

ECE TYPE-APPROVAL CERTIFICATE



Communication Concerning: Approval granted
~~Approval extended~~
~~Approval refused~~
~~Approval withdrawn~~
~~Production definitively discontinued~~

Of a type of electrical/electronic sub-assembly with regard to Regulation No.10.

Approval No: E24*10R05/01*2429*00

Reason for extension: *N/A*

1. Make (trade name of manufacturer): *MAYPOLE*

2. Type and general commercial description:
Rear group lamp

Variant(s):

3. Means of identification of type, if marked on the component: *Letters and digits*

3.1 Location of that marking: *Mould on the Lens*

4. Category of vehicle: *See Appendix*

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: *Mould on the Lens*

7. Address(es) of assembly plant(s):



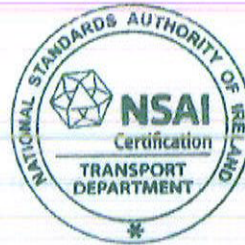
NSAI

Certification

Approval No: E24*10R05/01*2429*00

8. Additional information (where applicable): *See appendix*
9. Technical service responsible for carrying out the tests: *TÜV SÜD Auto Service GmbH
Westendstraße 199
D-80686 München*
10. Date of test report: *09.02.2018*
11. Number of test report: *18-00347-CX-SHA-00*
12. Remarks (if any): *See Appendix*
13. Place: *Dublin*
14. Date: *5th March, 2018.*

15. Signature:



16. The index to the information package lodged with the approval authority, which may be obtained on request is attached.



NSAI
Certification

Approval No: E24*10R05/01*2429*00

Appendix

To type-approval communication concerning the type approval of an electrical/electronic sub-assembly under Regulation No.10.

1. Additional information
 - 1.1. Electrical system rated voltage: *DC 12V/ 24V neg. ground*
 - 1.2. This ESA can be used on any vehicle type with the following restrictions: *See manufacturer's specifications.*
 - 1.2.1 Installation conditions, if any: *See manufacturer's specifications.*
 - 1.3. This ESA can only be used on the following vehicle types: *N/A*
 - 1.3.1 Installation conditions, if any: *N/A*
 - 1.4. The specific test method(s) used and the frequency ranges covered to determine immunity were:
*Bulk current injection method
Frequency range: 20 - 400 MHz
Free field substitution method
Frequency range: 400 - 2000 MHz*
 - 1.5. Laboratory accredited to ISO 17025 and recognized by the Approval Authority responsible for carrying out the tests: *TÜV SÜD Auto Service GmbH*
2. Remarks: *N/A*

Appendix to type-approval communication concerning the type approval of a vehicle under Regulation No.10.

1. Additional information
2. Special devices for the purpose of Annex 4 to this Regulation: *N/A*
3. Electrical system rated voltage: *N/A*
4. Type of bodywork: *N/A*
5. List of electronic systems installed in the tested vehicle(s) not limited to the items in the information document: *N/A*
- 5.1 Vehicle equipped with 24 GHz short-range radar equipment (yes/no): *N/A*
6. Laboratory accredited to ISO 17025 and recognized by the Approval Authority responsible for carrying out the tests: *N/A*
7. Remarks: *N/A*



NSAI

Certification

Approval No: E24*10R05/01*2429*00

Index to the Information Package

Date of issue: **5th 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: **09.02.2018**

- date of latest amendment: **N/A**

3. Information document

- number(s):

- date of issue: **20.12.2017**

- date of latest amendment: **N/A**

Documentation: **29 pages**



Approval No: E24*10R05/01*2429*00

Appendix: Additional conditions, and advisory notes on legal alternatives

A: Additional conditions:

1. The attached technical report, with any of its attachments, forms part of this Type Approval certificate.
2. Each type from series production shall be to the measurements specified in the attached drawings, and shall be manufactured only from the materials specified in the Approval documents.
3. Changes in the type are permitted only with the explicit permission of NSAI. Breaches of this requirement will lead to a withdrawal of the Type Approval, and in addition may be subject to criminal prosecution.
4. At regular intervals, any tests or associated checks prescribed by the applicable legislation to verify continued conformity with the approved type shall be carried out. The manufacturer shall demonstrate compliance with this by submitting to NSAI evidence of adequate arrangements and documented control plans for each type approved.
5. Any set of samples or test pieces showing evidence of non-conformity shall give rise to further sampling and testing and all steps shall be taken to restore conformity of production.
6. This Type Approval will expire when it is surrendered by the holder, or withdrawn by NSAI, or when the approved type no longer conforms to legal requirements. The recall of the Type Approval can be issued by NSAI when the conditions required for the issuing or continuation of the Type Approval are no longer current, or when the Approval holder is in breach of the duties attached to the Type Approval, or when it is established that the approved type no longer meets the requirements of traffic safety.
7. Changes in the company name, address or manufacturing site, as well as in any of the sales or other agents specified in the issuing of the approval must immediately be notified to NSAI.
8. The duties imposed by the issuing of this certificate are not transferable. The legal protection of third parties is not affected by this certificate.
9. When the manufacture or sale of the system, component or separate technical unit has not been started within one year of the date of issue of this certificate, then NSAI is to be informed. This requirement also applies when the manufacture or sale has been halted for more than one year, or when it ought to have been halted for more than one year. The initial commencement of manufacture or sale, or the resumption of manufacture or sale, shall then be notified to NSAI within one month of commencement or resumption.

B: Legal Options:

Any objection to the requirements set out in this certificate shall be made within one month of the date of issue. The objection shall be made, in writing, to NSAI in Dublin.

Technical Report No.:

Manufacturer:

Type:

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TECHNICAL REPORT

No.:

Test of a type of a component

According to the Regulation of the Economic Commission for Europe relating to

Electromagnetic Compatibility

No.: ECE R10

including amendment 01 up to 05 series

Approval status	
<input checked="" type="checkbox"/>	Granting of a type approval
<input type="checkbox"/>	Extension/correction to type approval no.: --

Technical Report No.:

Manufacturer:

Type:

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1. General

1.1. Make : MAYPOLE

1.2. Type :

1.3. Variants :

1.4. Commercial description(s) : Rear group lamp

1.5. Category of vehicle : N/A

1.6. Name and address of manufacturer :

1.7. Name and address of representative : N/A

1.8. Information document

No. :

Date of issue : 2017-12-20_(YYYY-MM-DD)

Last date of amendment : N/A

1.9. Technical description of the component : See manufacturer's information document

Technical Report No.:

Manufacturer:

Type:

2. **Test record** : Refer to Annex 2

3. **Enclosure(s)**

- Annex 1 List of modification
- Annex 2 Test record
- Annex 2a Measurement diagrams of the radio interference 30 MHz - 1 GHz
- Annex 2b Immunity of ESA to conducted transient interferences
- Annex 2c Conducted transients from ESAs to the vehicle power supply
- Annex 2d Immunity of ESA to electromagnetic radiation
- Annex 3 Information document

4. **Statement of conformity**

The information folder as mentioned under No. 1.8. 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, 2018-02-09 (YYYY-MM-DD)



Erin Zeng

Erin Zeng
 Test Laboratory / DIN EN ISO 17025

Approval authority	Country	Registration-number	Actual scope list
Kraftfahrt-Bundesamt (KBA)	Germany	KBA-P 00100-10	http://www.kba.de
Vehicle Certification Agency (VCA)	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)	The Netherlands	RDWT-082-XX	
National Standards Authority of Ireland (NSAI)	Ireland	Technical Service Number: 49	
Vehicle Safety Certification Center (VSCC)	Taiwan	DE04-06-2	http://www.vsc.org.tw/English/Default.aspx



Technical Report No.:

Manufacturer:

Type:

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Annex 1

List of modification

Correction of : N/A

Modification of : N/A

Addition of : N/A

Deletion of : N/A

Technical Report No.:

Manufacturer:

Type:

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Annex 2

Test record

1. Technical data of the test component

Representative ESA :

Tested variant (if any) : N/A

2. Test conditions

2.1. Instrument : In accordance to the standard above

2.2. Ambient condition : In accordance to the standard above

2.3. Carrying out of the test

2.3.1. Broadband electromagnetic interference generated by ESA

2.3.1.1. Method of measurement : Measured by the method described in Annex 7 of ECE Regulation No. 10.

2.3.1.2. Results : The measured values, expressed in dB μ V/m, are below the reference limits.
The test was passed.

2.3.2. Narrowband electromagnetic interference generated by ESA

2.3.2.1. Method of measurement : Measured by the method described in Annex 8 of ECE Regulation No. 10.

2.3.2.2. Results : The measured values, expressed in dB μ V/m, are below the reference limits. The test was passed.

Technical Report No.:

Manufacturer:

Type:

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2.3.3. Immunity of ESA to electromagnetic radiation

2.3.3.1. Method of measurement : Measured by bulk current injection (20 MHz - 400 MHz) and in the anechoic chamber (400 MHz – 2 GHz) as described in annex 9 of ECE-Regulation No. 10

2.3.3.2. Performance criteria : No degradation of function by testing with 60 mA (bulk current injection) and 30 V/m (anechoic chamber).

2.3.3.3. Results : The ESA has not exhibited any malfunction. The claimed functional state was fulfilled during the test. The test was passed.

2.3.4. Immunity of ESA to conducted transient interferences

2.3.4.1. Method of measurement : Measured as described in Annex 10 of ECE Regulation No. 10.

2.3.4.2. Results : The ESA has not exhibited any unacceptable malfunction. The claimed functional state was fulfilled during the test. The test was passed.

2.3.5. Conducted transient interferences generated by ESA

2.3.5.1. Method of measurement : Measured as described in Annex 10 of ECE Regulation No. 10.

2.3.5.2. Results : The measured values are below the reference limits. The test was passed.

3. Test result

The results of the tests are attached in the diagrams of the enclosure.

4. Place and date of test

Place : Shanghai Inspection and Testing Institute of Instruments and Automation Systems Co., Ltd.

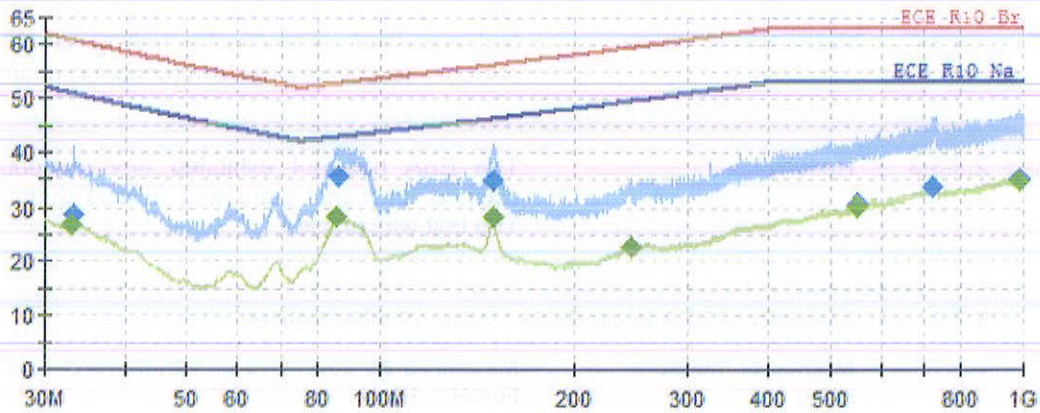
Date : 2018-01-03 (YYYY-MM-DD)

Technical Report No.:
 Manufacturer:
 Type:

Annex 2a Measurement diagrams of the radio interference 30 MHz - 1 GHz

DUT Model: Test Voltage: 13.5V
 Test Mode: On Test Result: Pass

30 to 1000MHz - Horizontal:

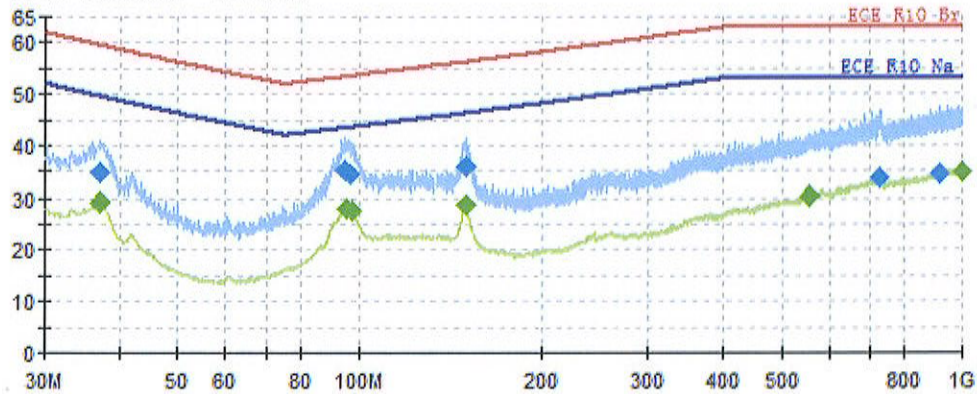


Frequency (MHz)	QuasiPeak (dB/m)	Height (cm)	Polarization	Margin (dB)	Limit (dB/m)
33.180000	28.9	100.0	H	31.90	60.80
85.920000	35.4	100.0	H	17.40	52.80
149.520000	34.9	100.0	H	21.40	56.30
549.540000	30.5	100.0	H	32.50	63.00
723.120000	33.6	100.0	H	29.40	63.00
985.560000	35.0	100.0	H	28.00	63.00

Frequency (MHz)	Average (dB/m)	Height (cm)	Polarization	Margin (dB)	Limit (dB/m)
33.000000	27.0	100.0	H	23.90	50.90
85.140000	28.2	100.0	H	14.50	42.70
148.860000	28.5	100.0	H	17.70	46.20
244.080000	22.9	100.0	H	26.60	49.50
550.020000	30.2	100.0	H	22.80	53.00
987.060000	34.6	100.0	H	18.40	53.00

Technical Report No.:
 Manufacturer:
 Type:

30 to 1000MHz - Vertical:



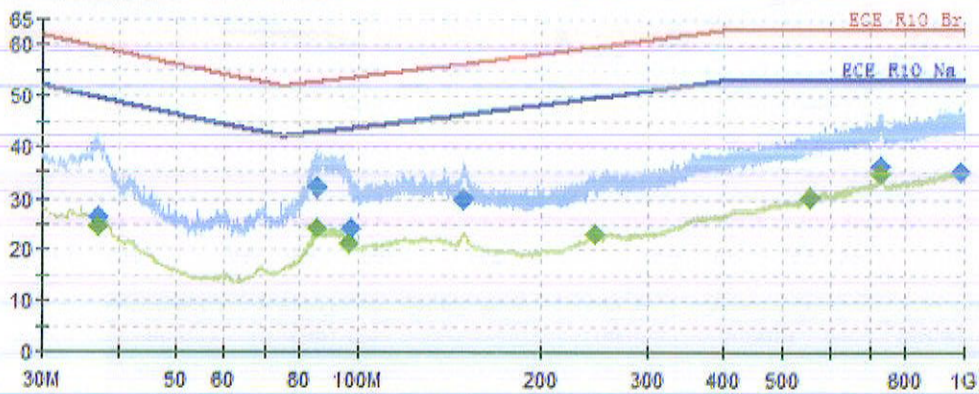
Frequency (MHz)	QuasiPeak (dB/m)	Height (cm)	Polarization	Margin (dB)	Limit (dB/m)
37.080000	34.6	100.0	V	24.90	59.50
94.380000	35.0	100.0	V	18.30	53.40
96.780000	34.2	100.0	V	19.30	53.50
148.740000	35.7	100.0	V	20.50	56.20
724.320000	33.7	100.0	V	29.30	63.00
914.640000	34.4	100.0	V	28.60	63.00

Frequency (MHz)	Average (dB/m)	Height (cm)	Polarization	Margin (dB)	Limit (dB/m)
37.140000	29.3	100.0	V	20.20	49.50
95.280000	28.2	100.0	V	15.30	43.40
97.560000	27.5	100.0	V	16.00	43.60
148.920000	28.9	100.0	V	17.30	46.20
555.900000	30.3	100.0	V	22.70	53.00
996.660000	34.7	100.0	V	18.30	53.00

Technical Report No.:
 Manufacturer:
 Type:

DUT Model: Test Voltage: 27V
 Test Mode: On Test Result: Pass

30 to 1000MHz - Horizontal:

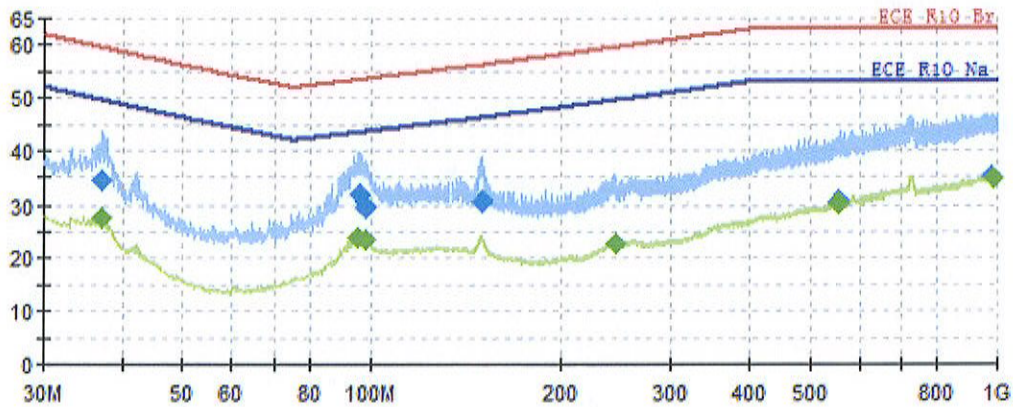


Frequency (MHz)	QuasiPeak (dB/m)	Height (cm)	Polarization	Margin (dB)	Limit (dB/m)
37.020000	26.7	100.0	H	32.90	59.50
85.560000	32.0	100.0	H	20.80	52.80
97.080000	24.4	100.0	H	29.10	53.60
148.440000	29.9	100.0	H	26.30	56.20
726.300000	36.3	100.0	H	26.70	63.00
988.800000	35.0	100.0	H	28.00	63.00

Frequency (MHz)	Average (dB/m)	Height (cm)	Polarization	Margin (dB)	Limit (dB/m)
36.960000	24.5	100.0	H	25.00	49.50
85.620000	24.4	100.0	H	18.30	42.80
96.900000	21.3	100.0	H	22.20	43.50
244.500000	23.0	100.0	H	26.50	49.50
553.920000	30.3	100.0	H	22.70	53.00
729.060000	34.7	100.0	H	18.30	53.00

Technical Report No.:
 Manufacturer:
 Type:

30 to 1000MHz - Vertical:



Frequency (MHz)	QuasiPeak (dB/m)	Height (cm)	Polarization	Margin (dB)	Limit (dB/m)
37.020000	34.2	100.0	V	25.30	59.50
95.700000	31.6	100.0	V	21.90	53.50
97.980000	29.4	100.0	V	24.20	53.60
149.280000	30.5	100.0	V	25.80	56.30
557.040000	30.8	100.0	V	32.20	63.00
979.560000	35.0	100.0	V	28.00	63.00

Frequency (MHz)	Average (dB/m)	Height (cm)	Polarization	Margin (dB)	Limit (dB/m)
37.020000	27.6	100.0	V	21.90	49.50
94.920000	23.8	100.0	V	19.60	43.40
97.680000	23.7	100.0	V	19.90	43.60
244.080000	22.9	100.0	V	26.60	49.50
555.360000	30.3	100.0	V	22.70	53.00
987.300000	34.6	100.0	V	18.40	53.00

Technical Report No.:

Manufacturer:

Type:

Annex 2b Immunity of ESA to conducted transient interferences

DUT Model: Test Voltage: 13.5V
 Test Mode: On Test Result: Pass

Measurement result:

Test pulse	Test level	Number of pulse / test time	Burst cycle / pulse repetition time	Required minimum functional status	Status of function true value
1	-75V	5000 pulses	0.5s	C	C
2a	+37V	5000 pulses	0.2s	B	A
2b	+10V	10 pulses	0.5s	C	C
3a	-112V	1h	90ms	A	A
3b	+75V	1h	90ms	A	A
4	-6V	1 pulses	2s	B	B

DUT Model: **Error! Reference source not found.** Test Voltage: 27V
 Test Mode: On Test Result: Pass

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

Remark:

"A": all functions of EUT perform as designed during and after exposure to disturbance.
 "B": all functions of EUT 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.
 "C": EUT power off during exposure but return automatically to normal operation after exposure is removed.
 "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/user" action.

Technical Report No.:
 Manufacturer:
 Type:

Annex 2c Conducted transients from ESAs to the vehicle power supply

DUT Model: Test Voltage: 13.5V
 Test Mode: On Test Result: Pass

Measurement result:

Polarity of pulse amplitude	Maximum allowed value for vehicles with 12V systems	Measured Pulse amplitude True Value(Fast)	Measured Pulse amplitude True Value(Slow)
Positive	+75V	+17.3V	+16.8V
Negative	-100V	-18.7V	-18.4V

DUT Model:: Test Voltage: 27V
 Test Mode: On Test Result: Pass

Polarity of pulse amplitude	Maximum allowed value for vehicles with 24V systems	Measured Pulse amplitude True Value(Fast)	Measured Pulse amplitude True Value(Slow)
Positive	+150V	+45.1V	+46.6V
Negative	-450V	-50.5V	-50.8V

Annex 2d Immunity of ESA to electromagnetic radiation

DUT Model: Test Voltage: 13.5V
 Test Mode: On Test Result: Pass

Measurement result:

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

Technical Report No.:
 Manufacturer:
 Type:

DUT Model: Test Voltage: 27V
 Test Mode: On Test Result: Pass

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

Remark:

"A": all functions of EUT perform as designed during and after exposure to disturbance.

"B": all functions of EUT 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.

"C": EUT power off during exposure but return automatically to normal operation after exposure is removed

"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.

	Type:
	Information Document No.:
	Date: December 20, 2017
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**APPLICATION FOR APPROVAL
PURSUANT TO THE ECE REGULATION No. 10.05**

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

Company name:

Type:

Name of responsible person



邹成峰

Zou Chengfeng

E24*10R05/01*2429*00

	Typ
	Information Document No.:
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List of documentation

Confirmation	Page 3
Information document	Page 4
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Drawings	Page 6-11
Bill of material	Page 12-14
Variant list	Page 15-16

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	Information Document No.
	Date: December 20, 2017
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Confirmation

We hereby declare that the product of
for the type approval

submitted

1. is compatible with the enclosed documentation

and

2. has been manufactured under condition of mass production.

	Type:
	Information Document No.:
	Date: December 20, 2017
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INFORMATION DOCUMENT FOR TYPE-APPROVAL OF AN ELECTRIC/ELECTRONIC SUB-ASSEMBLY WITH RESPECT TO ELECTROMAGNETIC COMPATIBILITY ACCORDING ANNEX 2B

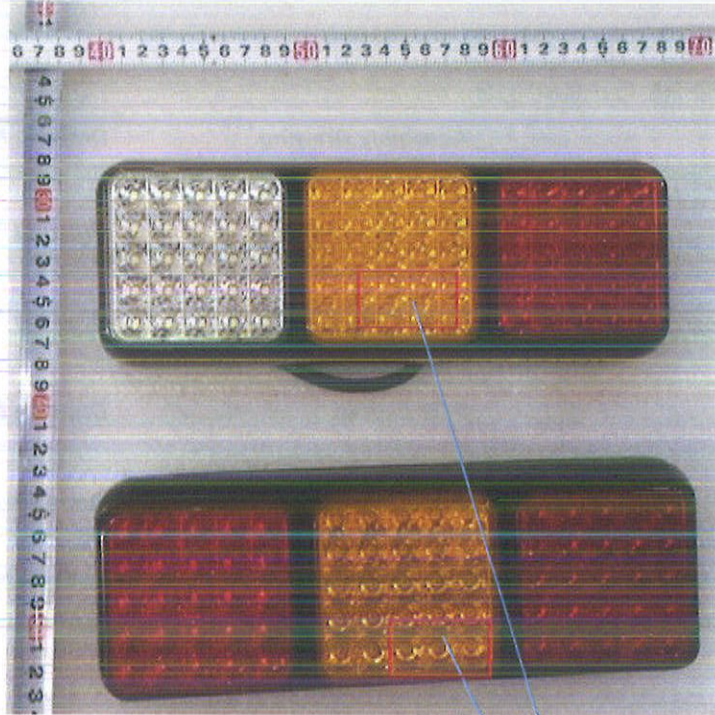
- | | | |
|------|--|---|
| 1. | Make (trade name of the manufacturer) | : MAYPOLE |
| 2. | Type | : |
| 2.1. | Variants (if applicable) | : |
| 2.2. | General commercial description(s) | : Rear group lamp |
| 3. | Means of identification of type if marked on the vehicle/component/STU | : Letters and digits |
| 3.1. | Location of that marking | : Mould on the Lens |
| 4. | Name and address of the manufacturer | : |
| 5. | In the case of components and separate technical units, location and method of affixing of the approval mark | : Mould on the Lens |
| 6. | Address(es) of assembly plant(s) | : |
| 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 12V/ 24V-pos./neg. ground ⁽¹⁾ |
| 10. | Charger: on board/external | : N/A |
| 11. | Charging current: DC/AC (number of phases/frequency) | : N/A |
| 12. | Maximal nominal current (in each mode if necessary) | : N/A |
| 13. | Nominal charging voltage | : N/A |
| 14. | Basic ESA interface functions: ex. L1/L2/L3/N/PE/control pilot | : N/A |
| 15. | Minimum R _{sce} value (see paragraph 7.11. of this Regulation) | : N/A |
| 16. | Statement for model difference (if applicable) | : The function performed by the ESA or The general arrangement of the electrical and/or electronic components, if applicable. |

	Type:
	Information Document No.:
	Date: December 20, 2017
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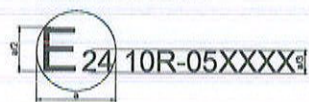
List of attachments:

Assembly Drawing	Drawing No. 1
Explosive view	Drawing No. 2
Circuit Diagram	Drawing No. 3-4
PCB Layout	Drawing No. 5-6
Bill of materials	Consists of 3 pages
Variant list	Consists of 2 pages

	Type:
	Information Document No.:
	Date: December 20, 2017
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Approval mark



a=6mm min

Approval mark

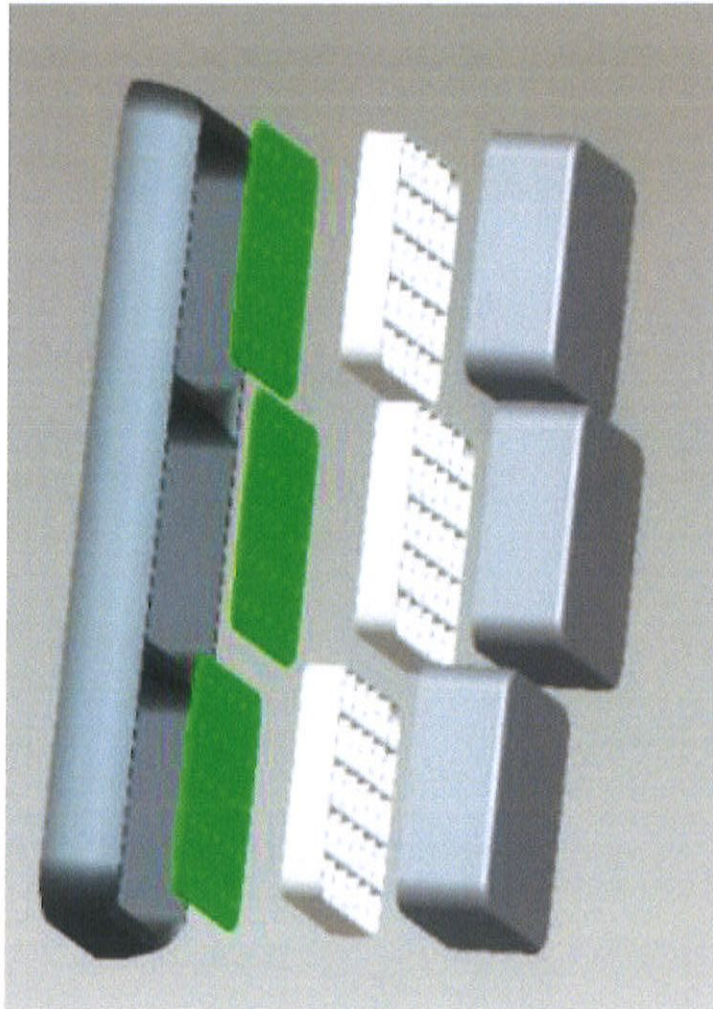
XXXX means an approval number, please refer to the certificate.

Drawing No. 1

Assembly Drawing

E24*10R05/01*2429*00

	Type:
	Information Document No.:
	Date: December 20, 2017
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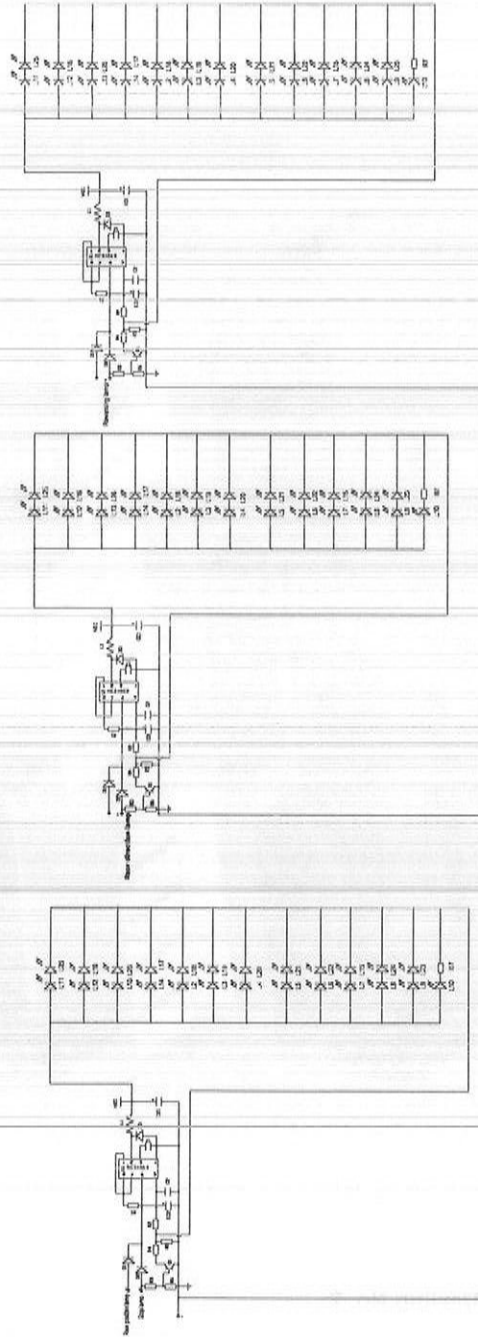


Drawing No. 2

Explosive view

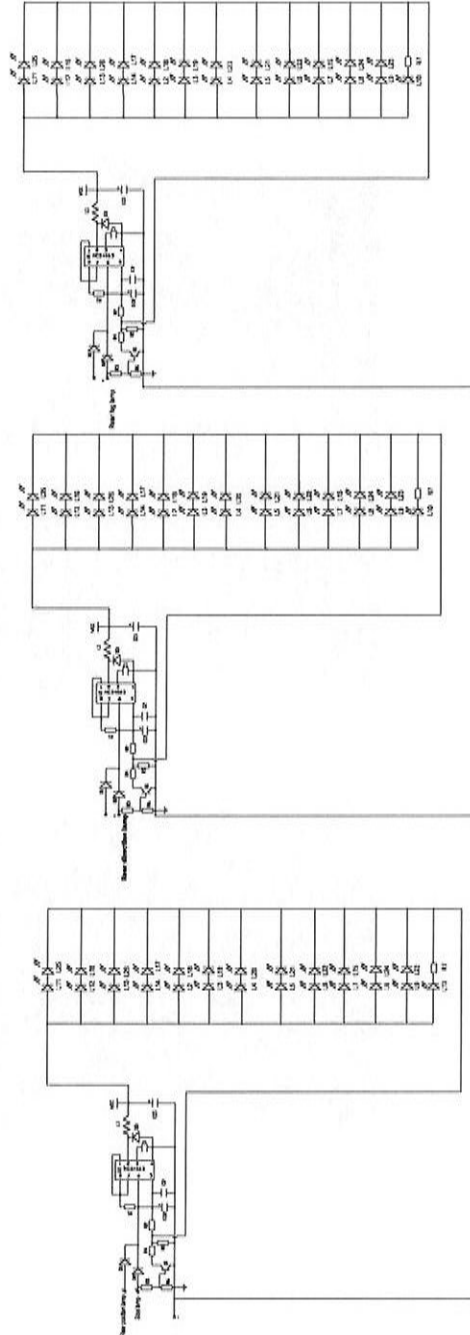
E24*10R05/01*2429*00

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Drawing No. 3

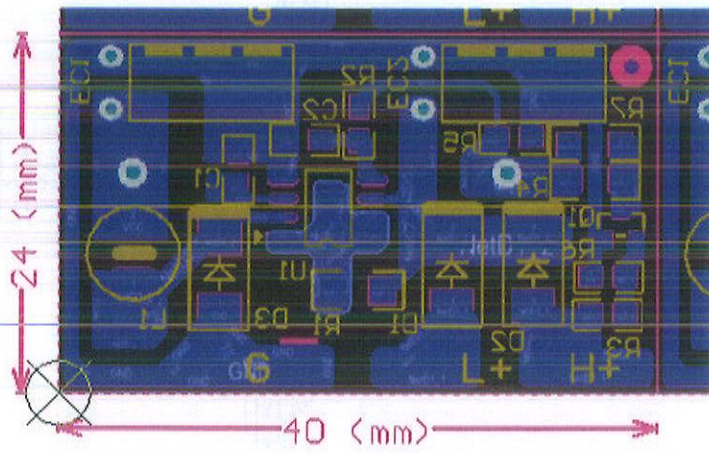
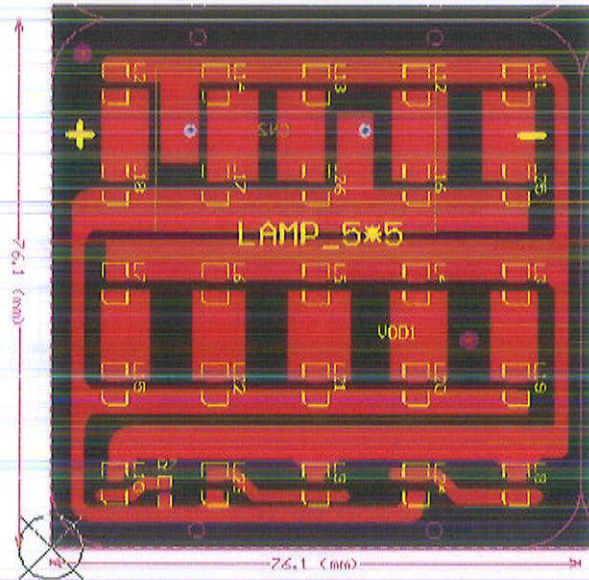
Circuit Diagram



Drawing No. 4

Circuit Diagram

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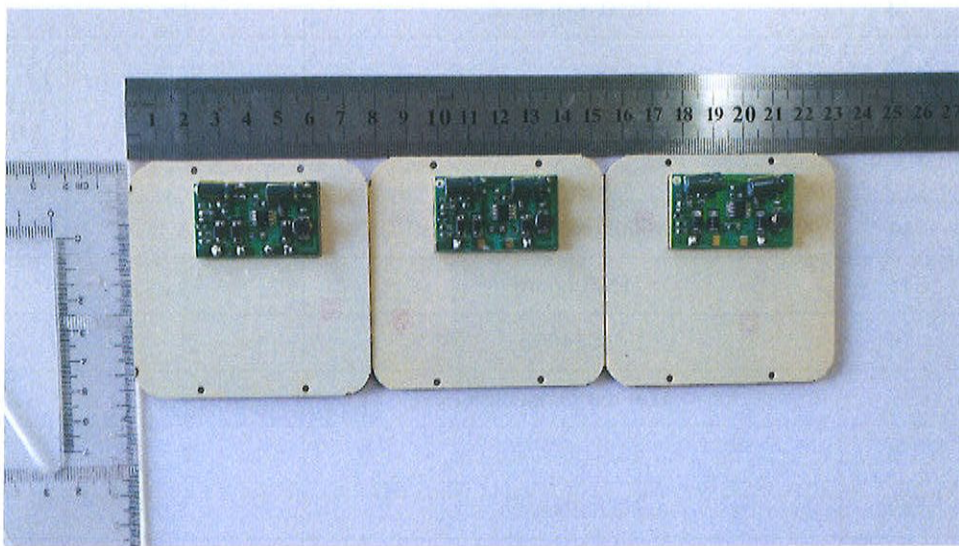
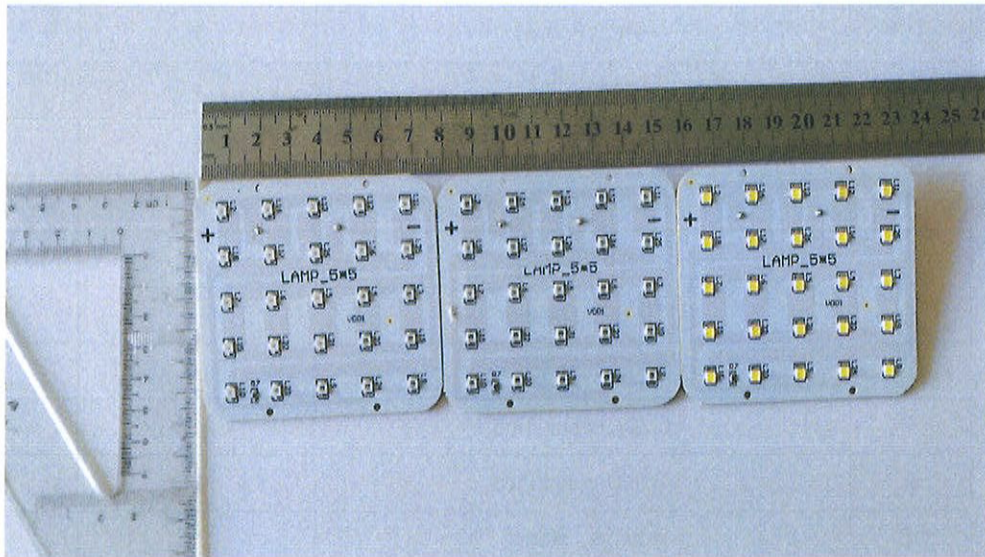


Drawing No. 5

PCB Layout

E24*10R05/01*2429*00

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Drawing No. 6

PCB Layout

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Bill of Material			
Item No.	Specification/Description	QTY (PC)	Position
1	PCB board	1	--
2	MC34063	1	U1
3	47µF/50V capacitor	2	EC1, EC2
4	SS8050 triode	1	Q1
5	IN5819 diode	3	D2, D3
6	100pF capacitor	1	C1
7	100uF capacitor	1	C2
8	0.39Ω resistance	1	R1
9	4.7KΩ resistance	3	R2, R3, R6
10	4.3Ω resistance	1	R4
11	39Ω resistance	1	R5
12	300Ω resistance	1	R7
13	2835RLED Lamp beads	25	L2, L3, L4, L5, L6, L7, L8, L9, L10, L11, L12, L13, L14, L15, L16, L17, L18, L19, L20, L21, L22, L23, L24, L25, L26
14	100uH inductance	1	L1
15	PCB board	1	--
16	MC34063	1	U1
17	47µF/50V capacitor	2	EC1, EC2
18	SS8050 triode	1	Q1
19	IN5819 diode	3	D2, D3
20	100pF capacitor	1	C1

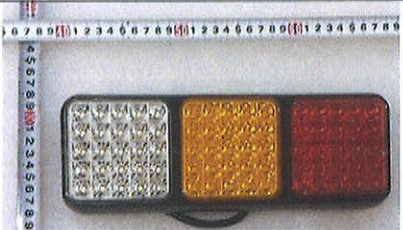
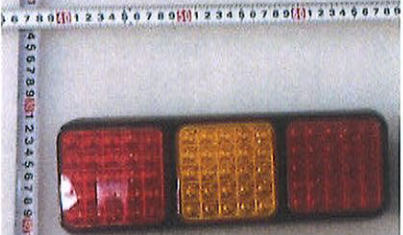


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21	100nF capacitor	1	C2
22	0.39Ω resistance	1	R1
23	4.7KΩ resistance	3	R2, R3, R6
24	3.3Ω resistance	1	R4
25	39Ω resistance	1	R5
26	300Ω resistance	1	R7
27	2835RLED Lamp beads	25	L2, L3, L4, L5, L6, L7, L8, L9, L10, L11, L12, L13, L14, L15, L16, L17, L18, L19, L20, L21, L22, L23, L24, L25, L26
28	CD54_100uH inductance	1	L1
29	PCB board	1	--
30	MC34063	1	U1
31	47μF/50V capacitor	2	EC1, EC2
32	SS8050 triode	1	Q1
33	IN5819 diode	3	D2, D3
34	100pF capacitor	1	C1
35	100nF capacitor	1	C2
36	0.39Ω resistance	1	R1
37	4.7KΩ resistance	3	R2, R3, R6
38	3.3Ω resistance	1	R4
39	39Ω resistance	1	R5
40	300Ω resistance	1	R7

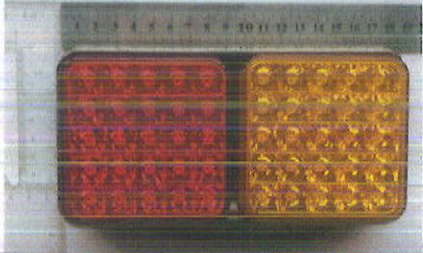
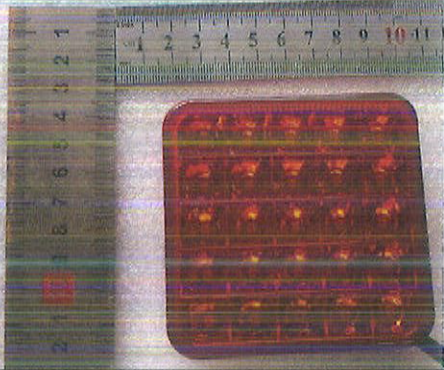
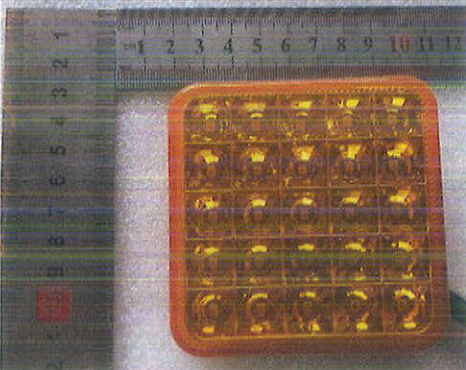
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41	2835RLED Lamp beads	25	L2, L3, L4, L5, L6, L7, L8, L9, L10, L11, L12, L13, L14, L15, L16, L17, L18, L19, L20, L21, L22, L23, L24, L25, L26
42	CD54_100uH inductance	1	L1
43	PCB board	1	--
44	MC34063	1	U1
45	47µF/50V capacitor	2	EC1, EC2
46	SS8050 triode	1	Q1
47	IN5819 diode	3	D2, D3
48	100pF capacitor	1	C1
49	100nF capacitor	1	C2
50	0.39Ω resistance	1	R1
51	4.7KΩ resistance	3	R2, R3, R6
52	3.3Ω resistance	1	R4
53	39Ω resistance	1	R5
54	300Ω resistance	1	R7
55	2835RLED Lamp beads	25	L2, L3, L4, L5, L6, L7, L8, L9, L10, L11, L12, L13, L14, L15, L16, L17, L18, L19, L20, L21, L22, L23, L24, L25, L26
56	CD54_100uH inductance	1	L1

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Variant list		
No.	Variant	Differences description
1		
2		
3		
4		

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5		
6		
7		

⁽¹⁾ Strike out what does not apply.