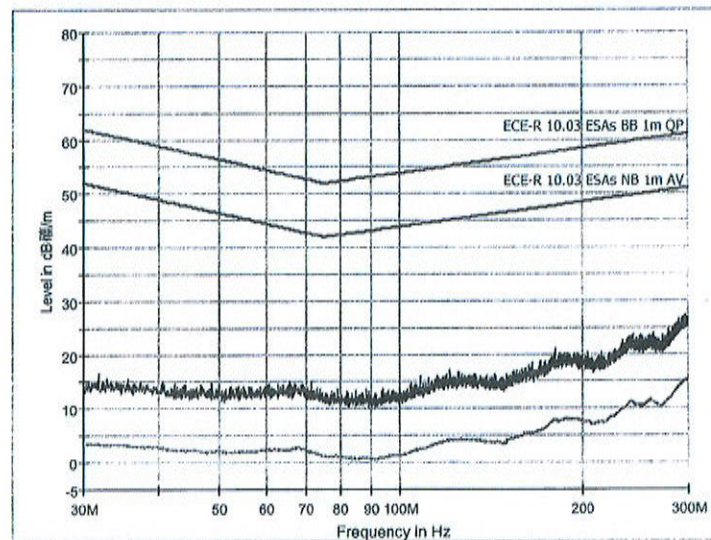
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer:	Rear reposition plate lamp
Test Item:	
Identification:	
Test Standard:	ECE-R 10
Test Detail:	RE
Operation Mode:	Lighting
Climate Condition:	23.0degree, 50%, 101kPa
Test Voltage/ Freq:	27V
Receipt No:	173066516
Report No:	
Result:	Pass
Comment:	Test distance is 1m, Horizontal
Subrange 1	
Frequency Range:	30M-300MHz
Receiver:	TUV ESU 26
Transducer:	TUV VHBB9124

01 TT_EMARK_30-300MHz_WLC_2012_APR



Sign-off Test

Date: 7/5/2012 - Time: 2:55:25

Tested by: Paul He Reviewed by:

2012.07.05



Manufacturer :
Type :

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and MarginbB

Frequency (MHz)	QuasiPeak (dBμV/m)	Corr. (dB)	Margin QPK (dB)	Limit QPK (dBμV/m)	Polarization
31.800000	10.4	12.4	50.9	61.4	H
71.220000	8.8	11.5	43.8	52.6	H
94.080000	7.9	10.7	45.6	53.5	H
121.020000	11.1	13.7	44.0	55.1	H
163.380000	12.3	14.3	44.8	57.1	H
181.080000	14.6	16.7	43.2	57.8	H
243.180000	17.9	19.9	41.8	59.7	H
267.000000	22.0	24.1	39.0	61.0	H

Limit and MarginNB

Frequency (MHz)	Average (dBμV/m)	Corr. (dB)	Margin AVG (dB)	Limit AVG (dBμV/m)	Polarization
31.800000	3.4	12.4	48.1	51.4	H
67.380000	2.7	12.2	40.5	43.2	H
97.080000	1.1	10.8	42.6	43.7	H
125.640000	4.3	13.8	41.1	45.4	H
161.880000	5.4	14.2	41.7	47.1	H
190.800000	7.9	16.9	40.2	48.1	H
239.820000	11.4	20.1	38.3	49.6	H
297.840000	15.2	24.2	35.8	51.1	H

Sign-off Test Data

Date: 7/5/2011 - Time: 2:55:25

Tested by: Ran He Reviewed by: _____

2012.07.05



Manufacturer :
Type :

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

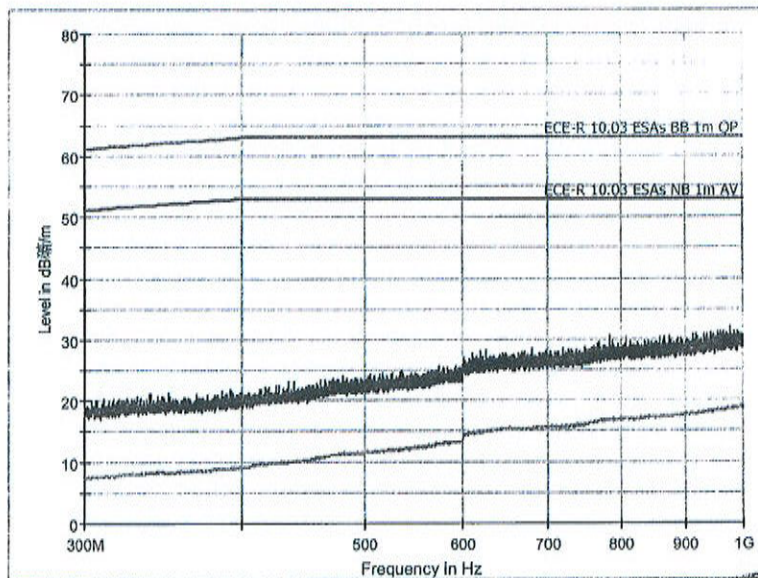
EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item: on plate lamp
 Identification:
 Test Standard: ECE-R 10
 Test Detail: RE
 Operation Mode: Lighting
 Climate Condition: 23.0degree, 50%, 101kPa
 Test Voltage/ Freq: 27V
 Receipt No: 173066516
 Report No:
 Result: Pass
 Comment: Test distance is 1m, Horizontal

Subrange 1
 Frequency Range: 300M-1GHz
 Receiver: TUV ESU 26
 Transducer: TUV VHBB9124

03 TT_EMARK_300-1000MHz_WLC_2012_APR



on-off Test Data

Sign

Date: 7/5/2012 - Time: 3:34:08

Tested by: Paul He Reviewed by:

2012.07.05



Manufacturer :
Type :

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin BB

Frequency (MHz)	Quasi Peak (dBµV/m)	Corr. (dB)	Margin QPK (dB)	Limit QPK (dBµV)	Polarization
337.740000	15.2	17.1	46.7	61.9	H
516.960000	18.7	20.3	44.3	63.0	H
625.980000	21.9	22.1	41.1	63.0	H
784.440000	23.7	24.0	39.3	63.0	H
978.240000	25.6	26.0	37.4	63.0	H

Limit and Margin NB

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin AVG (dB)	Limit AVG (dBµV/m)	Polarization
392.340000	8.9	18.1	43.9	52.9	H
518.100000	11.7	20.3	41.3	53.0	H
651.120000	15.4	22.7	37.6	53.0	H
816.660000	16.9	24.4	36.1	53.0	H
979.020000	18.6	26.0	34.4	53.0	H

Sign-off Test Data

Date: 7/5/2012 - Time: 3:34:08

Tested by: Pau He Reviewed by: _____

2012.07.05



Manufacturer :
Type :

Peak value scan graph (Vertical):

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

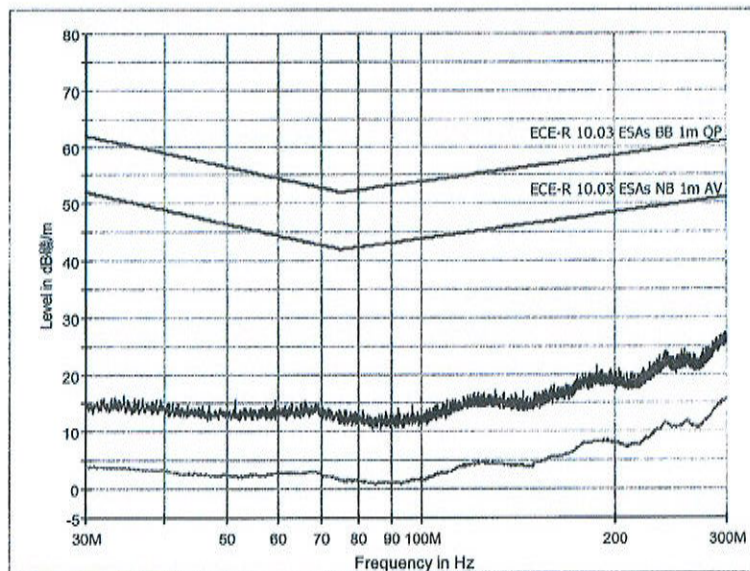
EMC Test Record (Emission)

Common Information

Manufacturer: Rear registration plate lamp
Test Item: Rear registration plate lamp
Identification: 1
Test Standard: ECE-R 10
Test Detail: RE
Operation Mode: Lighting
Climate Condition: 23.0degree, 50%, 101kPa
Test Voltage/ Freq: 27V
Receipt No: 173066516
Report No:
Result: Pass
Comment: Test distance is 1m, Vertical

Subrange 1
Frequency Range: 30M-300MHz
Receiver: TUV ESU 26
Transducer: TUV VHBB9124

01 TT_EMARK_30-300MHz_WLC_2012_APR



Sign-off Test

Date: 7/5/2012 - Time: 2:31:47

Tested by: Paul He Reviewed by: 2012.07.05

Manufacturer :
Type :

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and MarginBB

Frequency (MHz)	QuasiPeak (dBμV/m)	Corr. (dB)	Margin OPK (dB)	Limit OPK (dBμV)	Polarization
34.440000	10.5	12.4	50.0	60.5	V
59.460000	9.5	11.8	45.1	54.5	V
96.900000	8.4	10.8	45.3	53.7	V
121.380000	11.2	13.8	43.9	55.2	V
161.400000	12.5	14.2	44.6	57.0	V
188.100000	15.1	16.9	43.0	58.0	V
241.080000	18.3	20.0	41.4	59.7	V
298.740000	22.4	24.3	38.7	61.1	V

Limit and MarginNB

Frequency (MHz)	Average (dBμV/m)	Corr. (dB)	Margin AVG (dB)	Limit AVG (dBμV/m)	Polarization
31.440000	3.0	12.4	47.9	51.5	V
67.200000	2.7	12.2	40.8	43.2	V
97.920000	1.4	10.9	42.3	43.8	V
124.860000	4.5	13.8	40.8	45.3	V
161.220000	5.5	14.2	41.5	47.0	V
191.280000	8.2	16.9	40.0	48.2	V
240.060000	11.3	20.2	38.3	49.6	V
297.600000	15.2	24.2	35.8	51.1	V

Sign-off

Date: 7/5/2012 - Time: 2:31:47

Tested by Paul He Reviewed by: 2012.07.05



Manufacturer :
Type :

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

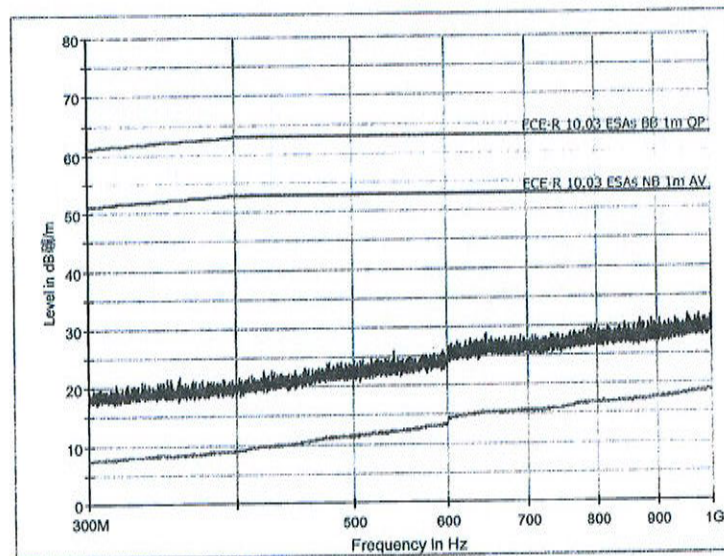
EMC Test Record (Emission)

Common Information

Manufacturer:
 Test Item: ion plate lamp
 Identification:
 Test Standard: ECE-R 10
 Test Detail: RE
 Operation Mode: Lighting
 Climate Condition: 23.0degree,50%,101kPa
 Test Voltage/ Freq: 27V
 Receipt No: 173066516
 Report No:
 Result: Pass
 Comment: Test distance is 1m, Vertical

Subrange 1
 Frequency Range: 300M-1GHz
 Receiver: TUV ESU 26
 Transducer: TUV VHBB9124

03 TT_EMARK_300-1000MHz_WLC_2012_APR



Sign-off Test Data

Date: 7/5/2012 - Time: 3:17:47

Tested by: *Paul He* Reviewed by: *2012.07.05*



Manufacturer :
Type :

Limit and MarginBB

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin- QPK (dB)	Limit- QPK (dBµV)	Polariz- ation
357.840000	15.4	17.5	46.9	62.3	V
518.640000	18.8	20.3	44.2	63.0	V
646.020000	22.3	22.6	40.7	63.0	V
797.100000	23.8	24.2	39.2	63.0	V
999.720000	25.9	26.2	37.1	63.0	V

Limit and MarginNB

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Limit- AVG (dBµV)	Margin- AVG (dB)	Polariz- ation
390.300000	8.9	18.1	52.8	43.9	V
519.960000	11.9	20.4	53.0	41.1	V
645.840000	15.3	22.6	53.0	37.7	V
807.660000	16.9	24.4	53.0	36.1	V
991.020000	18.8	26.1	53.0	34.2	V

Maximum value:

Frequency [MHz]	Test results [dBµV/m]		Reference AV Limit [dBµV/m]	Margin to reference value [dBµV/m]
	hor.	vert.		
297.6	---	15.2	51.1	35.8

Manufacturer :
Type :

2. Conducted emissions

Test method : ISO 7637-2 2nd edition: 2004

Test mode : Lighting

Polarity of pulse amplitude	Maximum allowed value for vehicles with 24V systems	Measured Pulse amplitude True value
Positive	+ 150	3.2
Negative	- 450	-4.2

3. Immunity to electromagnetic radiation

Test method : ISO 11452-4 3rd edition: 2005
Bulk current injection testing method (from 20 to 400MHz)

ISO 11452-2 2nd edition: 2004
Free field testing method (from 400 to 2000MHz)

Test mode : Lighting

Frequency range (MHz)	Test level	Type of modulation	Test distance	Antenna position	Result
20~400	60 mA	AM, 80%	150mm	/	Passed*
400~800	30volts/m	AM, 80%	1 m	Vertical	Passed*
800~2000	30volts/m	PM, 577µs	1 m	Vertical	Passed*

Remark:

* - no degradation of performance of 'immunity-related functions'.

Manufacturer :
Type :

4. Immunity to transient disturbances

Test method : ISO 7637-2 2nd edition: 2004

Test mode : Lighting

Test pulse	Test level	Number of pulse / test time	Burst cycle / pulse repetition time	Required minimum function status	Status of function true value	Result
1	-450V	5000 pulses	0.5 s	C	C	passed
2a	+37V	5000 pulses	0.2s	B	A	passed
2b	+20V	10 pulses	0.5s	C	C	passed
3a	-150V	1 h	90 ms	A	A	passed
3b	+150V	1 h	90 ms	A	A	passed
4	-12V	1 pulse	-	C	B	passed

Remark:

Class A: all functions of a device/system perform as designed during and after exposure to disturbance.

Class B: all functions of a device/system perform as designed during exposure. However, one or more of them can go beyond specified tolerance. All functions return automatically to within normal limits after exposure is removed. Memory functions shall remain class A.

Class C: one or more functions of a device/system do not perform as designed during exposure but return automatically to normal operation after exposure is removed.

Class D: one or more functions of a device/system do not perform as designed during exposure and do not return to normal operation until exposure is removed and the device/system is reset by simple "operator/use" action.

Class E: one or more functions of a device/system do not perform as designed during and after exposure and cannot be returned to proper operation without repairing or replacing the device/system.