


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- ~~approval withdrawn~~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 reversing lamp/~~manoeuvring lamp~~ ⁽¹⁾ pursuant to Regulation number 23.**Approval number: E4-23R-0024691****Extension number: 00**

1. Trade name or mark of the device : 
2. Manufacturer's name for the type of device : DF-TRS002-EU-A
3. Manufacturer's name and address : Zhejiang Dahao Automotive Co., Ltd.
Xiaotian Village, Duqiao Town, Linhai City,
Taizhou City, Zhejiang Province,
P.R. China 317000
4. If applicable, name and address of the manufacturer's representative : Not applicable
5. Submitted for approval on : 14 December 2015
6. Technical service responsible for conducting approval tests : TÜV SÜD Auto Service GmbH
Westendstraße 199
D-80686 München
7. Date of report issued by that service : 5 January 2016
8. Number of report issued by that service : 15-00895-CX-SHA-00



9. Concise description
- Number, category and kind of light source(s) : Not applicable (Lamp consist of 10 LEDs)
- Voltage and wattage : 12V/24V and 2.5W
- Application of an electronic light source control gear:
- (a) Being part of the lamp : ~~yes~~/no⁽¹⁾
- (b) Being not part of the lamp : ~~yes~~/no⁽¹⁾
- Input voltage(s) supplied by an electronic light source control gear : Not applicable
- 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) : Not applicable
- Light source module : ~~yes~~/no⁽¹⁾
- Light source module specific identification code : Not applicable
- Geometrical conditions of installation and relating variations, if any : See manufacturer's information document
- For a type of manoeuvring lamp pursuant to Regulation number 23, paragraph 6.2.2.
Maximum mounting height : Not applicable
10. Position of the approval mark : On the lens
11. Comments
- 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~~/no⁽¹⁾
12. Reason(s) for extension (if applicable) : Not applicable



13. Approval : granted/~~extended/refused/withdrawn~~⁽¹⁾
14. Place : Zoetermeer
15. Date : 11 January 2016
16. Signature :



K.J. van Steensel

17. The list of documents deposited with the Administrative Service which has granted approval is annexed to this communication and may be obtained on request.
- Information document: DF-TRS002-EU-A-00, 6 pages dated 14 December 2015

⁽¹⁾ Strike out what does not apply.


Zhejiang Dahao Automotive Co., Ltd.
Xiaotian Village, Duqiao Town, Linhai City,
Taizhou City, Zhejiang Province, P.R. China 317000

December 14, 2015

Dear Sirs,

We would like to apply for the type approval according to ECE.

Function	ECE approval number
Rear retro-reflector	E4-3R-0224691
Rear direction indicator lamp	E4-6R-0124691
Rear position lamp	E4-7R-0224691
Stop lamp	E4-7R-0224691
Reversing lamp	E4-23R-0024691
Rear fog lamp	E4-38R-0024691

Trade name or mark	:	
Manufacturer's name for type of device	:	DF-TRS002-EU-A
Name and address of manufacturer	:	Zhejiang Dahao Automotive Co., Ltd. Xiaotian Village, Duqiao Town, Linhai City, Taizhou City, Zhejiang Province, P.R. China 317000

We confirm that the above mentioned application has not been submitted to any other EC member state nor has any other member state granted a corresponding approval.

Sincerely




Mr. Wang Ping
Zhejiang Dahao Automotive Co., Ltd.



Information folder No. : DF-TRS002-EU-A-00

First application date : December 14, 2015

1. Specification data

Type		DF-TRS002-EU-A					
Function		Rear group lamp					
		Rear retro-reflector	Rear direction indicator lamp	Rear position lamp	Stop lamp	Reversing lamp	Rear fog lamp
Color		Red	Amber	Red	Red	White	Red
Rated	Voltage	--	12V/24V	12V/24V	12V/24V	12V/24V	12V/24V
	Wattage	--	1W	1.2W	2W	2.5W	4W
Application Regulation ECE		R3.02 Class IIIA	R6.01 Cat. 2a	R7.02 Cat. R1	R7.02 Cat. S1	R23.00 AR	R38.00 Cat. F1
Location of marking	Number and category of light source	--	6*LED	10*LED	6*LED	10*LED	8*LED
		Non-replaceable light source					
	Marked on housing						
	Trade mark						
		Marked on lens					
	Approval mark	Marked on lens					
Part No.	DF-TRS002-EU-B						

2. Construction and material

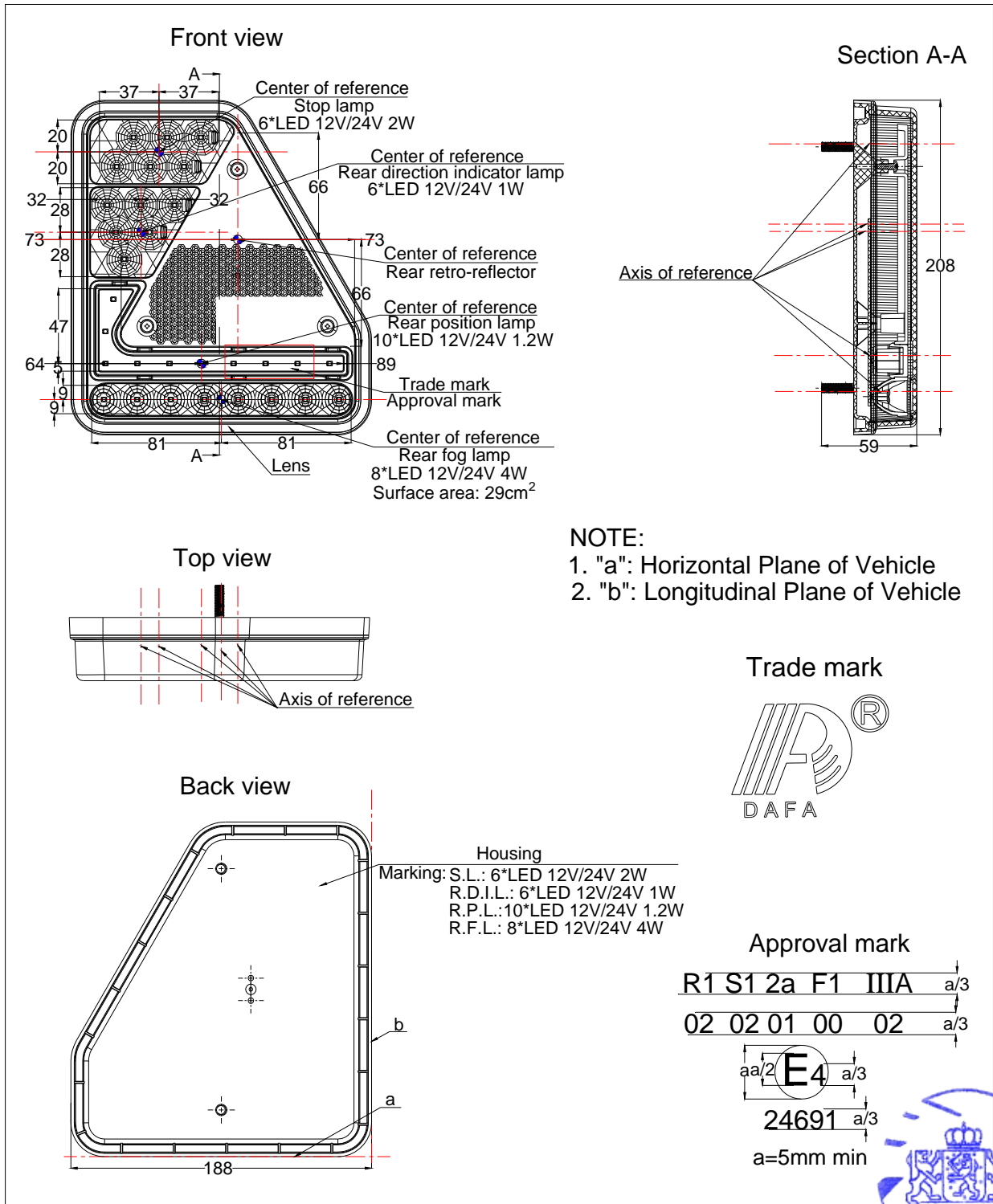
Construction	Material	Remarks
Lens	PMMA	Rear retro-reflector and Rear fog lamp: Red Rear direction indicator lamp: Amber Rear position lamp and Stop lamp: Red Reversing lamp: Clear
Inner lens	PMMA	Rear position lamp: Clear
Reflector	ABS	Painting on the inside surface Color: Metal silver
Housing	ABS	--
Electrical Wiring	Copper covered with insulation	--

3. Name and address of manufacturer : Zhejiang Dahao Automotive Co., Ltd.
Xiaotian Village, Duqiao Town, Linhai City,
Taizhou City, Zhejiang Province, P.R. China 317000

4. Name and address of the assembly plant: See 3.

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

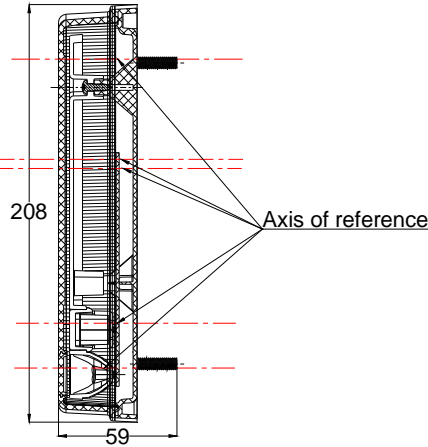




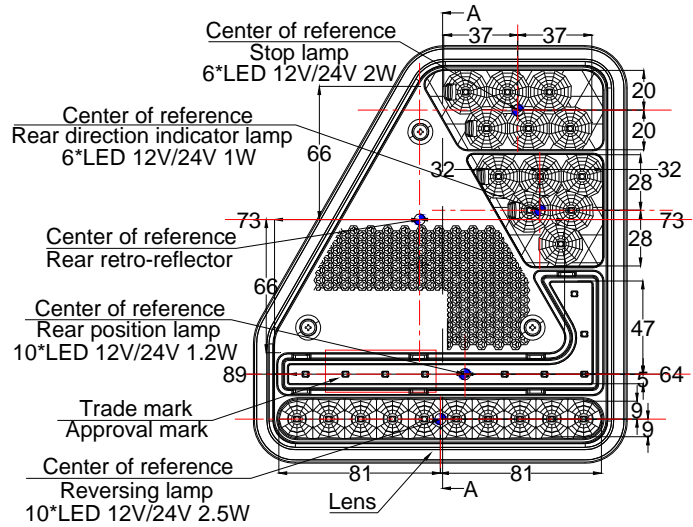
NOTE:
1. "a": Horizontal Plane of Vehicle
2. "b": Longitudinal Plane of Vehicle

Product Type	DF-TRS002-EU-A
General assembly drawing (Left side)	
Drawing No.	DF-TRS002-EU-A-01

Section A-A



Front view



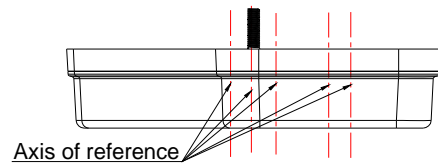
NOTE:

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

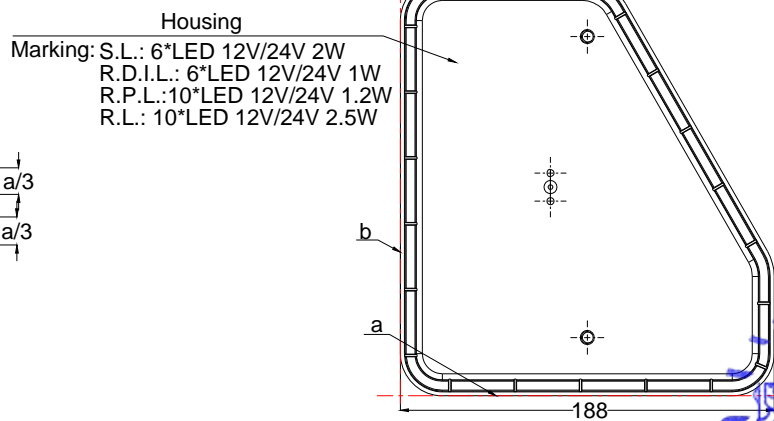
Trade mark



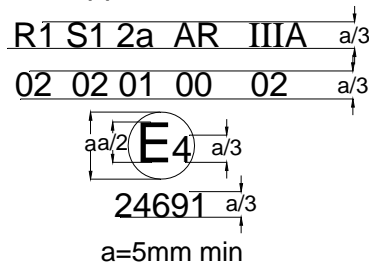
Top view



Back view

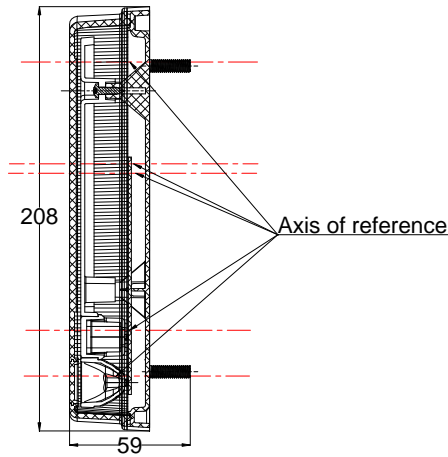


Approval mark

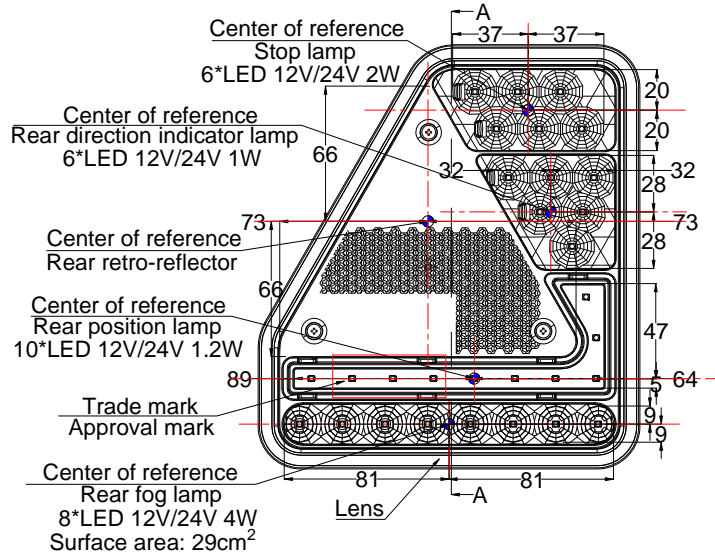


Product Type	DF-TRS002-EU-A
General assembly drawing (Right side)	
Drawing No.	DF-TRS002-EU-A-02

Section A-A



Front view



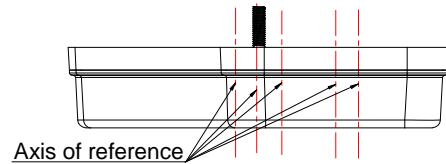
NOTE:

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

Trade mark

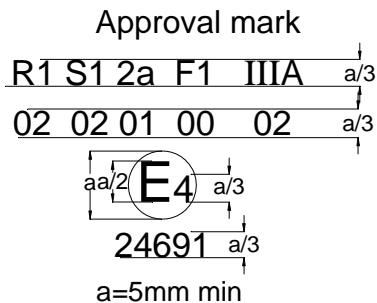
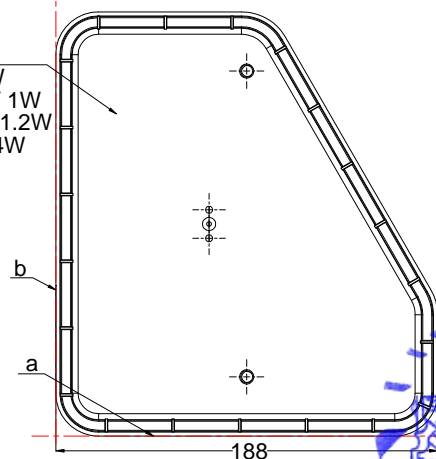


Top view

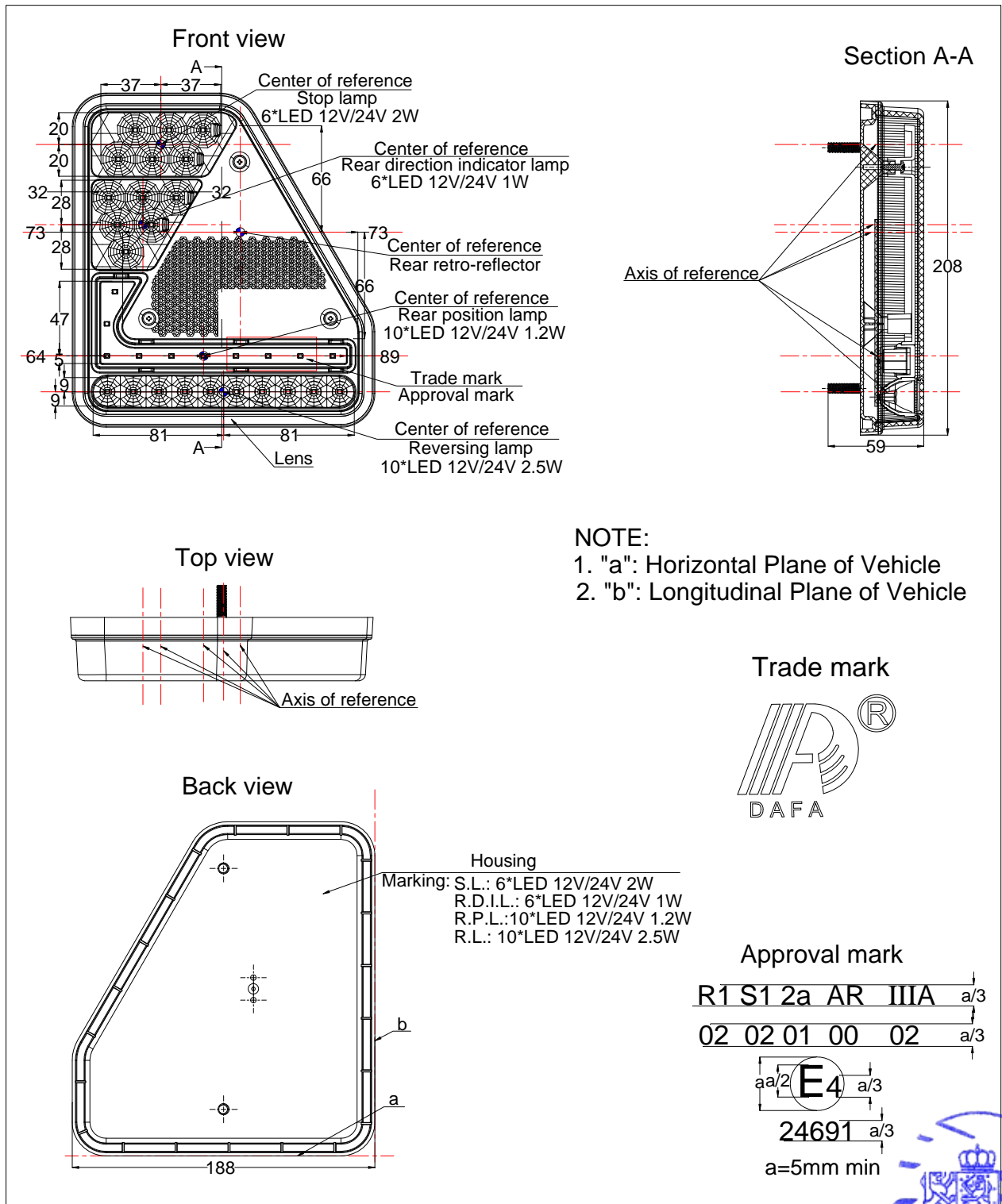


Back view

Housing
 Marking: S.L.: 6*LED 12V/24V 2W
 R.D.I.L.: 6*LED 12V/24V 1W
 R.P.L.: 10*LED 12V/24V 1.2W
 R.F.L.: 8*LED 12V/24V 4W



Product Type	DF-TRS002-EU-A
General assembly drawing (Left side)	
Drawing No.	DF-TRS002-EU-B-01



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

Trade mark




Approval mark

R1 S1 2a AR IIIA a/3
 02 02 01 00 02 a/3

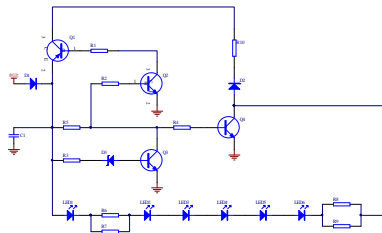
E4 a/3

24691 a/3

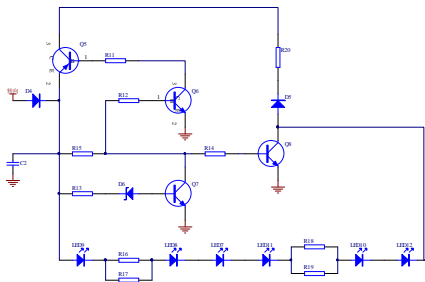
a=5mm min

Product Type	DF-TRS002-EU-A- 
General assembly drawing (Right side)	
Drawing No.	DF-TRS002-EU-B-02

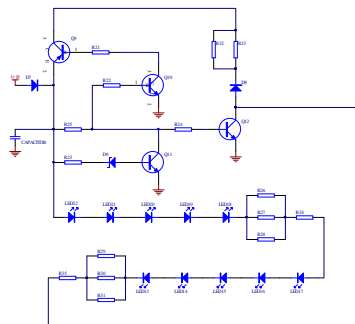
Stop lamp
 6*LED 12V/24V 2W



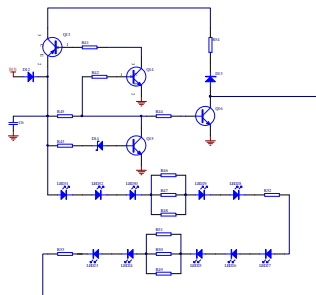
Rear direction indicator lamp
 6*LED 12V/24V 1W



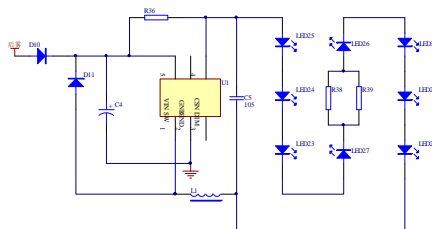
Rear position lamp
 10*LED 12V/24V 1.2W



Reversing lamp
 10*LED 12V/24V 2.5W



Rear fog lamp
 8*LED 12V/24V 4W



Product Type	DF-TRS002-EU-A
Led circuit diagram	
Drawing No.	DF-TRS002-EU-B-03



Technical Report No.: 15-00895-CX-SHA-00
Manufacturer: Zhejiang Dahao Automotive Co., Ltd.
Type: DF-TRS002-EU-A

TECHNICAL REPORT

No.: 15-00895-CX-SHA-00

Test according to ECE regulation relating to

Reversing lamp

ECE Regulation No. 23


Supplement 19 to the 00 series of amendments

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

Technical Report No.: 15-00895-CX-SHA-00
Manufacturer: Zhejiang Dahao Automotive Co., Ltd.
Type: DF-TRS002-EU-A

Page 2 / 7

I. Technical description

- 0.1. Make (trade name of manufacturer) : 
- 0.2. Type : DF-TRS002-EU-A
- 0.2.1. Variants : N/A
- 0.3. Means of identification of type : By digits and letters
- 0.4. Location of the trade mark : On the lens
- 0.5. Concise description
- Category : Reversing lamp
- Number, category and kind of light source(s) : N/A (Lamp consist of 10 LEDs)
- Voltage and wattage : 12V/24V and 2.5W
- In case of a single lamp containing more than one light source : In series, single light source
- Application of an electronic light source control gear/variable intensity control
- Being part of the lamp : No
- Being not part of the lamp : No
- 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.: 15-00895-CX-SHA-00
Manufacturer: Zhejiang Dahao Automotive Co., Ltd.
Type: DF-TRS002-EU-A

Page 3 / 7

For a type of manoeuvring lamp
pursuant to Regulation number 23,
paragraph 6.2.2. Maximum mounting
height : N/A

- 0.6. Name and address of manufacturer : Zhejiang Dahao Automotive Co., Ltd.
Xiaotian Village, Duqiao Town, Linhai City,
Taizhou City, Zhejiang Province,
P.R. China 317000
- 0.8. Name and address of assembly plant : See 0.6.
- 0.9. Location of the approval mark : On the lens
- 0.10. If applicable, name and address of the
manufacturer's representative : N/A

II. Test record

1. Test conditions

- 1.1. Technical data of the test samples : Two samples are tested.
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 : The above equipments on which the tests
were carried out fulfilled the requirements
of ECE Regulation No.: 23.00.
- 1.4. Standard bulb : N/A
- Luminous flux : N/A

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.

2.2. Intensity of light emitted

2.2.1. Sample No. 1, left side mounting, test voltage 13.499V, at HV after 1 minute of operation

No.	Point of the measurement		Limits [cd]		Measured values [cd]
			Minimum	Maximum	
1	H	V	80.00	300.00	204.86

2.2.1.1. Sample No. 1, left side mounting, test voltage 13.499V, after 30 minutes of operation

No.	Point of the measurement		Limits [cd]		Measured values [cd]
			Min.	Max.	
1	10L	10U	10.00	300.00	83.18
2	V	10U	15.00	300.00	104.27
3	10R	10U	10.00	300.00	97.00
4	45R	5U	15.00	300.00	54.63
5	10R	5U	20.00	300.00	133.17
6	V	5U	25.00	300.00	160.46
7	10L	5U	20.00	300.00	107.24
8	45L	5U	15.00	300.00	41.34
9	45L	H	15.00	300.00	43.29
10	30L	H	25.00	300.00	77.92
11	10L	H	50.00	300.00	114.54
12	V	H	80.00	300.00	199.84
13	10R	H	50.00	300.00	167.37
14	30R	H	25.00	300.00	68.51
15	45R	H	15.00	300.00	37.11
16	45R	5D	15.00	600.00	49.73
17	30R	5D	25.00	600.00	83.90
18	10R	5D	50.00	600.00	166.05
19	V	5D	80.00	600.00	188.61
20	10L	5D	50.00	600.00	122.98
21	30L	5D	25.00	600.00	56.64
22	45L	5D	15.00	600.00	35.11
23	All directions above H-H plane		---	300.00	206.41
24	All directions between H-H plane and 5D plane		---	600.00	208.51
25	All directions below 5D plane		---	8000.00	199.41

2.2.1.2. Sample No. 1, intensity of light emitted (LED) after 1 minute -by calculation

The luminous intensity distribution after 1 minute of operation complies with the minimum and maximum requirements.

2.2.2. Sample No. 2, right side mounting, test voltage 27.999V, at HV after 1 minute of operation

No.	Point of the measurement		Limits [cd]		Measured values [cd]
			Minimum	Maximum	
1	H	V	80.00	300.00	208.87

2.2.2.1. Sample No. 2, right side mounting, test voltage 27.999V, after 30 minutes of operation

No.	Point of the measurement		Limits [cd]		Measured values [cd]
			Min.	Max.	
1	10L	10U	10.00	300.00	128.41
2	V	10U	15.00	300.00	159.84
3	10R	10U	10.00	300.00	142.46
4	45R	5U	15.00	300.00	42.76
5	10R	5U	20.00	300.00	102.64
6	V	5U	25.00	300.00	163.77
7	10L	5U	20.00	300.00	98.45
8	45L	5U	15.00	300.00	30.64
9	45L	H	15.00	300.00	42.69
10	30L	H	25.00	300.00	84.90
11	10L	H	50.00	300.00	134.62
12	V	H	80.00	300.00	205.47
13	10R	H	50.00	300.00	192.54
14	30R	H	25.00	300.00	84.80
15	45R	H	15.00	300.00	25.83
16	45R	5D	15.00	600.00	25.78
17	30R	5D	25.00	600.00	80.58
18	10R	5D	50.00	600.00	178.59
19	V	5D	80.00	600.00	198.66
20	10L	5D	50.00	600.00	136.85
21	30L	5D	25.00	600.00	43.98
22	45L	5D	15.00	600.00	16.52
23	All directions above H-H plane		---	300.00	212.18
24	All directions between H-H plane and 5D plane		---	600.00	218.70
25	All directions below 5D plane		---	8000.00	201.09

2.2.2.2. Sample No. 2, intensity of light emitted (LED) after 1 minute.

-by calculation

The luminous intensity distribution after 1 minute of operation complies with the minimum and maximum requirements.

Technical Report No.: 15-00895-CX-SHA-00
 Manufacturer: Zhejiang Dahao Automotive Co., Ltd.
 Type: DF-TRS002-EU-A

Page 6 / 7

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	0.3325	0.3351	Complies
No. 2	0.3316	0.3346	Complies

2.4. Apparent surface

Upper boundary "U" (mm)	Down boundary "D" (mm)	Inner boundary "I" (mm)	Outer boundary "O" (mm)
9	9	81	81

3. Specimen submitted to test on: 14.12.2015 (DD.MM.YYYY)
4. Place of test: Jiangsu Huacheng Vehicle Inspection Co.,
 Ltd., Zhenjiang City, P.R. China
- Date of test: 23.12.2015 (DD.MM.YYYY)

III. Enclosures

Manufacturer's information document No.: DF-TRS002-EU-A-00

Dated on: 14.12.2015 (DD.MM.YYYY)



Technical Report No.: 15-00895-CX-SHA-00
 Manufacturer: Zhejiang Dahao Automotive Co., Ltd.
 Type: DF-TRS002-EU-A

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, 05.01.2016
 (DD.MM.YYYY)



Gu, Qing

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/se ctors/automotive/approval- authorities-technical- services/technical- services/index_en.htm
Approval Authority of the Netherlands (RDW)	Niederlande/ The Netherlands	RDWT-082-01	
National Standards Author- ity 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