

NSAI

ECE TYPE-APPROVAL CERTIFICATE

	Issued by:	Name of Administration: National Standard Authority of Ireland 1 Swift Square, Northwood, Santry, Dublin 9, Ireland D09 A0E4	
	Concerning ² :	Approval granted Approval extended Approval refused Approval withdrawn Production definitely discontinued	
Of a type of lamp pursuant to UN Regulation No. 148			
Lamp: ²	Rear registration plate illuminating lamp Direction indicator lamp Stop lamp Position lamp End-outline marker lamp Reversing lamp Manoeuvring lamp Rear fog lamp Parking lamp Daytime running lamp Side marker lamp		
Category of the lamp:	<i>MR, MS</i>	Change index:	<i>0</i>
Approval No:	<i>E24*148R00/03*0189*00</i>	Unique Identifier (UI) (If applicable)	

¹ Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in this Regulation).

² Strike out what does not apply.



Approval No: **E24*148R00/03*0189*00**

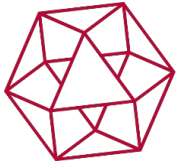
1. Trade name or mark of the lamp: **CHCHENGHAO**
2. Manufacturer's name for the type of lamp: **CH-2004**
Version(s): **N/A**
3. Manufacturer's name and address: **Changzhou Chenghao Vehicle Lamps Co., Ltd.
No. 519, Hanjiang West Road, Xinbei District, Changzhou Jiangsu, China**
4. If applicable, name and address of manufacturer's representative: **N/A**
5. Submitted for approval on: **08.03.2022**
6. Technical service responsible for conducting approval tests: **ISOQA Technical Service Co., Ltd.
60, Yong Long Road,
41257 Da-Li, Taichung
Taiwan**
7. Date of test report issued by that service: **02.03.2022**
8. Number of report issued by that service: **ISOQA-22-0052-R148-MRMS**
9. Concise description:
 - 9.1. In case of
 - 9.1.1. A rear-registration plate illuminating lamp:

Geometrical conditions of installation (position(s) and inclination(s) of the device in relation to the space to be occupied by the registration plate and/or different inclinations of this space): **N/A**
 - 9.1.2. A direction indicator:

Sequential activation of light sources: yes/no² **N/A**
 - 9.1.3. A reversing lamp:

The lamp shall be installed on a vehicle only as part of a pair of lamps: yes/no **N/A**
 - 9.1.4. A manoeuvring lamp:

The maximum mounting height: **N/A**



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9.1.5. A daytime running lamp

Maximum luminous intensity does not exceed 700 cd: *N/A*

9.2. By light signalling function and category:

*Rear Position Lamp, Category MR
Stop Lamp, Category MS*

For mounting either outside or ~~inside or both~~² *Outside*

Colour of light emitted: red/~~white/amber/colourless~~² *Red*

Number, category and kind of light source(s): *One non-replaceable light source (10 LEDs connected as 1 light source)*

Lamp approved for LED substitute light source(s): *No*

If yes, category of LED substitute light source(s) *N/A*

Voltage and Wattage: *MR: 12 V, 0.05 W / MS: 12 V, 0.77 W*

Light source module: ~~yes~~/no² *No*

Light source module specific identification code: *N/A*

Only for limited mounting height of equal to or less than 750 mm above the ground, if applicable: ~~yes~~/no² *No*

Geometrical conditions of installation and relating variations (if any): *Reference axis parallel to the median longitudinal plane of the vehicle and parallel to the bearing plane of the vehicle on the road (see drawings)*

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

(a) being part of the lamp: ~~yes~~/no² *N/A*

(b) being not part of the lamp: ~~yes~~/no² *N/A*

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

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 if applicable: ~~yes~~/no *No*

Function(s) produced by an interdependent lamp forming part of an interdependent lamp system, if applicable: *No*

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9.3 The ~~front position lamp~~², rear position lamp², stop lamp², ~~end-outline marker lamp~~², daytime running lamp² is only for use on a vehicle fitted with a tell-tale indicating failure: yes/~~no~~²

Yes

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. Approval granted for devices to be used on vehicles already in use only, yes/~~no~~²

No

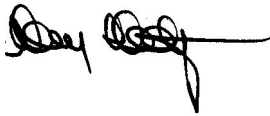
14. Place:

Dublin

15. Date:

25th March, 2022

16. Signature:



17. The list of documents deposited with the Type Approval Authority which has granted approval is annexed to this communication and may be obtained on request.



Approval No: E24*148R00/03*0189*00

Index to the Information Package

Date of issue:	<i>25th March, 2022</i>
Date of latest amendment:	<i>N/A</i>
Reason for extension/revision:	<i>N/A</i>
1. Additional conditions, and advisory notes on legal alternatives	
2. Test report(s)	
- numbers(s):	<i>ISOQA-22-0052-R148-MRMS</i>
- date of issue:	<i>02.03.2022</i>
- date of latest amendment:	<i>N/A</i>
3. Information document	
- number(s):	<i>ISOQA-22-0052-Appendix 1_Information Document</i>
- date of issue:	<i>19.01.2022</i>
- date of latest amendment:	<i>N/A</i>
Documentation:	<i>15 pages</i>



Approval No: E24*148R00/03*0189*00

Appendix: Additional conditions, and advisory notes on legal alternatives

A: Additional conditions:

1. The lamp, Type CH-2004 shall be marked as prescribed by the regulation.
2. Fitting instructions shall be supplied with each lamp, giving details of any limitations in the use of the lamp.
3. The lamp should be fitted in accordance with the fitting instructions.
4. The attached technical report, with any of its attachments, forms part of this Type Approval certificate.
5. Each individual product 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.
6. Changes in the product 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.
7. This Type Approval will expire when it is surrendered by the holder, or withdrawn by NSAI, or when the approved type of product 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.
8. NSAI may at any time check the correct performance of the duties imposed by the grant of this Type Approval, and in order to do so, may make tests, or have tests made.
9. 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 the NSAI.
10. The duties imposed by the issuing of this certificate are not transferable. The legal protection of third parties is not affected by this certificate.
11. When the manufacture or sale of the vehicle, 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

Test Report No. : ISOQA-22-0052-R148-MRMS

Approval No. : E24*148R00/03*0189*00
Type : CH-2004
Manufacturer : Changzhou Chenghao Vehicle Lamps Co., Ltd.

TEST REPORT

Concerning the Adoption of Harmonized Technical United Nations Regulations for 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 United Nations Regulations

Uniform provisions concerning the approval of light-signalling devices (lamps) for power-driven vehicles and their trailers

Tested according to ECE-R148, supplement 03 to original version of amendments of 30 September 2021

Kind of device:

- Rear Position Lamp, Category MR
- Stop Lamp, Category MS

Approval Status	
X	Application for granting of a type approval
	Application for an extension of type approval No.: Reason for the extension:

Test Report No. : ISOQA-22-0052-R148-MRMS

Approval No. : E24*148R00/03*0189*00
Type : CH-2004
Manufacturer : Changzhou Chenghao Vehicle Lamps Co., Ltd.

0. General

- 0.1. Make (trade name of manufacturer) : CHCHENGHAO
- 0.2. Type : CH-2004
- 0.3. Version / Variant : ---
- 0.4. Manufacturer's name and address : Changzhou Chenghao Vehicle Lamps Co., Ltd.
No. 519, Hanjiang West Road, Xinbei District,
Changzhou Jiangsu,
China
- 0.4.1 Name and address of manufacturer's representative : ---
- 0.5. Test laboratory : ISOQA Technical Service Co., Ltd.
60, Yong Long Road,
41257 Da-Li, Taichung
Taiwan

Test Report No. : ISOQA-22-0052-R148-MRMS

Approval No. : E24*148R00/03*0189*00
 Type : CH-2004
 Manufacturer : Changzhou Chenghao Vehicle Lamps Co., Ltd.

1. Test Object (s)

1.1. Information :

Material of Outer Lens	PC		
Material of Housing	ABS		
Material of Reflector	ABS		
Rated Voltage	12 V		
Rear Position Lamp	Category	MR	
	Light source	10 x LED, 12 V, 0.05W	
	Light source control gear	Type	No control gear
	Color of light emitted	Red	
	Color of outer lens	Clear	
	Visibility	The visibility angles are symmetrical, the horizontal arrow is not required.	
	Grouped with	---	
	Combined with	---	
	Incorporated with	Stop Lamp	
Stop Lamp	Category	MS	
	Light source	10 x LED, 12 V, 0.77W	
	Light source control gear	Type	No control gear
	Color of light emitted	Red	
	Color of outer lens	Clear	
	Grouped with	---	
	Combined with	---	
	Incorporated with	Rear Position Lamp	

1.2. Location of Marking : on the Lens, see drawing

1.3. Remark(s) :

1.3.1 There are no objections against the variants that may be described in the Information folder respectively the information document by the manufacturer because adversely effects are not expected.

The lamps are part of the same assembly of grouped, combined or reciprocally incorporated lamps. Each of these lamps satisfies the requirements of the relevant regulation.

1.3.2 Test sample(s) has been provided by the manufacturer as the representative(s) of the type to be approved. Unless otherwise indicated, the results apply to the sample(s) as received.

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Approval No. : E24*148R00/03*0189*00
Type : CH-2004
Manufacturer : Changzhou Chenghao Vehicle Lamps Co., Ltd.

2. Test Specification

- 2.1. Place of test : Laboratory of ISOQA in Taiwan
- 2.2. Date of test : 20 January 2022
- 2.3. Date of receipt of test device(s) : 20 January 2022
- 2.4. Test results :
- 2.4.1. Markings (according to paragraph 3.3 of R148-00)
- | | | |
|---|----------------|------------------------------|
| a. Trade name or mark | Complies | see Appendix 2 |
| b. Categories of replaceable light source(s) / replaceable light source module specific identification code | Not Applicable | non-replaceable light source |
| c. Space reserved for the UI or approval mark | Complies | see Appendix 2 |
| d. Rated voltage or range of voltage | Complies | see Appendix 2 |
| e. Marking on replaceable light source module | Not Applicable | |
| f. Marking on control gear | Not Applicable | |
- 2.4.2. General Specifications (according to paragraph 4.1 ~ 4.6 of R148-00)
- | | | |
|--|----------------|--|
| a. Conformity of specifications | Complies | |
| b. Design and construction for satisfactory operation | Complies | |
| c. Light sources : | | |
| - replaceable light source(s) | Not Applicable | |
| - light source modules | Not Applicable | |
| - non-replaceable filament light source(s) | Not Applicable | |
| d. Independent (marked 'D') and interdependent (marked 'Y') lamps | Not Applicable | |
| e. Grouped, combined, reciprocally incorporated lamps : | | |
| - rear position lamp reciprocally incorporated with a stop lamp | Complies | (b) Be intended for use in a vehicle equipped with a failure monitoring system |
| - front position lamp incorporates one or more infrared radiation generators | Not Applicable | |
| f. Failure of a single lamp containing more than one light source | Not Applicable | see 2.5.1 |
| g. Failure of the variable intensity control | Not Applicable | |

Test Report No. : ISOQA-22-0052-R148-MRMS

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Type : CH-2004
Manufacturer : Changzhou Chenghao Vehicle Lamps Co., Ltd.

- 2.4.3. Specific technical requirements (according to paragraph 5.2 and 5.5 of R148-00)
- | | | |
|---|----------|-----------|
| a. Light distribution | Complies | see 3.1 |
| b. Visibility | Complies | see 3.1 |
| c. Colour of the light emitted | Complies | see 3.2 |
| d. Reciprocally incorporated with a stop lamp | Complies | see 2.5.2 |

2.5. Remark (s)

2.5.1 According to manufacturer's technical description if one LED fails, all LEDs will fail, therefore they are considered to be one light source.

2.5.2 The minimum ratio of luminous intensities for the rear position lamp with respect to the stop-lamp is:
sample 1 : 6.71 Sample 2 : 5.44 (at least 5: 1)

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Approval No. : E24*148R00/03*0189*00
 Type : CH-2004
 Manufacturer : Changzhou Chenghao Vehicle Lamps Co., Ltd.

3.1.2 Stop Lamp

Function : Stop Lamp Category : MS
 Test Voltage : 13.5 V Light Source : 10 x LED
 Test Distance : 3.182 m Current : 0.057 A / 0.057 A

Test Point	Minimum (cd)	Maximum (cd)	Sample1			Sample2		
			1 min	30 min	n-1 ⁽¹⁾	1 min	30 min	n-1 ⁽¹⁾
10U - 5L	8	260	43.347	41.040	---	40.018	37.670	---
10U - 5R	8	260	62.264	58.950	---	23.786	22.390	---
5U - 20L	4	260	8.767	8.300	---	8.658	8.150	---
5U - 10L	8	260	28.000	26.510	---	39.105	36.810	---
5U - V	28	260	97.489	92.300	---	98.691	92.900	---
5U - 10R	8	260	43.812	41.480	---	25.316	23.830	---
5U - 20R	4	260	8.946	8.470	---	9.508	8.950	---
H - 10L	14	260	39.323	37.230	---	80.770	76.030	---
H - 5L	36	260	100.763	95.400	---	148.834	140.100	---
H - V	40	260	150.300	142.300	---	163.600	154.000	---
H - 5R	36	260	133.189	126.100	---	97.735	92.000	---
H - 10R	14	260	55.916	52.940	---	35.429	33.350	---
5D - 20L	4	260	8.323	7.880	---	10.422	9.810	---
5D - 10L	8	260	26.215	24.820	---	55.762	52.490	---
5D - V	28	260	60.131	56.930	---	86.889	81.790	---
5D - 10R	8	260	28.190	26.690	---	19.143	18.020	---
5D - 20R	4	260	8.693	8.230	---	7.393	6.959	---
10D - 5L	8	260	25.529	24.170	---	61.191	57.600	---
10D - 5R	8	260	25.793	24.420	---	31.158	29.330	---
Visibility ⁽²⁾	0.3	260	(0.727)	(0.688)	---	(0.685)	(0.645)	---
			166.944	158.058	---	165.917	156.181	---
Result			PASS	PASS	---	PASS	PASS	---

⁽¹⁾ Not Applicable; according to manufacturer's technical description if one LED fails, all LEDs will fail, therefore they are considered to be one light source.

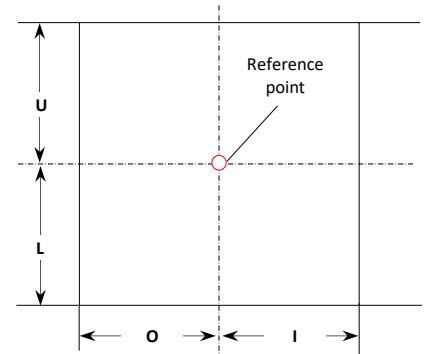
⁽²⁾ Minimum light-distribution angles - Vertical (above / below): 15° / 10° Horizontal (inboard / outboard): 45° / 45°

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Type : CH-2004
Manufacturer : Changzhou Chenghao Vehicle Lamps Co., Ltd.

4. Determination of the limits of the apparent surface according to paragraph 2.4 of ECE-R53

Boundry (mm)	Rear Position Lamp / Stop Lamp
Upper (U)	14
Lower (L)	19
Outside (O)	58
Inside (I)	58



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Approval No. : E24*148R00/03*0189*00
Type : CH-2004
Manufacturer : Changzhou Chenghao Vehicle Lamps Co., Ltd.

5. Communication

Concerning : Approval Granted of a type of device pursuant to Regulation No. 148
Approval No. : E24*148R00/03*0189*00 Unique Identifier (UI): -- Extension No.: 00
Category of the Lamp : Rear Position Lamp (MR) / Stop Lamp (MS) Change index : 0

5.1. Incase of

- 5.1.1. A rear-registration plate illuminating lamp : No
Geometrical conditions of installation (position(s) and inclination(s) of the device in relation to the space to be occupied by the registration plate and/or different inclinations of this space) : Not Applicable
- 5.1.2 A direction indicator : No
Sequential activation of light sources : Not Applicable
- 5.1.3 A reversing lamp : No
The lamp shall be installed on a vehicle only as part of a pair of lamps : Not Applicable
- 5.1.4 A manoeuvring lamp : No
The maximum mounting height : Not Applicable
- 5.1.5 A daytime running lamp : No
Maximum luminous intensity does not exceed 700 cd : Not Applicable
- 5.2 By light signalling function and category : Rear Position Lamp, Category MR
Stop Lamp, Category MS
For mounting either outside or inside or both : Outside
Color of light emitted : Red
Number, category and kind of light source(s) : One non-replaceable light source (10 LEDs connected as 1 light source)
Lamp approved for LED substitute light source(s) : No
If yes, category of LED substitute light source(s) : Not Applicable
Voltage and wattage : MR: 12 V, 0.05 W / MS: 12 V, 0.77 W
Light source module : No
Light source module specific identification code : Not Applicable

Test Report No. : ISOQA-22-0052-R148-MRMS

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Type : CH-2004
Manufacturer : Changzhou Chenghao Vehicle Lamps Co., Ltd.

Only for limited mounting height of equal to or less than 750mm above the ground	:	No
Geometrical conditions of installation and relating variations, if any	:	Reference axis parallel to the median longitudinal plane of the vehicle and parallel to the bearing plane of the vehicle on the road (see drawing).
Application of an electronic light source control gear/variable intensity control	:	No
(a) being part of the lamp	:	Not Applicable
(b) being not part of the lamp	:	Not Applicable
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	:	No
Function(s) produced by an interdependent lamp forming part of an interdependent lamp system	:	No
5.3. The front position lamp , rear position lamp, stop lamp, end-outline marker lamp is only for use on a vehicle fitted with a tell-tale indicating failure	:	Yes
5.4. Position of the approval mark	:	On the lens
5.5. Reason(s) for extension (if applicable)	:	Not Applicable
5.6. Approval granted for devices to be used on vehicles already in use only	:	No

Test Report No. : ISOQA-22-0052-R148-MRMS

Approval No. : E24*148R00/03*0189*00
Type : CH-2004
Manufacturer : Changzhou Chenghao Vehicle Lamps Co., Ltd.

6. Appendices

Appendix 1	Information Document	1	page(s) in total
Appendix 2	Drawing	1	page(s) in total

7. Statement of Conformity

The information folder respectively information document by the manufacturer and the type described therein are in compliance with the Test Specification mentioned above.

The decision rule is inherent in the requested specification or standard, a further consideration of the level of risk and MU is not necessary.

Duplication and publishing in extracts of the Test Report, including the Appendices, is allowed only by written permission of the Test Laboratory.

Opinions and interpretations and worst-case scenario, if any, will be indicated below.

ISOQA Technical Service Co., Ltd.

Place : Taichung, Taiwan

Date : 02 March 2022

Signature



Laboratory Manager - Chih-Hua Chang

This test report has been signed by Chih-Hua Chang using a qualified digital signature.

Changzhou Chenghao Vehicle Lamps Co., Ltd.

No. 519, Hanjiang West Road, Xinbei District,
Changzhou Jiangsu, China

TEL: 86-519-85511299

FAX: 86-519-85511399

INFORMATION

for Initial Application

Date: 2022/1/19

Manufacturer's Name and Address	Changzhou Chenghao Vehicle Lamps Co., Ltd. No. 519, Hanjiang West Road, Xinbei District, Changzhou Jiangsu, China	
Trade name or mark	CHCHENGHAO	
Type Name	CH-2004	
Material of Lens(es)	PC	
Rate Voltage	12 V	
Rate Wattage	see below	
Rear Position Lamp (R148.00)	Category	MR
	Light Source	10 x LED, 12 V, 0.05W
		(if anyone LED fails, all LEDs fail)
	Light Source Control Gear	No Control Gear
	Color of light emitted	Red
	Color of lens	Clear
Stop Lamp (R148.00)	Category	MS
	Light Source	10 x LED, 12 V, 0.77W
		(if anyone LED fails, all LEDs fail)
	Light Source Control Gear	No Control Gear
	Color of light emitted	Red
	Color of lens	Clear

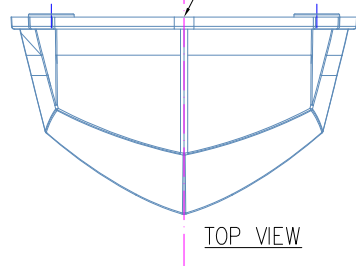
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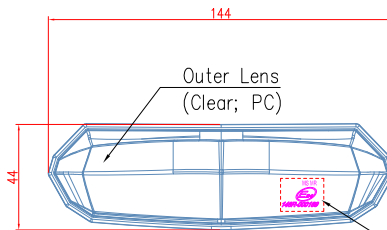
4

Reference axis
Parallel to the median longitudinal plane of the vehicle



DRIVING DIRECTION

TOP VIEW



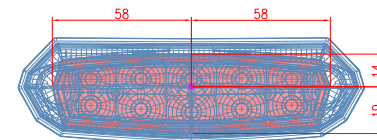
Outer Lens
(Clear; PC)

Marking

MS MR

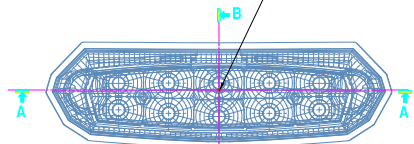
E24

148R-000189

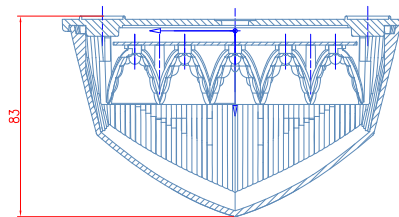


Rear position Lamp / Stop Lamp
Apparent Surface

Center of Reference
Rear position Lamp
(10 x LED's, 12V, 0.05W)
Stop Lamp
(10 x LED's, 12V, 0.77W)

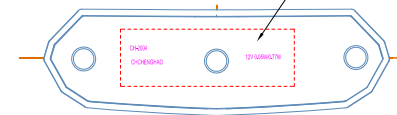


FRONT VIEW

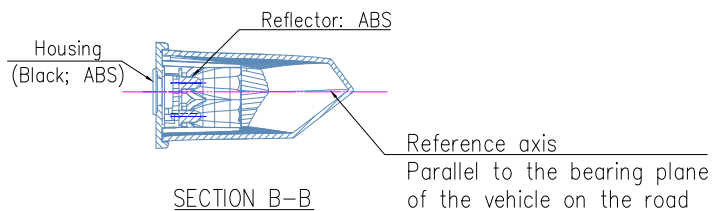


SECTION A-A

Marking on Housing:
Trade mark:
CHCHENGHAO
CH-2004
12V 0.05W / 0.77W



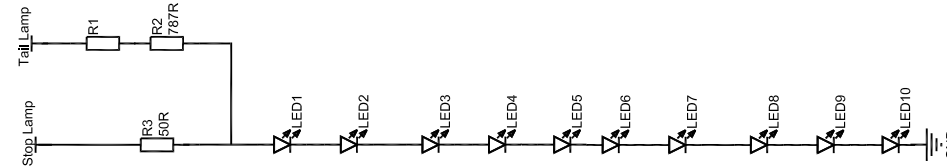
REAR VIEW



SECTION B-B

Reference axis
Parallel to the bearing plane of the vehicle on the road

Circuit Diagram :



Changzhou Chenghao Vehicle Lamps Co.,Ltd.

Type Name CH-2004

Function Rear position Lamp / Stop Lamp

Unit mm