



ECE TYPE-APPROVAL CERTIFICATE

Communication concerning:²

Approval granted
~~Approval extended~~
~~Approval refused~~
~~Approval withdrawn~~
~~Production definitely discontinued~~

of a type of reversing lamp/manoeuvraing lamp pursuant to Regulation No. 23

Approval No: **E24*23R00/21*0288*00**

Reason(s) for extension:

N/A

1. Trade name or mark of the device:



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

ZK-01-009

Version(s):

Two:
Variant 1: ZK-01-009;
Variant 2: ZK-01-008

3. Manufacturer's name and address:

**Changzhou Zhongkai Vehicle Parts Co.,
 Ltd.
 Menghe Avenue, Henghe Town, Xinbei
 District, Changzhou City, Jiangsu
 Province
 P.C.: 213001**

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

N/A

5. Submitted for approval on:

10.01.2018

6. Technical service responsible for conducting approval tests:

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

7. Date of test report issued by that service:

04.01.2018

8. Number of report issued by that service:

17-01934-CX-SHA-00


Approval No: E24*23R00/21*0288*00

| | | |
|----|--|---|
| 9. | Concise description: | <i>Reversing lamp</i> |
| | Number, category and kind of light source(s): | <i>Reversing lamp</i> |
| | Voltage and wattage: | <i>24V and 21W</i> |
| | Application of an electronic light source control gear: | |
| | (a) being part of the lamp: yes / no ² | <i>N/A</i> |
| | (b) being not part of the lamp: yes / no ² | <i>N/A</i> |
| | Input voltage(s) supplied by an electronic light source control gear: | <i>N/A</i> |
| | Electronic light source control gear manufacturer and identification number (when the light source control gear is part of the lamp but is not included into the lamp body): | <i>N/A</i> |
| | Light source module: yes / no ² | <i>No</i> |
| | Light source module specific identification code: | <i>N/A</i> |
| | Geometrical conditions of installation and relating variations (if any): | <i>See manufacturer's information document</i> |
| | For a type of manoeuvring lamp pursuant to Regulation No. 23 paragraph 6.2.2. | |
| | Maximum mounting height: | <i>N/A</i> |
| | The lamp is only for use on a vehicle fitted with a tell-tale indicating failure: yes / no ² | <i>No</i> |

¹ Distinguishing number of the country which has granted/refused/withdrawn approval (see approval provisions in the Regulation).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

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10. Position of the approval mark: *See drawings of the information folder*
11. Comments:
In the case of a reversing lamp, this device shall be installed on a vehicle only as part of a pair of devices: yes/~~no~~² *Yes*
12. Reason(s) for extension (if applicable): *N/A*
13. Approval granted/~~extended/refused/withdrawn~~² *Granted*
14. Place: *Dublin*
15. Date: *29th January, 2018*
16. Signature: 



17. 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: | <i>29th January, 2018</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>17-01934-CX-SHA-00</i> |
| - date of issue: | <i>04.01.2018</i> |
| - date of latest amendment: | <i>N/A</i> |
| 3. Information document | |
| - number(s): | <i>ZK-01-009-00</i> |
| - date of issue: | <i>14.12.2017</i> |
| - date of latest amendment: | <i>N/A</i> |
| Documentation: | <i>13 pages</i> |

Approval No: E24*23R00/21*0288*00

Appendix: **Additional conditions, and advisory notes on legal alternatives**

A: Additional conditions:

1. The device, Type ZK-01-009 shall be marked as prescribed by the regulation.
2. Fitting instructions shall be supplied with each device, giving details of any limitations in the use of the device.
3. The device 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.

TECHNICAL REPORT

No.: 17-01934-CX-SHA-00

Test according to ECE regulation relating to

Reversing lamp

ECE Regulation No.: 23


supplement 21 to the 00 series of amendments

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

Technical Report No.: 17-01934-CX-SHA-00
Manufacturer: Changzhou Zhongkai Vehicle Parts Co., Ltd.
Type: ZK-01-009

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I. Technical description

- 0.1. Make (trade name of manufacturer) : 
- 0.2. Type : ZK-01-009
- 0.2.1. Variants : Variant 1: ZK-01-009;
Variant 2: ZK-01-008
- 0.3. Means of identification of type : By digits and letters
- 0.4. Concise description
- Category : Reversing lamp
- Number, category and kind of light source(s) : 1*P21W
- Voltage and wattage : 24V and 21W
- Application of an electronic light source control gear/variable intensity control : N/A
- Being part of the lamp : N/A
- Being not part of the lamp : N/A
- Input voltage(s) supplied by an electronic light source control gear : N/A
- Electronic light source control gear manufacturer and identification number (when the light source gear is part of the lamp but is not included into the lamp body) : N/A
- Light source module : No
- Light source module specific identification code : N/A
- Geometrical conditions of installation and relating variations, if any : See manufacturer's information document



Technical Report No.: 17-01934-CX-SHA-00
Manufacturer: Changzhou Zhongkai Vehicle Parts Co., Ltd.
Type: ZK-01-009

- For a type of manoeuvring lamp pursuant to Regulation number 23, paragraph 6.2.2. Maximum mounting height : N/A
- In the case of a reversing lamp, this device shall be installed on a vehicle only as a part of a pair of devices : Yes
- The lamp is only for use on a vehicle fitted with a tell-tale indicating failure : No
- 0.5. Name and address of manufacturer : Changzhou Zhongkai Vehicle Parts Co., Ltd.
Menghe Avenue, Henghe Town, Xinbei District, Changzhou City, Jiangsu Province
P.C.: 213001
- 0.8. Address of assembly plant : See 0.5.
- 0.9. Location of the approval mark : On the lens
- 0.10. If applicable, name and address of the manufacturer's representative : N/A

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Manufacturer: Changzhou Zhongkai Vehicle Parts Co., Ltd.
Type: ZK-01-009

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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.: 23.00.
- 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

Reversing lamps have been designed and constructed that in normal use, despite the vibration to which they may then be subjected, they continue to function satisfactorily and retain the characteristics prescribed by this regulation.
No light source module or light generator is used.

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2.2. Intensity of light emitted

2.2.1. Sample No. 1, test voltage 13.879V.

| No. | Point of the measurement | Limits [cd] | | Measured values [cd] | Conclusion |
|-----|--------------------------|-------------|---------|----------------------|------------|
| | | Min. | Max. | Sample No. 1 | |
| 1 | 10U-10L | 10.00 | 300.00 | 15.41 | Complies |
| 2 | 10U-V | 15.00 | 300.00 | 40.75 | Complies |
| 3 | 10U-10R | 10.00 | 300.00 | 25.29 | Complies |
| 4 | 5U-45R | 15.00 | 300.00 | 30.52 | Complies |
| 5 | 5U-10R | 20.00 | 300.00 | 73.86 | Complies |
| 6 | 5U-V | 25.00 | 300.00 | 88.62 | Complies |
| 7 | 5U-10L | 20.00 | 300.00 | 45.94 | Complies |
| 8 | H-30L | 25.00 | 300.00 | 43.20 | Complies |
| 9 | H-10L | 50.00 | 300.00 | 78.94 | Complies |
| 10 | H-V | 80.00 | 300.00 | 241.13 | Complies |
| 11 | H-10R | 50.00 | 300.00 | 186.26 | Complies |
| 12 | H-30R | 25.00 | 300.00 | 65.08 | Complies |
| 13 | H-45R | 15.00 | 300.00 | 42.33 | Complies |
| 14 | 5D-45R | 15.00 | 600.00 | 62.76 | Complies |
| 15 | 5D-30R | 25.00 | 600.00 | 116.87 | Complies |
| 16 | 5D-10R | 50.00 | 600.00 | 214.01 | Complies |
| 17 | 5D-V | 80.00 | 600.00 | 247.65 | Complies |
| 18 | 5D-10L | 50.00 | 600.00 | 122.73 | Complies |
| 19 | 5D-30L | 25.00 | 600.00 | 84.64 | Complies |
| 20 | below 5D | -- | 8000.00 | 259.67 | Complies |
| 21 | Above HH line | -- | 300.00 | 260.98 | Complies |
| 22 | Down H line Above 5D | -- | 600.00 | 265.50 | Complies |

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 Manufacturer: Changzhou Zhongkai Vehicle Parts Co., Ltd.
 Type: ZK-01-009

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2.2.2. Sample No. 2, test voltage 13.879V.

| No. | Point of the measurement | Limits [cd] | | Measured values [cd] | Conclusion |
|-----|--------------------------|-------------|---------|----------------------|------------|
| | | Min. | Max. | Sample No. 2 | |
| 1 | 10U-10L | 10.00 | 300.00 | 23.80 | Complies |
| 2 | 10U-V | 15.00 | 300.00 | 50.33 | Complies |
| 3 | 10U-10R | 10.00 | 300.00 | 31.43 | Complies |
| 4 | 5U-10R | 20.00 | 300.00 | 86.76 | Complies |
| 5 | 5U-V | 25.00 | 300.00 | 98.54 | Complies |
| 6 | 5U-10L | 20.00 | 300.00 | 74.21 | Complies |
| 7 | 5U-45L | 15.00 | 300.00 | 38.77 | Complies |
| 8 | H-45L | 15.00 | 300.00 | 45.85 | Complies |
| 9 | H-30L | 25.00 | 300.00 | 74.07 | Complies |
| 10 | H-10L | 50.00 | 300.00 | 190.62 | Complies |
| 11 | H-V | 80.00 | 300.00 | 248.43 | Complies |
| 12 | H-10R | 50.00 | 300.00 | 85.35 | Complies |
| 13 | H-30R | 25.00 | 300.00 | 53.05 | Complies |
| 14 | 5D-30R | 25.00 | 600.00 | 93.37 | Complies |
| 15 | 5D-10R | 50.00 | 600.00 | 130.95 | Complies |
| 16 | 5D-V | 80.00 | 600.00 | 250.49 | Complies |
| 17 | 5D-10L | 50.00 | 600.00 | 222.24 | Complies |
| 18 | 5D-30L | 25.00 | 600.00 | 125.78 | Complies |
| 19 | 5D-45L | 15.00 | 600.00 | 70.00 | Complies |
| 20 | below 5D | -- | 8000.00 | 264.22 | Complies |
| 21 | Above HH line | -- | 300.00 | 268.80 | Complies |
| 22 | Down H line Above 5D | -- | 600.00 | 272.87 | Complies |

Technical Report No.: 17-01934-CX-SHA-00
 Manufacturer: Changzhou Zhongkai Vehicle Parts Co., Ltd.
 Type: ZK-01-009

2.3. Colour - White

| Sample | Measured values | | Limits |
|--------|-----------------|--------|--|
| | x | y | |
| | | | W12 green boundary: $y = 0.150 + 0.640 x$ W23 yellowish green boundary: $y = 0.440$ W34 yellow boundary: $x = 0.500$ W45 reddish purple boundary: $y = 0.382$ W56 purple boundary: $y = 0.050 + 0.750 x$ W61 blue boundary: $x = 0.310$ |
| No. 1 | 0.4203 | 0.3863 | Complies |
| No. 2 | 0.4208 | 0.3866 | Complies |

2.4. Apparent surface

| Limit (I) | Limit (O) | Limit (U) | Limit (D) |
|-----------|-----------|-----------|-----------|
| 30mm | 30mm | 51mm | 51mm |

3. Specimen submitted to test on : 2017-12-14 (YYYY-MM-DD)
4. Place of test : Jiangsu Huachen Vehicle Inspection Co., Ltd., Zhenjiang City, P.R. China
- Date of test : 2017-12-19 (YYYY-MM-DD)

III. Enclosures

- Manufacturer's information document No. : ZK-01-009-00
- Dated on : 2017-12-14 (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, 2018-01-04
 (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 Authority of Ireland (NSAI) | Irland/ Ireland | Technical Service Number: 49 | |
| Vehicle Safety Certification Center (VSCC) | Taiwan/ Taiwan | DE04-06-2 | http://www.vsc.org.tw/English/Default.aspx |

Information folder No. : ZK-01-009-00

First application date : December 14, 2017

1. Specification data

| | | | | | | | | | | | |
|----------------------------|-------------------------------------|--|-----------------------------|--------------------|-------------------------------|---------------|--------------------|-------------------------------|----------------|----------------|------------------|
| Type | | ZK-01-009 | | | | | | | | | |
| Variant | | Variant 1: ZK-01-009 Variant 2: ZK-01-008 | | | | | | | | | |
| Function | | Rear group lamp | | | | | | | | | |
| | | Rear retro-reflector Device | Side retro-reflector Device | License plate lamp | Rear direction indicator lamp | Stop lamp | Rear position lamp | Rear end -outline marker lamp | Reversing lamp | Rear fog lamp | Side marker lamp |
| Color | | Red | Amber | Colorless | Amber | Red | Red | Red | White | Red | Amber |
| Rated | Voltage | -- | -- | 24V | 24V | 24V | 24V | 24V | 24V | 24V | 24V |
| | Wattage | -- | -- | 10W | 21W | 21W | 2*10W | 10W | 21W | 21W | 10W |
| Application Regulation ECE | | R3.02 Class IB | R3.02 Class IB | R4.00 Cat. 1b | R6.01 Cat. 2a | R7.02 Cat. S1 | R7.02 Cat. R1 | R7.02 Cat. RM1 | R23.00 AR | R38.00 Cat. F1 | R91.00 Cat. SM1 |
| Location of marking | Number and category of light source | -- | -- | R10W | P21W | P21W | 2*R10W | R10W | P21W | P21W | R10W |
| | Trade mark | Marked on housing  | | | | | | | | | |
| | Approval mark | Marked on lens | | | | | | | | | |
| | Remark | Sequential activation of light sources: No The lamp is only for use on a vehicle fitted with a tell-tale indicating failure: No | | | | | | | | | |

2. Construction and material

| Construction | Material | Remarks |
|-------------------|--------------------------------|--|
| Lens | AS | L.P.L.+R.L.: Clear S.D.+R.D.L.+S.M.L.: Amber R.D.+S.L.+R.P.L.+R.E.L.+R.F.L.: Red |
| Reflector | PP | AL vacuum vapour coating Painting on the inside surface Colour: Metal silver |
| Housing | ABS | Colour: Black |
| Electrical Wiring | Copper covered with insulation | -- |

3. Name and address of manufacturer

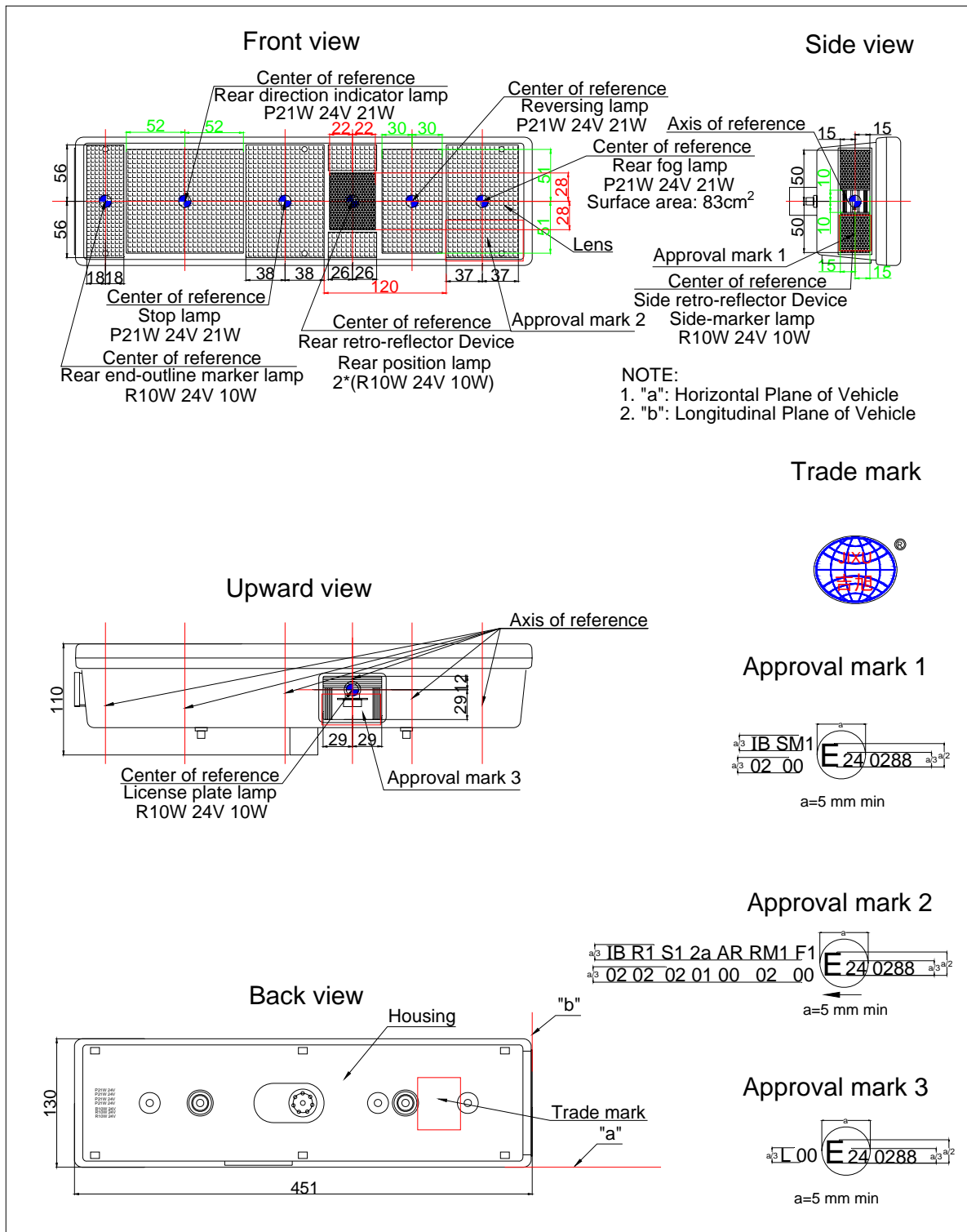
Changzhou Zhongkai Vehicle Parts Co., Ltd.
: Menghe Avenue, Henghe Town, Xinbei District,
Changzhou City, Jiangsu Province P.C.: 213001

4. Name and address of the assembly plant

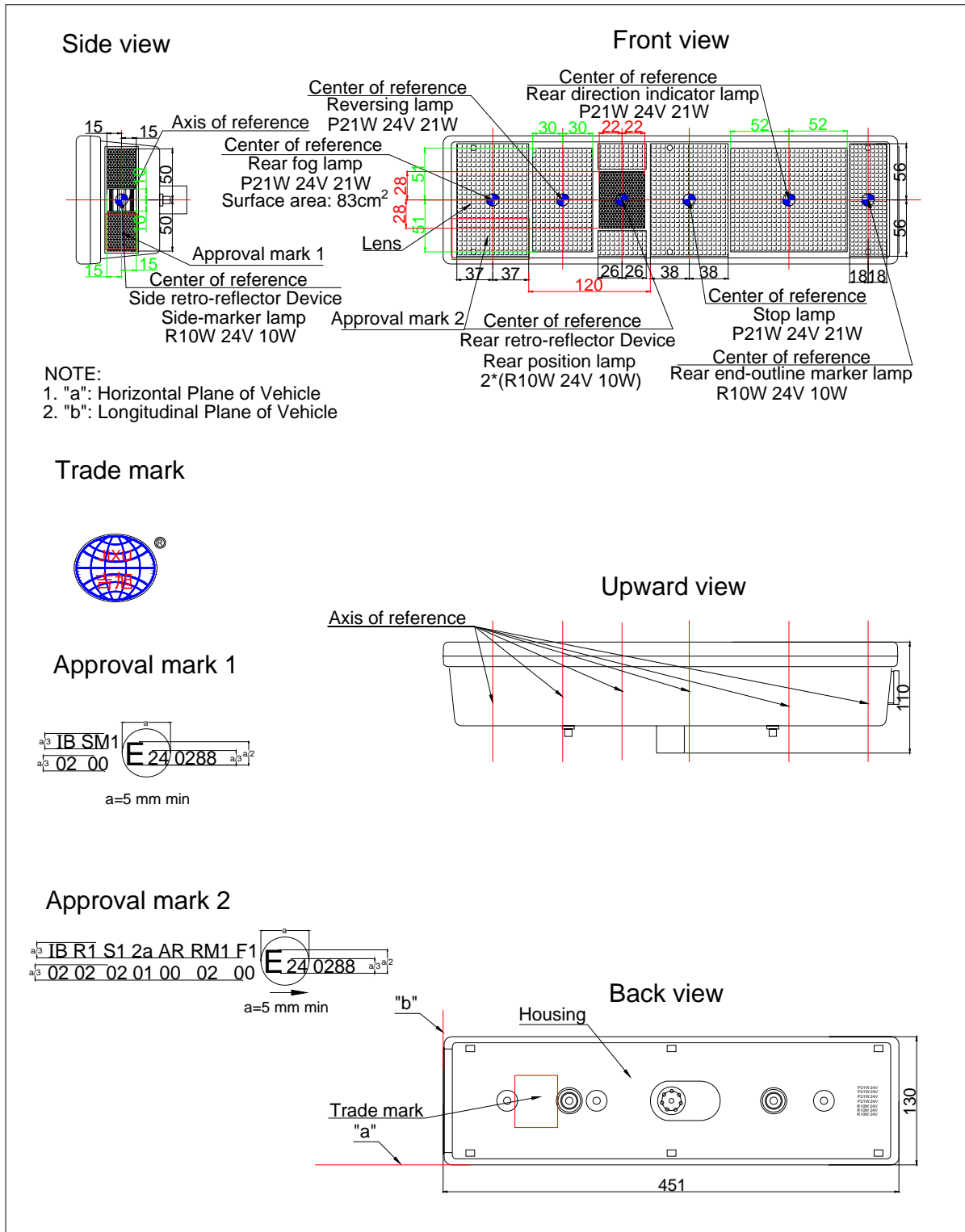
: See 3.

5. Name and address of the manufacturer's representative

: N/A



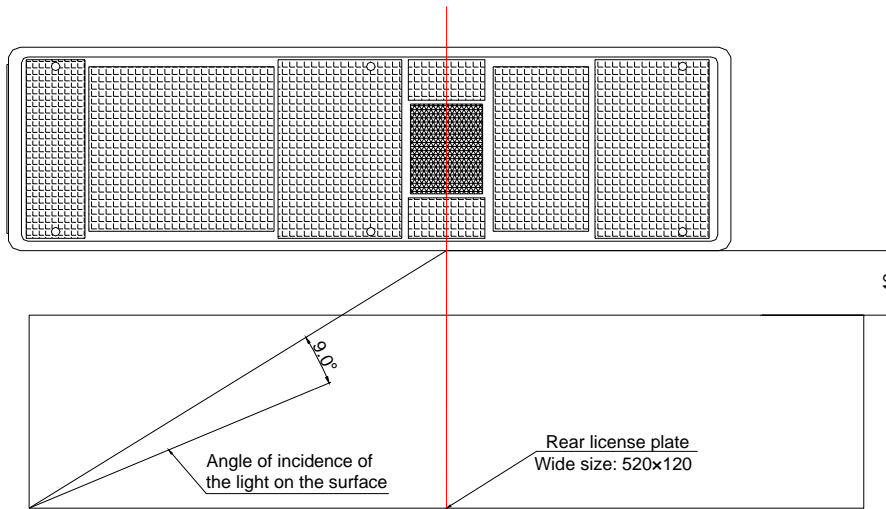
| | |
|--------------------------------------|--------------|
| Product Type | ZK-01-009 |
| General assembly drawing (Left side) | |
| Drawing No. | ZK-01-009-01 |



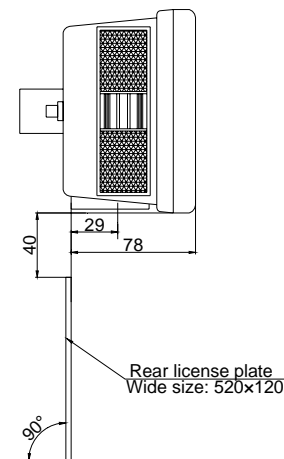
| | |
|---------------------------------------|--------------|
| Product Type | ZK-01-009 |
| General assembly drawing (Right side) | |
| Drawing No. | ZK-01-009-02 |

Installation requirements of rear license plate

Front view



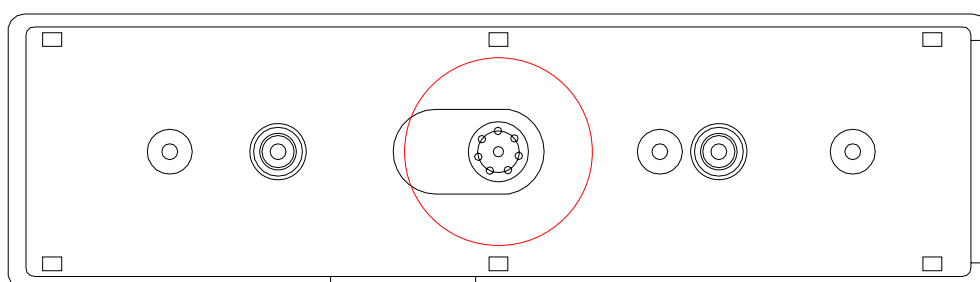
Side view



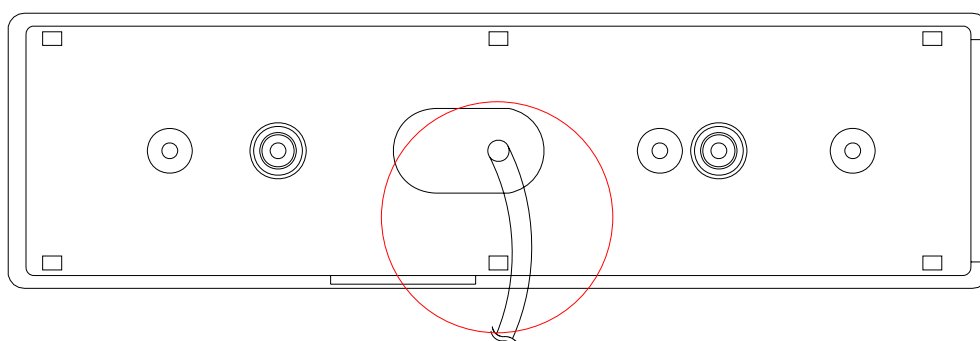
| | |
|---|--------------|
| Product Type | ZK-01-009 |
| Installation requirements of rear license plate | |
| Drawing No. | ZK-01-009-03 |

Back view

Variant 1



Variant 2



| | |
|--------------|--------------|
| Product Type | ZK-01-009 |
| Variant | |
| Drawing No. | ZK-01-009-04 |