


**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- ~~approval withdrawn~~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 retro-reflecting device pursuant to Regulation number 3.

Approval number: E4-3R-0224691**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 test report : 5 January 2016
8. Number of test report : 15-00898-CX-SHA-00



9. Concise description
- In ~~isolation~~/part of an assembly of devices⁽¹⁾ : Class IIIA
- Colour of light emitted : ~~white/red/amber~~⁽¹⁾
- Installation as an integral part of a lamp which is integrated into the body of a vehicle : yes/~~no~~⁽¹⁾
- Geometric conditions of installation and relating variations, if any : See manufacturer's information document
10. Position of the approval mark : On the lens
11. Reason(s) for extension (if applicable) : Not applicable
12. Approval : granted/~~refused/extended/withdrawn~~⁽¹⁾
13. Place : Zoetermeer
14. Date : 11 January 2016
15. Signature :
- 

K.J. van Steensel RDW
16. The following documents, bearing the approval number shown above, are available on request:
- Information document DF-TRS002-EU-A, 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

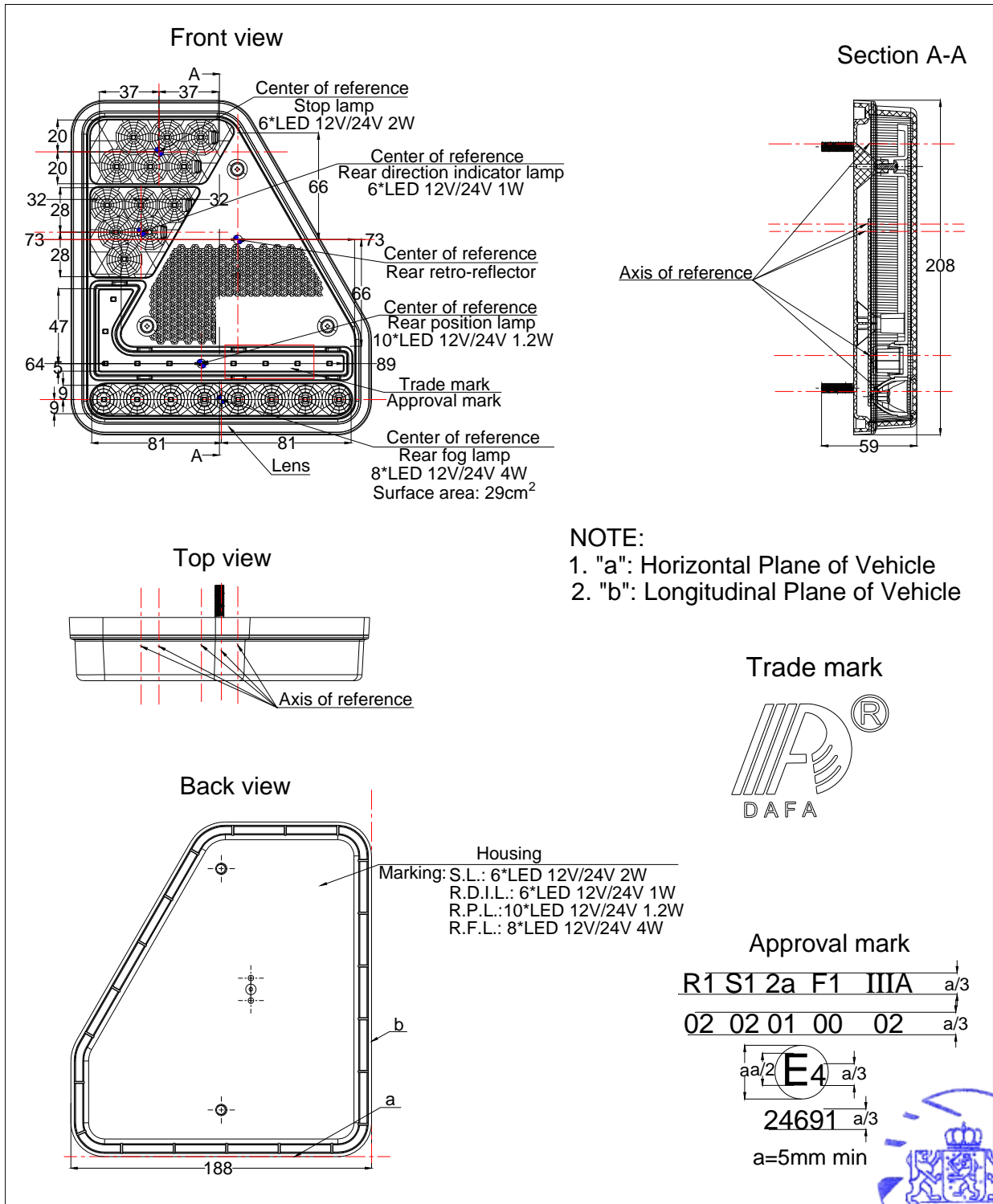
Construction	Material	Remarks
Lens	PMMA	Rear retro-reflector and Rear fog lamp: Red Rear direction indicator lamp: Amber Rear position lamp and Stop lamp: Red Reversing lamp: Clear
Inner lens	PMMA	Rear position lamp: Clear
Reflector	ABS	Painting on the inside surface Color: Metal silver
Housing	ABS	--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

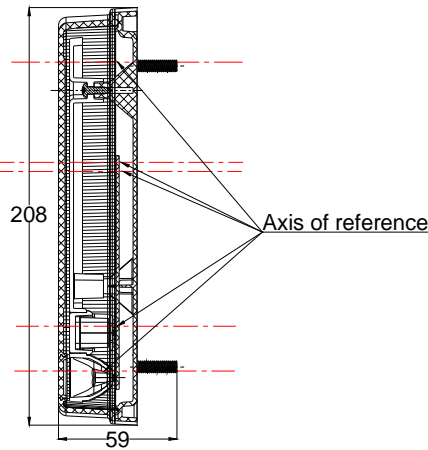




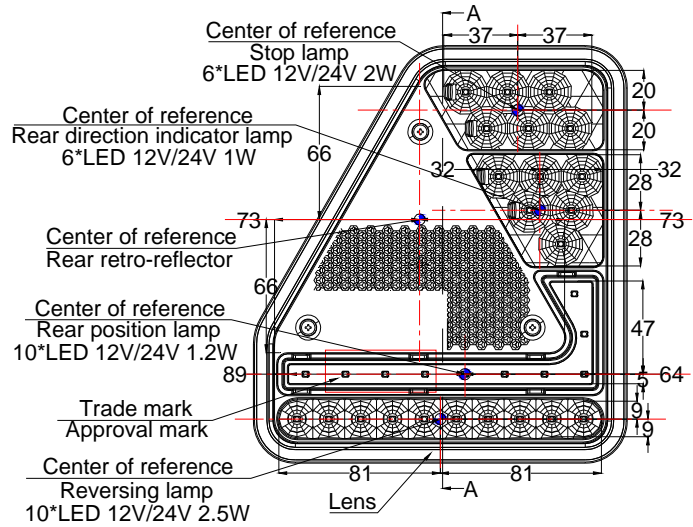
NOTE:
1. "a": Horizontal Plane of Vehicle
2. "b": Longitudinal Plane of Vehicle

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

Section A-A



Front view



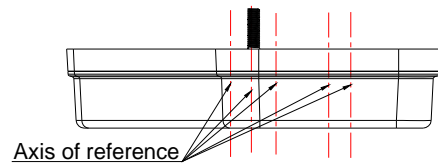
NOTE:

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

Trade mark

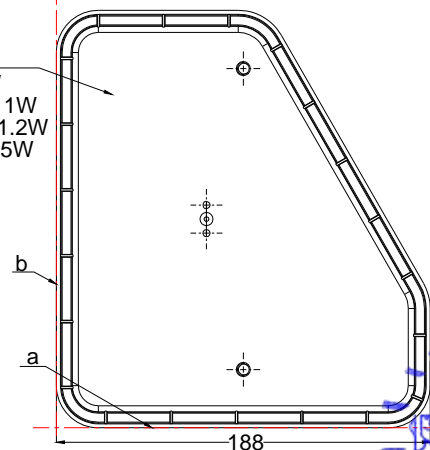


Top view

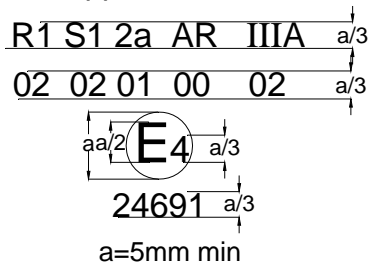


Back view

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.L.: 10*LED 12V/24V 2.5W

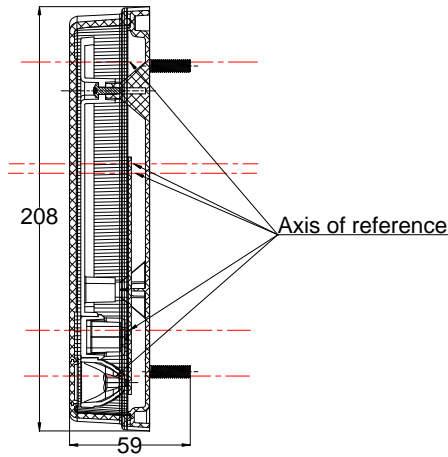


Approval mark

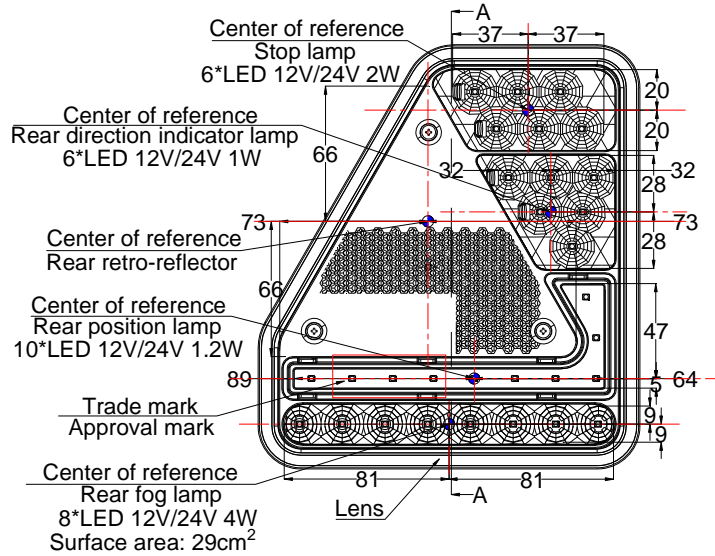


Product Type	DF-TRS002-EU-A
General assembly drawing (Right side)	
Drawing No.	DF-TRS002-EU-A-02

Section A-A



Front view



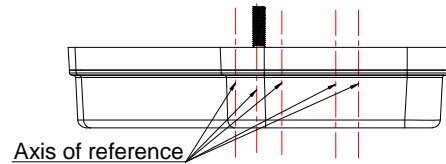
NOTE:

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

Trade mark

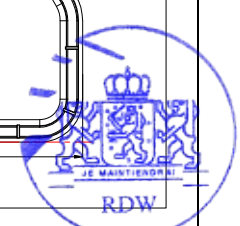
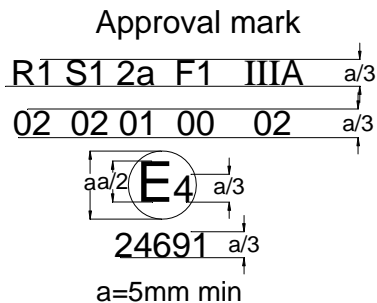
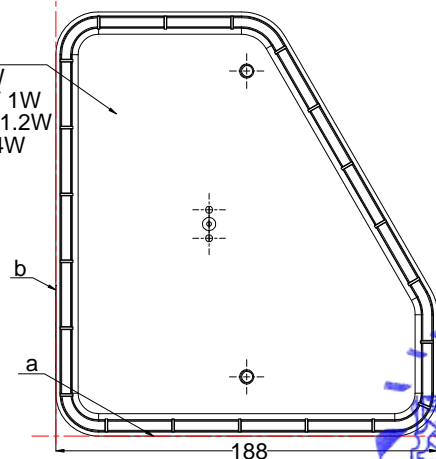


Top view

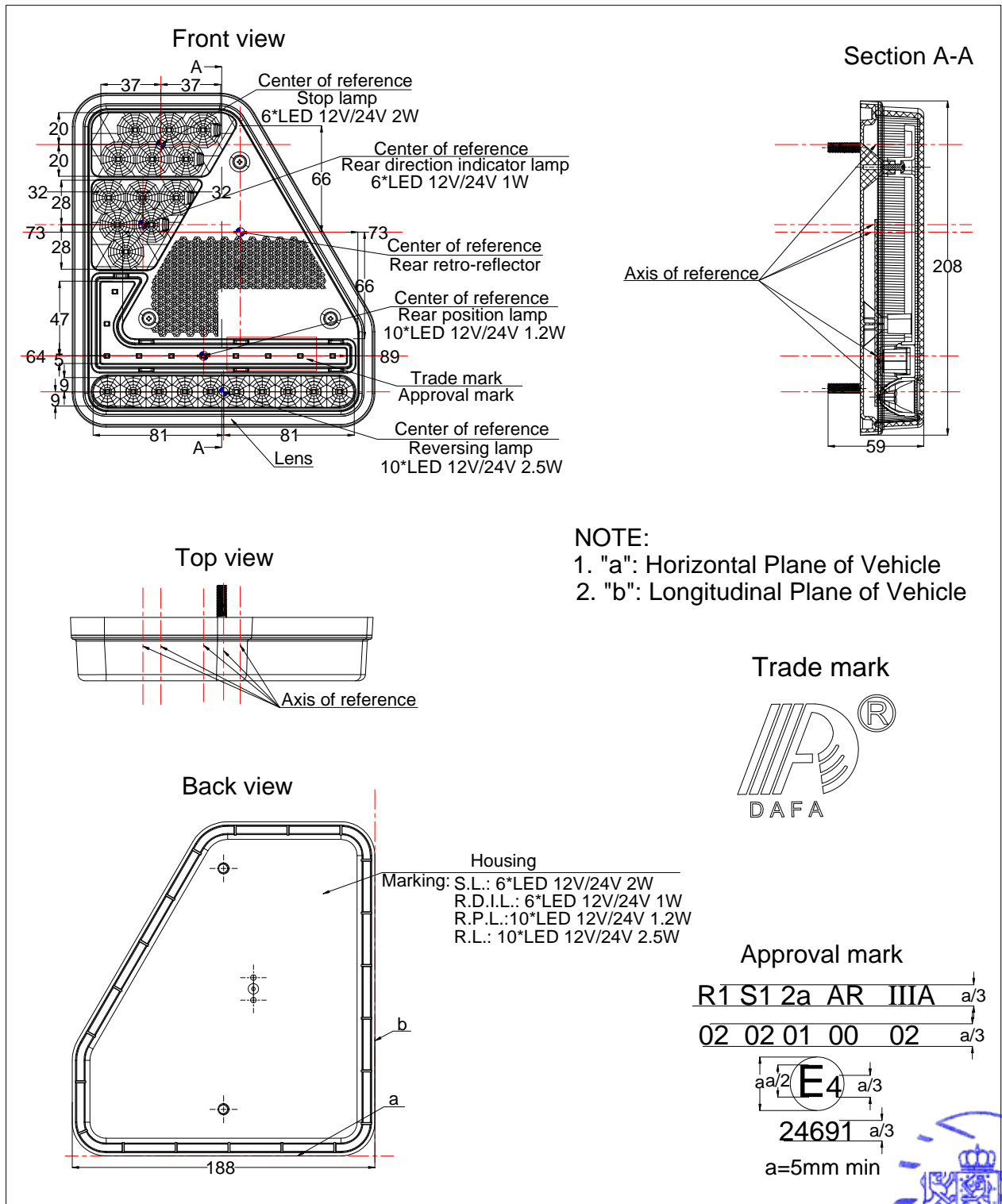


Back view

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



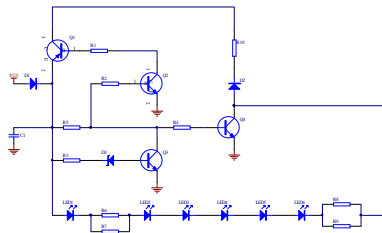
Product Type	DF-TRS002-EU-A
General assembly drawing (Left side)	
Drawing No.	DF-TRS002-EU-B-01



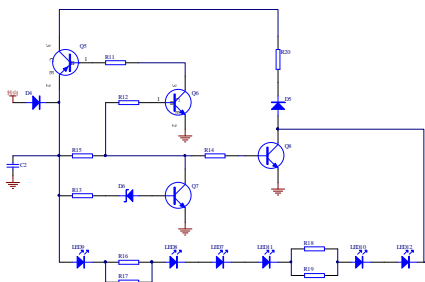
NOTE:
 1. "a": Horizontal Plane of Vehicle
 2. "b": Longitudinal Plane of Vehicle

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

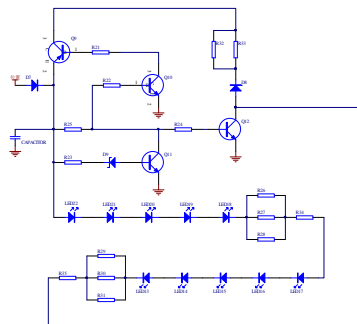
Stop lamp
 6*LED 12V/24V 2W



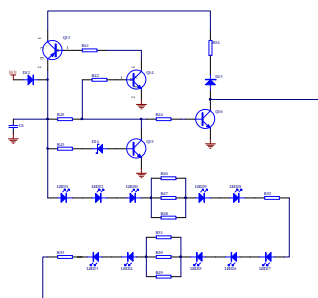
Rear direction indicator lamp
 6*LED 12V/24V 1W



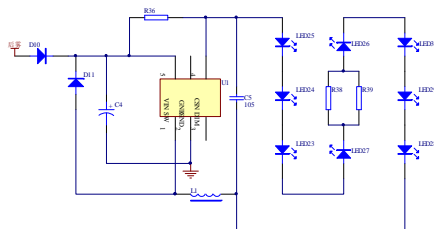
Rear position lamp
 10*LED 12V/24V 1.2W



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.: 15-00898-CX-SHA-00
Manufacturer: Zhejiang Dahao Automotive Co., Ltd.
Type: DF-TRS002-EU-A

TECHNICAL REPORT

No.: 15-00898-CX-SHA-00

Test according to ECE regulation relating to

Rear retro-reflector

ECE Regulation No. 3


Supplement 15 to the 02 series of amendments

Approvals granted up to now		
ECE	Number of approval	Date
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Technical Report No.: 15-00898-CX-SHA-00
Manufacturer: Zhejiang Dahao Automotive Co., Ltd.
Type: DF-TRS002-EU-A

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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
- In isolation/part of an assembly of devices : Class IIIA
- Colour of light emitted : ~~White/Red/Amber~~
- Installation as an integral part of a lamp which is integrated into the body of a vehicle : Yes/No
- Geometrical conditions of installation and relating variations, if any : See manufacturer's information document
- 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 : Ten 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.: 3.02.
- 1.3. Measuring and test equipment : The above equipments on which the tests were carried out fulfilled the requirements of ECE Regulation No.: 3.02.

2. Test results

2.1.	Requirement	General Specifications (Sample “a” to “j”), Visual inspection according to 6.1.
	Results	Retro-reflecting devices have been constructed that they function satisfactorily and continue to do so in normal use. In addition, they have not any defect in design or manufacture that is detrimental to their efficient operation or to their maintenance in good condition.
	Conclusion	Complies
2.2.	Requirement	Specification of shapes and dimensions (Sample “a” to “j”), Visual inspection according to Annex 5
	Results	The shape of the illuminating surfaces are simple, and not easily confused at normal observation distances
	Conclusion	Complies
2.3.	Requirement	Heat resistance-visual inspection (Sample “a” to “j”), Visual inspection according to Annex 10
	Results	After this test, no cracking or appreciable distortion of the retro-reflecting device and, in particular, of its optical component is visible.
	Conclusion	Complies

2.4.	Requirement	Colorimetric characteristics (Sample "a" to "j"), Visual inspection according to Annex 6
	Results	All samples are red
	Conclusion	Complies

2.5. Photometry limited to 20' and V = H = 0°

Angle of divergence α	H	V	CIL Measured values (Limits ≥ 300 mcd / lx)				
			a	b	c	d	e
20'	0°	0°	602.71	587.46	657.38	621.39	628.40
			f	g	h	i	j
			683.23	590.29	596.34	608.25	633.27

2.6. Complete photometry

α	β		CIL Limits [mcd / lx]	Measured values [mcd / lx]	
			Minimum	Sample "b"	Sample "f"
20'	10U	V	200	536.58	638.39
	5U	20L	150	287.49	422.46
	5U	20R	150	321.70	456.67
	H	V	450	587.46	683.23
	5D	20L	150	297.24	423.68
	5D	20R	150	325.95	469.72
	10D	V	200	555.11	637.47
1°30'	10U	V	8	47.13	52.79
	5U	20L	8	36.23	40.26
	5U	20R	8	35.75	39.74
	H	V	12	62.91	68.43
	5D	20L	8	33.28	36.11
	5D	20R	8	37.41	40.41
	10D	V	8	43.16	50.53

2.7. Test

2.7.1. Water submersion test

Requirement	Sample "c"	Sample "g"
Visual inspection according to Annex 8 paragraph 1.1.2. and 1.1.3.	After test, no water has penetrated to the reflecting surface of the retro-reflecting optical unit, the devices have passed the test.	
Colorimetric (Visual inspection trichromatic coordinates in case of doubt), Photometry: limited to 20' and $V = H = 0^\circ$, $CIL \geq 300$ [mcd / lx]	647.69	583.46

2.7.2. Fuels and lubricants resistance test

Requirement	Sample "c"	Sample "g"
Visual inspection according to Annex 8 paragraph 3 and 4.	After test, the surfaces are cleaned, there are no any apparent surface changes, surface cracks, the devices have passed the test.	
Photometry: limited to 20' and $V = H = 0^\circ$, $CIL \geq 300$ [mcd / lx]	602.85	536.27

2.7.3. Corrosion resistance test

Requirement	Sample "d"	Sample "e"
Visual inspection according to Annex 8 paragraph 2.4.	After test, there are no signs of excessive corrosion liable to impair the efficiency of the device, the devices have passed the test.	

Technical Report No.: 15-00898-CX-SHA-00
 Manufacturer: Zhejiang Dahao Automotive Co., Ltd.
 Type: DF-TRS002-EU-A

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2.8. Colour - red

Sample	Measured values		Limits	
	x	y	$y \leq 0.335$	$y \geq 0.98 - x$
No. 1	0.6859	0.3083	Yes	Yes
No. 2	0.6847	0.3078	Yes	Yes

2.9. Apparent surface

Upper boundary "U" (mm)	Down boundary "D" (mm)	Inner boundary "I" (mm)	Outer boundary "O" (mm)
66	66	73	73

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: 24.12.2015 to 25.12.2015 (DD.MM.YYYY)

III. Enclosures

Manufacturer's information document

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

Dated on: 14.12.2015 (DD.MM.YYYY)

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/sectors/automotive/approval-authorities-technical-services/technical-services/index_en.htm
Approval Authority of the Netherlands (RDW)	Niederlande/ The Netherlands	RDWT-082-01	
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