

**VCA Headquarters**

1 The Eastgate Office Centre
Eastgate Road
Bristol, BS5 6XX
United Kingdom

Switchboard: +44 (0) 117 951 5151
Direct line: +44 (0) 117 952
Main Fax: +44 (0) 117 952 4103
Email: enquiries@vca.gov.uk
Web: www.vca.gov.uk

VCA job number: CSN256891

Date: 16 August 2012

Dear Sirs,

1. The vehicle type / component described on the attached approval(s) has been tested and meets the requirements of the ECE Regulation / EEC Directive displayed on the approval certificate(s). I enclose a set of approval documents, comprising, as appropriate, the approval certificate, test report and your documentation duly authenticated.

2. If you think there are any errors in the enclosed package, please contact Ian Woodruff, telephone 0117 9524164, e-mail ian.woodruff@vca.gov.uk immediately. Please be aware that from the date of issue we have a three week holding period, any corrections required after this time will need to be corrected via an extension, index revision or correction 1 certificate, as appropriate.

ROAD TRAFFIC ACT 1988 - SECTION 80

3. The Secretary of State for Transport authorises, under section 80 of the Road Traffic Act 1988, the stated manufacturer or accredited agent to apply to the motor vehicle type / part specified, the appropriate mark designated in the Motor Vehicles (Designation of Approval Marks) Regulations 1979, as amended. The conditions attached to this authorisation are set out overleaf.

4. If this approval / extension / index revision results in a change being required to a vehicle information document issued under either a National or European Whole Vehicle approval you should notify the issuing authority to arrange for the approval(s) to be updated.

5. VCA is continually scrutinising the quality of the service it provides to customers, in order to discover more ways in which the standard can be improved. If you have a specific complaint concerning the way this job has been dealt with, our customer services leaflet gives guidance on the best approach. If you would like a copy, please contact the above.

Yours sincerely,

European Operations Branch



INVESTOR IN PEOPLE



VCA Midlands Centre
Nuneaton, Warwickshire, UK
Switchboard: +44 (0)247 632 8421
Fax: +44 (0)247 632 9276
Email: enquiries@vca.gov.uk

VCA Millbrook Centre
Millbrook, Bedford, UK
Telephone: +44 (0)1525 408466
Email: millbrook@vca.gov.uk

VCA North America
Northville, Michigan, USA
Switchboard: +1 248 4680151
Main Fax: +1 248 3499261
Email: general@vcana.com
Web: www.vcana.com

Ohio office
Ashland, Ohio, USA
Telephone: +1 419 207 8123
Fax: +1 419 207 1193
Email: c.gepper@vcana.com
Web: www.vcana.com

VCA East Asia
Naka-ku, Nagoya, Japan
Telephone: +81 52 683 8831
Fax from Europe: +44 (0) 870 125 3704
Fax from East Asia: +81 (0) 6 7500 1280
Email: enquiries@vca-asia.jp
Web: www.vca-asia.net

VCA Malaysia
Selangor, Malaysia
Telephone: +6 037 494 0221
or +6 037 494 4868
Fax: +6 037 494 0225
Email: paultownd.vca@myjaring.net

VCA China
Beijing
Telephone: +8610 852 830 91/2/3
Fax: +8610 852 830 97



1. CONDITIONS

1.1 This Approval may be withdrawn at any time and while held is subject to the following conditions.

2. CONDITIONS OF MOTOR VEHICLE PARTS

- 2.1 The holder of this approval shall put the approval mark described in the Motor Vehicles (Designation of Approval Marks) Regulations 1979 as amended only on Motor Vehicle Parts that:
- Have been manufactured, assembled or completed in factories under his control and
 - Conform in all material respects with the samples, which were tested before this approval was issued.
- 2.2 The holder of this approval shall mark his products in the manner set out in the relevant Regulation / Directive as given in the Motor Vehicles (Designation of Approval Marks) Regulations 1979 as amended together with:
- The approval number allocated by the Secretary of State for Transport.
 - His name or trademark
 - Any other markings specified in the appropriate international Regulation
- 2.3 The holder of this approval shall be prepared at any time to satisfy Department for Transport officials or agents of the Department, that the quality of the part being produced and marked or intended to be by him with the approval marking conforms in all material respects with that of the samples tested as the International Regulation requires.
- 2.4 The holder of this approval undertakes to admit duly authorised officials or agents of the Department at all reasonable times to any premises in which parts marked or intended to be marked are being manufactured, assembled or stored and to permit any such official or agent to inspect parts and all records relating to them and their production processes.
- 2.5 This approval may be suspended or withdrawn by the Secretary of State for Transport at any time without any particular length of notice being given and in the event of that being done the holder will absolve the Secretary of State from any claim for damages or compensation.

3. CONDITIONS FOR MOTOR VEHICLES

- 3.1 The holder of this approval shall put the approval mark described in the Motor Vehicles (Designation of Approval Marks) Regulation 1979 as amended only on Motor Vehicles fitted with Motor Vehicle parts which Motor Vehicles as fitted with such parts conform with the type of Motor Vehicle approved by as on behalf of the Secretary of State for Transport and only on Motor Vehicles that:
- Have been manufactured, assembled or completed in factories under his control and
 - Conform in all material respects with the type of Motor Vehicle, which was tested before an approval certificate was issued.
- 3.2 The holder of this approval shall mark motor vehicles of the type approved. In the matter set out in the relevant Regulation / Directive using the authorised approval mark as given in the Motor Vehicles (Designation of Approval Marks) Regulation 1979 as amended together with the approval number allocated by the Secretary of State for Transport.
- 3.3 The holder of this approval shall mark Motor Vehicles of the type approved in the manner set out in the relevant Regulation annexed to the United Nations agreement of 1958 as amended using the authorised approval mark which comprises a capital letter E followed by the number 11 within a circle together with the approval number allocated by the Secretary of State for Transport.
- 3.4 The holder of this approval shall be prepared at any time to satisfy Department for Transport officials or agents of the Department that Motor Vehicles of the type approved which have been produced and marked or that are intended to be marked by him conform in all material respects with the type of vehicle approved.
- 3.5 The holder of this approval undertakes to admit duly authorised officials or agents of the Department at all reasonable times to any premises in which the Motor Vehicles of the type approved which have been or are intended to be marked are manufactured, assembled or stored and to permit any such official or agent to inspect the Motor Vehicles and all records relating to them and their production processes.
- 3.6 This approval may be suspended or withdrawn by the Secretary of State for Transport at any time without any particular length of notice given and in the event of that being done the holder will absolve the Secretary of State from any claim for damages or compensation.





VCA Headquarters
1 The Eastgate Office Centre
Eastgate Road
Bristol, BS5 6XX
United Kingdom

Switchboard: +44 (0) 117 951 5151
Main Fax: +44 (0) 117 952 4103
Email: enquiries@vca.gov.uk
Web: www.vca.gov.uk

THE UNITED KINGDOM VEHICLE APPROVAL AUTHORITY



COMMUNICATION CONCERNING THE APPROVAL GRANTED /
APPROVAL EXTENDED / APPROVAL REFUSED / APPROVAL
WITHDRAWN / PRODUCTION DEFINITELY DISCONTINUED OF A TYPE
OF DEVICE PURSUANT TO REGULATION NO. 7.02

Approval No: 07R - 023011

Extension No: Not applicable

1. Trade name or mark of the device:



2. Manufacturer's name for the type of device:205020

3. Manufacturer's name and address:

Beifang Hella Automotive Lighting Ltd.
No.6 Shenwei North Road ,Yanjiao Jinggong Industrial Park
Yanjiao Economic and Technological Development Zone
Sanhe
Hebei Province
PEOPLE'S REPUBLIC OF CHINA

4. If applicable, name and address of the manufacturer's representative:Not applicable

5. Submitted for approval on: 29 MAY 2012

6. Technical service responsible for conducting approval tests: Vehicle Certification Agency

7. Date of report issued by that service: 02 JULY 2012

8. Number of report issued by that service: CSN256891

Job number:CSN256891



9. Concise description:

By category of lamp: Front position lamp:A
Rear position lamp:R

For mounting either outside or inside or both: Not applicable

Colour of light emitted: Rear position lamp:red
Front position lamp:white

Number, category and kind of light source(s): LED

Voltage and wattage:12V/0.5W,24V/0.5W

Light source module specific identification code: Not applicable

Only for installation on M₁ and/or N₁ category vehicles: ~~yes~~/no

Only for limited mounting height of equal to or less than 750 mm above the ground:
~~yes~~/no

Geometrical conditions of installation and relating variations, if any:Not applicable

Application of an electronic light source control gear/variable intensity control: Not applicable

(a) being part of the lamp: ~~yes~~/no

(b) being not part of the lamp: ~~yes~~/no

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: ~~yes~~/no

10. Position of the approval mark: On the lens

11. Reason(s) for extension (if applicable): Not applicable


12. Approval GRANTED/~~REFUSED~~/~~EXTENDED~~/~~WITHDRAWN~~

Job number:CSN256891



13. Place: BRISTOL

14. Date:16 AUGUST 2012

15. Signature: 

A. W. STENNING
Head of Technical and Quality Group

16. The list of documents deposited with the Administrative Service which has granted approval is annexed to this communication and may be obtained on request.

CSN256891

(1) Strike out what does not apply

Beijing Hella Automotive Lighting Ltd.
 NO. 6 Shenwei North Road, Yanjiao jinggong Industrial Park, Yanjiao Economic
 and Technological Development Zone, Sanhe, Hebei Province.

VCA JOB NUMBER
CSN256891

INFORMATION DOCUMENT
UN ECE REGULATION R7
FRONT AND REAR POSITION LAMPS
END-OUTLINE MARKER LAMPS

INITIAL APPLICATION

MANUFACTURER TRADE NAME OR MARK	
TYPE	205020
VARIANT	variant 1: 12V 0.5W; variant 2: 24V 0.5W;
VERSION	version1:base plate fixing version2:fastening angle fixing version3:rubber bracket fixing
MANUFACTURER'S ADDRESS	NO. 6 Shenwei North Road, Yanjiao jinggong Industrial Park, Yanjiao Economic and Technological Development Zone, Sanhe, Hebei Province.
LOCATION OF APPROVAL MARK	On the lens
METHOD OF MAKING MARK	E-mark is engraved into plastic lens.
ASSEMBLY PLANT ADDRESS	Beijing Hella Automotive Lighting Ltd. NO. 6 Shenwei North Road, Yanjiao jinggong Industrial Park, Yanjiao Economic and Technological Development Zone, Sanhe, Hebei Province.



Beijing Hella Automotive Lighting Ltd.
 NO. 6 Shenwei North Road, Yanjiao jinggong Industrial Park, Yanjiao Economic
 and Technological Development Zone, Sanhe, Hebei Province.

VCA JOB NUMBER
CSN256891

INFORMATION DOCUMENT
UN ECE REGULATION R7
FRONT AND REAR POSITION LAMPS
END-OUTLINE MARKER LAMPS

INITIAL APPLICATION

POSITION LAMP FUNCTION	Lamp used to indicate the presence and the width of the vehicle when viewed from the front or rear.
TRAFFIC SIDE	Right hand traffic
CATEGORY OF STOP LAMP	Not applicable
FRONT POSITION LAMP COLOUR OF EMITTED LIGHT	White
REAR POSITION LAMP COLOUR OF EMITTED LIGHT	Red
STOP LAMP COLOUR OF EMITTED LIGHT	Not applicable
IN THE CASE OF DEVICES WITH TWO LEVELS OF INTENSITY ARRANGEMENT DIAGRAM AND SPECIFICATION OF THE CHARACTERISTICS OF THE SYSTEM ENSURING THE TWO LEVELS OF INTENSITY:	Not applicable
COLOUR OF LENS	Clear
LENS MATERIAL	PMMA
BULB TYPE	LED
RATED VOLTAGE /	12V 0.5W / 24V 0.5W



Beijing Hella Automotive Lighting Ltd.
NO. 6 Shenwei North Road, Yanjiao jinggong Industrial Park, Yanjiao Economic
and Technological Development Zone, Sanhe, Hebei Province.

VCA JOB NUMBER
CSN256891

INFORMATION DOCUMENT
UN ECE REGULATION R7
FRONT AND REAR POSITION LAMPS
END-OUTLINE MARKER LAMPS

INITIAL APPLICATION

	WATTAGE	
	MOUNTING POSITION	Refer to following specification
	S3 LAMP MAY BE MOUNTED INSIDE / OUTSIDE VEHICLE	Not applicable

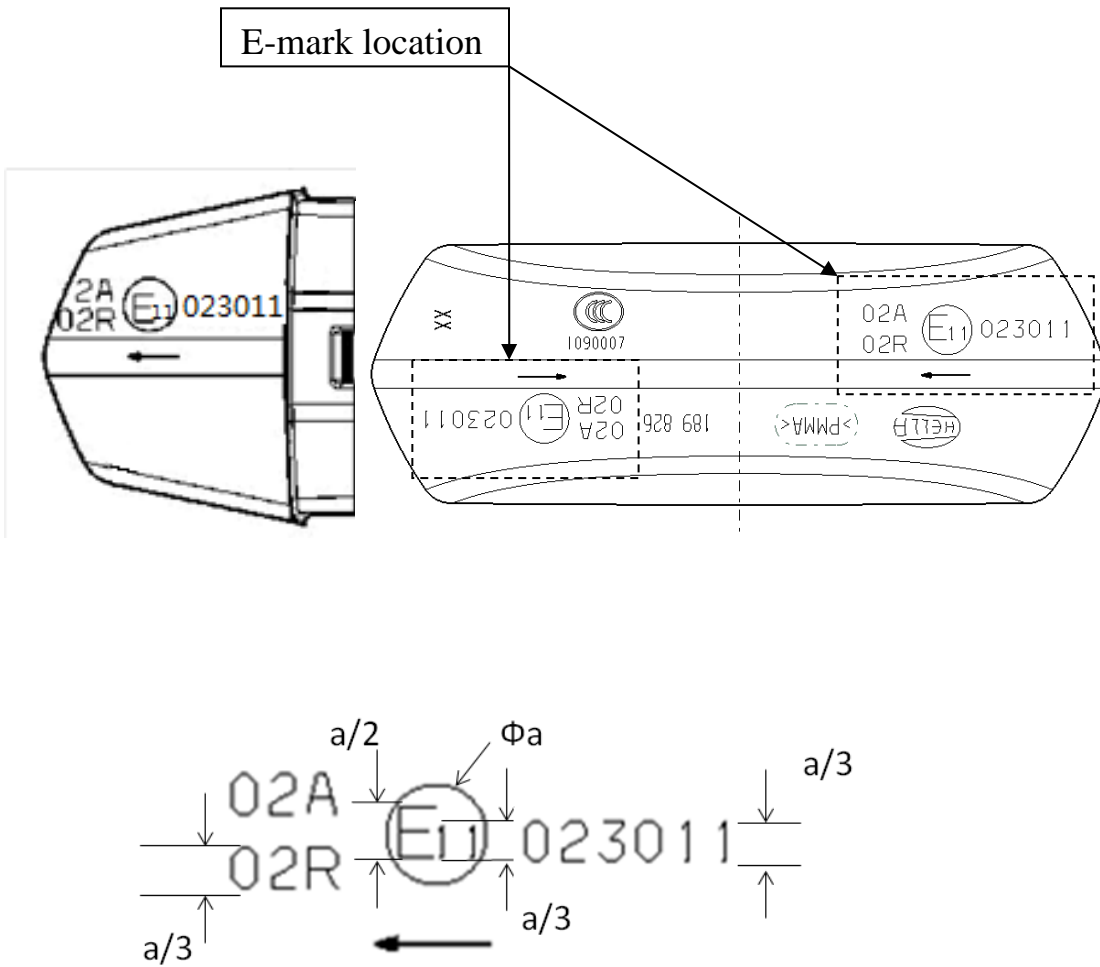


Beijing Hella Automotive Lighting Ltd.
NO. 6 Shenwei North Road, Yanjiao jinggong Industrial Park, Yanjiao Economic
and Technological Development Zone, Sanhe, Hebei Province.

VCA JOB NUMBER
CSN256891

INFORMATION DOCUMENT
UN ECE REGULATION R7
FRONT AND REAR POSITION LAMPS
END-OUTLINE MARKER LAMPS

INITIAL APPLICATION

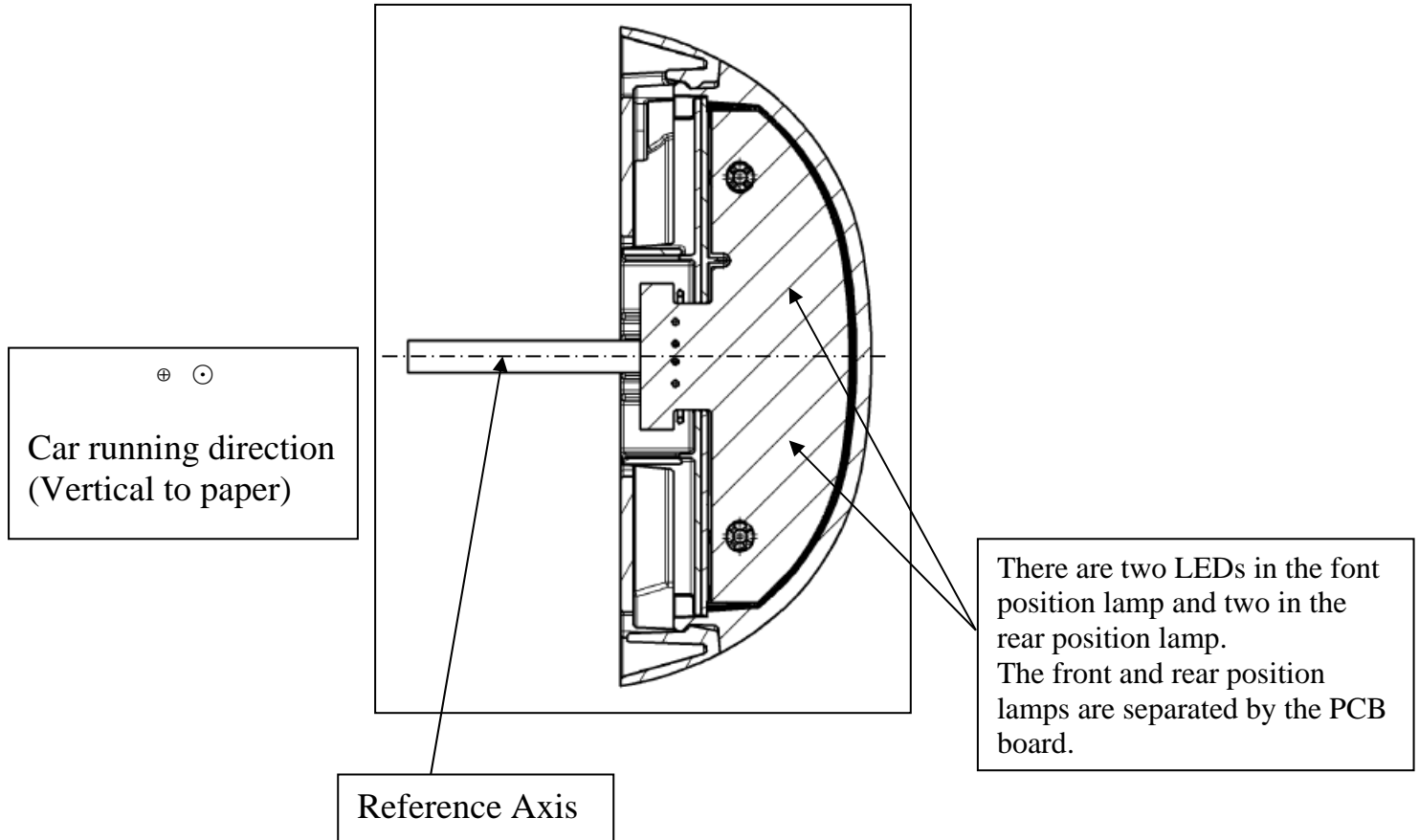


E-mark letter size acc. To ECE regulation R7
(Note:a=6mm, Font:Arial)

VCA JOB NUMBER
CSN256891

INFORMATION DOCUMENT
UN ECE REGULATION R7
FRONT AND REAR POSITION LAMPS
END-OUTLINE MARKER LAMPS

INITIAL APPLICATION



LED:

Axis of reference: see above picture

Direction vertical to the longitudinal median plane of the vehicle and road surface shown above.

VCA JOB NUMBER
CSN256891

INFORMATION DOCUMENT
UN ECE REGULATION R7
FRONT AND REAR POSITION LAMPS
END-OUTLINE MARKER LAMPS

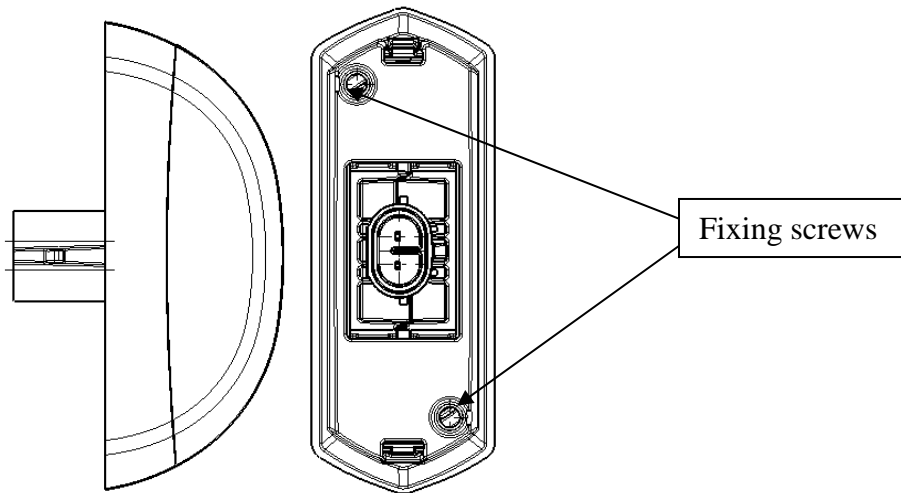
INITIAL APPLICATION

This lamp has three assembly version:

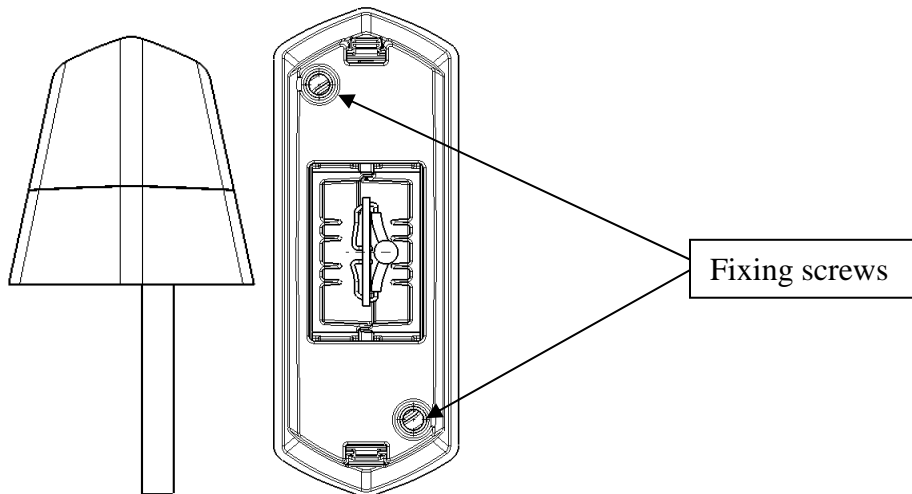
The lamp assembly position and method can be consulted with Hella engineer.

version1: base plate fixing

Connector :



Harness :



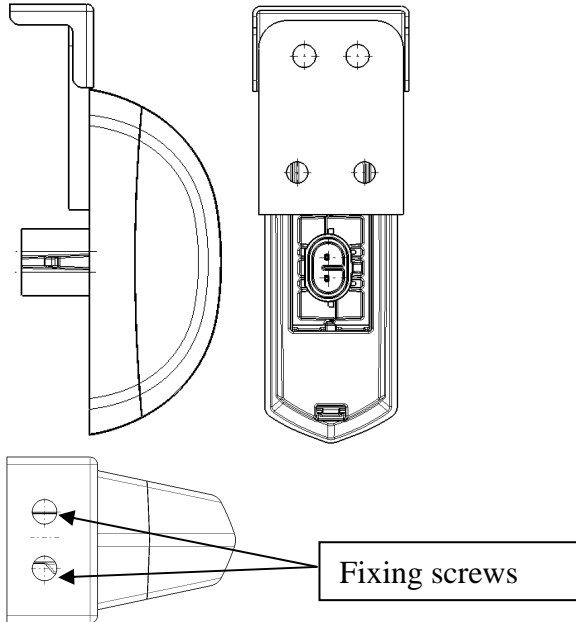
VCA JOB NUMBER
CSN256891

INFORMATION DOCUMENT
UN ECE REGULATION R7
FRONT AND REAR POSITION LAMPS
END-OUTLINE MARKER LAMPS

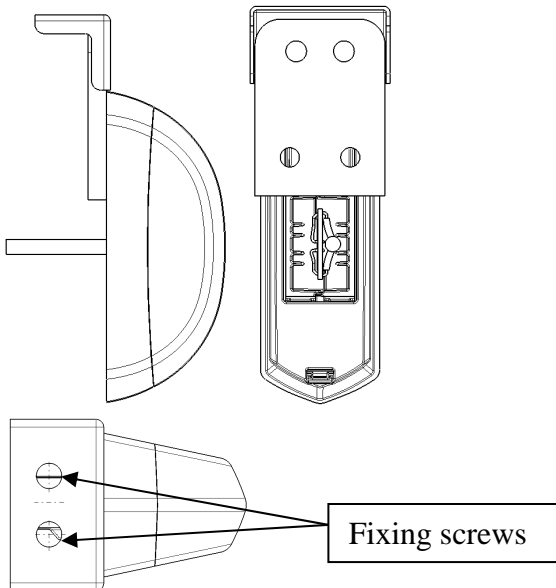
INITIAL APPLICATION

version2: fastening angle fixing

Connector:



Harness:



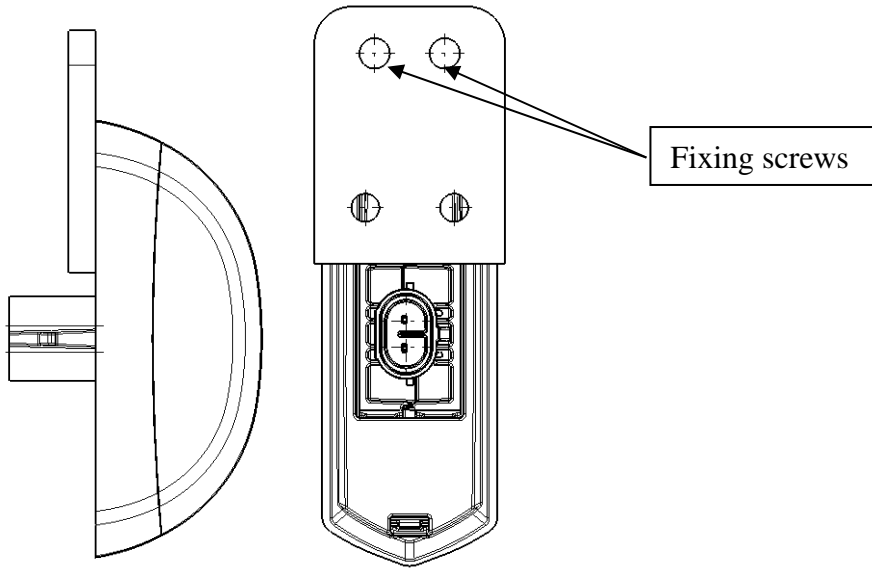
VCA JOB NUMBER
CSN256891

INFORMATION DOCUMENT
UN ECE REGULATION R7
FRONT AND REAR POSITION LAMPS
END-OUTLINE MARKER LAMPS

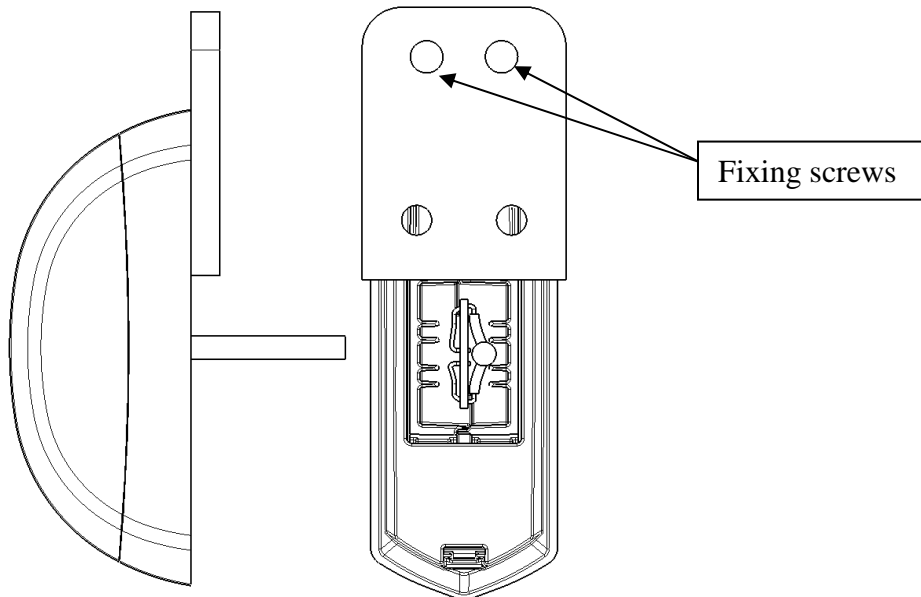
INITIAL APPLICATION

version3: rubber bracket fixing

Connector:



Harness:



Beijing Hella Automotive Lighting Ltd.
NO. 6 Shenwei North Road, Yanjiao jinggong Industrial Park, Yanjiao Economic
and Technological Development Zone, Sanhe, Hebei Province.

VCA JOB NUMBER
CSN256891

INFORMATION DOCUMENT
UN ECE REGULATION R7
FRONT AND REAR POSITION LAMPS
END-OUTLINE MARKER LAMPS

INITIAL APPLICATION

Pictures:





Vehicle Certification Agency,
1 The Eastgate Office Centre
Eastgate Road,
Bristol,
BS5 6XX,
United Kingdom.
Telephone: +44 (0) 117 951 5151
Fax: +44 (0) 117 952 4103
Email: enquiries@vca.gov.uk
www.dft.gov.uk/vca/

TEST REPORT: POSITION, STOP AND OUTLINE MARKER LAMPS

Regulation 7.02

REPORT/JOB NUMBER: CSN256891

TEST DETAILS


Location of Test: Beifang Hella Automotive Lighting Ltd.
Date of Test: 2012-5-29
VCA Representative(s): DuSong
Manufacturer's Representative(s): Wang Dong Liang
Reason for Test: New approval

MANUFACTURER DETAILS

Manufacturer's Name: Beifang Hella Automotive Lighting Ltd
Manufacturer's Address: No. 6 Shenwei North Road, Yanjiao Jinggong Industrial Park
Yanjiao Economic and Technological Development Zone
Sanhe, Hebei Province, 065201 P.R. China
Category: A, R(group lamp)

CONCLUSION

The above mentioned lamp was tested in accordance with ECE Regulation 7.02 and was found to comply in all respects

Signature: 
Name: Du Song
Position: Type Approval Engineer
Date: 12 JULY 2012

LIST OF ANNEXES		
ANNEX	No. of PAGES	SUBJECT
1		
2		
3		
4		



TEST REPORT: POSITION, STOP AND OUTLINE MARKER LAMPS

Regulation 7.02

TEST SPECIFICATION AND WORST CASE RATIONALE

LED light source, supply voltage:12V ,24V as alternative ,variant1:12V 0.5W(single light source),Variant2:24V 0.5W(single light source)

Tests required (if more than one is applicable):

2 samples for photometry (if design is symmetrically opposite, one left hand and one right hand lamp is acceptable)

2 samples for colour (if design is symmetrically opposite, one left hand and one right hand lamp is acceptable)

~~2 samples for stop/rear position:rear position ratio~~

~~2 samples for failed light source(s) (if lamp contains multiple light sources)~~

Manufacturer's documentation is complete and reflects the agreed specification for the component tested and covers all variants and versions agreed in the worst case rationale.

FACILITY AND EQUIPMENT CHECKS

1 Generic Risk Assessment followed Insert RA Identifier Y / N/A

OR

Specific Risk Assessment completed and stored in in electronic job folder Y / N/A

2 Facilities and test equipment are appropriate Y / N/A
Brief description of test equipment:

3 Calibration certificates checked and valid, recorded in the following table

Equipment	Serial No	Calibration Date
Photometric test equipment	TYPV	12-Mar-12
Colorimetric tesst equipment	655	12-Mar-12





TEST REPORT: POSITION, STOP AND OUTLINE MARKER LAMPS

Regulation 7.02

Paragraph	Requirement	Complies? Y / N / N/A
-----------	-------------	--------------------------

Markings

3.1	Lamp bears indelible Trade Name or Trade Mark of applicant	Y
3.2	Lamp has non-replaceable light source or Lamp bears marking of bulb category(ies) or Lamp bear marking of light module identification code	Y
		N/A
		N/A
3.4	For lamps using non-replaceable light sources or light modules, lamp bears markings with the rated voltage and rated wattage	Y
3.5	Lamp has non-standard/secondary operating voltage marking	N/A
3.6	Lamp meets light source module marking requirements	N/A
4.2, 4.3	Approval mark meets requirements	Y

General

5.2	Lamp is durable in normal operation	Y
5.5.1	Rear position lamps reciprocally incorporated with a stop lamp and using a common light source must either: Have multiple light sources or Be intended for fitment to a vehicle with a monitoring system (A note is required on the Comm Doc in either case)	N/A
		N/A
5.6.1, 5.6.2	Light source modules must be tamper-proof and only able to be installed in the correct orientation	N/A

Testing

6 Note 4b	Lamps with multiple light sources meet minimum photometric requirements with any one light source failed	N/A
7.1.2	Lamps with non-replaceable light sources were tested at 6.75 , 13.5 or 28V	Y
7.5	Limits of apparent surface (98% boundary) were defined	Y
7.6	S3 stop lamps for mounting inside vehicles were tested behind samples of all optional glass (photometry and colour)	N/A





TEST REPORT: POSITION, STOP AND OUTLINE MARKER LAMPS
Regulation 7.02

Front Position Lamp Photometry - Sample 1

Reading at HV at 1 minute: 15.32

Test voltage:28V(Variant2)

Location	Measured Value at 30 minutes cd	Calculated Value at 1 Minute cd	Required Maximum Value cd	Required Minimum Value cd	Complies
15U, 80R	0.33	0.34	140	0.05	Y
15U, 80L	0.33	0.34	140	0.05	Y
10U, 5L	4.93	5.03	140	0.8	Y
10U, 5R	5.34	5.44	140	0.8	Y
5U, 20R	2.00	2.04	140	0.4	Y
5U, 10R	6.58	6.71	140	0.8	Y
5U, V	10.45	10.65	140	2.8	Y
5U, 10L	5.15	5.25	140	0.8	Y
5U, 20L	1.57	1.60	140	0.4	Y
H, 10L	6.62	6.75	140	1.4	Y
H, 5L	11.72	11.95	140	3.6	Y
H, V	15.03	15.32	140	4	Y
H, 5R	13.84	14.11	140	3.6	Y
H, 10R	9.09	9.27	140	1.4	Y
5D, 20R	2.10	2.14	140	0.4	Y
5D, 10R	8.60	8.77	140	0.8	Y
5D, V	14.70	14.98	140	2.8	Y
5D, 10L	6.31	6.43	140	0.8	Y
5D, 20L	1.66	1.69	140	0.4	Y
10D, 5L	7.24	7.38	140	0.8	Y
10D, 5R	8.15	8.31	140	0.8	Y
15D, 80R	0.37	0.38	140	0.05	Y
15D, 80L	0.37	0.38	140	0.05	Y

Colour coordinates

x (measured):0.435

y (measured):0.414

**TEST REPORT: POSITION, STOP AND OUTLINE MARKER LAMPS**

Regulation 7.02

Front Position Lamp Photometry - Sample 2

Reading at HV at 1 minute: 15.42

Test voltage:28V(variant2)

Location	Measured Value at 30 minutes cd	Calculated Value at 1 Minute cd	Required Maximum Value cd	Required Minimum Value cd	Complies
15U, 80R	0.32	0.32	140	0.05	Y
15U, 80L	0.32	0.32	140	0.05	Y
10U, 5L	4.80	4.86	140	0.8	Y
10U, 5R	5.22	5.29	140	0.8	Y
5U, 20R	1.95	1.97	140	0.4	Y
5U, 10R	6.43	6.51	140	0.8	Y
5U, V	10.19	10.32	140	2.8	Y
5U, 10L	5.01	5.07	140	0.8	Y
5U, 20L	1.53	1.55	140	0.4	Y
H, 10L	6.44	6.52	140	1.4	Y
H, 5L	11.42	11.56	140	3.6	Y
H, V	15.23	15.42	140	4	Y
H, 5R	13.52	13.69	140	3.6	Y
H, 10R	8.89	9.00	140	1.4	Y
5D, 20R	2.05	2.08	140	0.4	Y
5D, 10R	8.41	8.51	140	0.8	Y
5D, V	13.72	13.89	140	2.8	Y
5D, 10L	6.14	6.22	140	0.8	Y
5D, 20L	1.62	1.64	140	0.4	Y
10D, 5L	7.05	7.14	140	0.8	Y
10D, 5R	7.95	8.05	140	0.8	Y
15D, 80R	0.36	0.36	140	0.05	Y
15D, 80L	0.36	0.36	140	0.05	Y

Colour coordinates

x (measured):0.436

y (measured):0.414



TEST REPORT: POSITION, STOP AND OUTLINE MARKER LAMPS

Regulation 7.02

Front Position Lamp Photometry - Sample 1

Reading at HV at 1 minute 15.56

Test voltage:13.5V(variant1)

Location	Measured Value at 30 minutes cd	Calculated Value at 1 Minute cd	Required Maximum Value cd	Required Minimum Value cd	Complies
15U, 80R	0.28	0.29	140	0.05	Y
15U, 80L	0.28	0.29	140	0.05	Y
10U, 5L	5.45	5.65	140	0.8	Y
10U, 5R	9.58	9.94	140	0.8	Y
5U, 20R	4.30	4.46	140	0.4	Y
5U, 10R	13.50	14.00	140	0.8	Y
5U, V	13.20	13.69	140	2.8	Y
5U, 10L	3.72	3.86	140	0.8	Y
5U, 20L	1.07	1.11	140	0.4	Y
H, 10L	3.97	4.12	140	1.4	Y
H, 5L	8.83	9.16	140	3.6	Y
H, V	15.00	15.56	140	4	Y
H, 5R	18.03	18.70	140	3.6	Y
H, 10R	15.51	16.09	140	1.4	Y
5D, 20R	3.68	3.82	140	0.4	Y
5D, 10R	11.03	11.44	140	0.8	Y
5D, V	11.03	11.44	140	2.8	Y
5D, 10L	3.43	3.56	140	0.8	Y
5D, 20L	1.08	1.12	140	0.4	Y
10D, 5L	4.36	4.52	140	0.8	Y
10D, 5R	7.09	7.35	140	0.8	Y
15D, 80R	0.26	0.27	140	0.05	Y
15D, 80L	0.26	0.27	140	0.05	Y

Colour coordinates

x (measured):0.427

y (measured):0.409





TEST REPORT: POSITION, STOP AND OUTLINE MARKER LAMPS

Regulation 7.02

Front Position Lamp Photometry - Sample 1

Reading at HV at 1 minute 15.02

Test voltage:13.5V(variant1)

Location	Measured Value at 30 minutes cd	Calculated Value at 1 Minute cd	Required Maximum Value cd	Required Minimum Value cd	Complies
15U, 80R	0.34	0.34	140	0.05	Y
15U, 80L	0.35	0.35	140	0.05	Y
10U, 5L	5.56	5.63	140	0.8	Y
10U, 5R	7.24	7.33	140	0.8	Y
5U, 20R	2.39	2.42	140	0.4	Y
5U, 10R	8.79	8.90	140	0.8	Y
5U, V	12.22	12.37	140	2.8	Y
5U, 10L	4.67	4.73	140	0.8	Y
5U, 20L	1.30	1.32	140	0.4	Y
H, 10L	5.20	5.26	140	1.4	Y
H, 5L	10.25	10.37	140	3.6	Y
H, V	14.84	15.02	140	4	Y
H, 5R	15.07	15.25	140	3.6	Y
H, 10R	10.78	10.91	140	1.4	Y
5D, 20R	2.16	2.19	140	0.4	Y
5D, 10R	8.23	8.33	140	0.8	Y
5D, V	11.35	11.49	140	2.8	Y
5D, 10L	4.47	4.52	140	0.8	Y
5D, 20L	1.32	1.34	140	0.4	Y
10D, 5L	4.98	5.04	140	0.8	Y
10D, 5R	6.31	6.39	140	0.8	Y
15D, 80R	0.34	0.34	140	0.05	Y
15D, 80L	0.34	0.34	140	0.05	Y

Colour coordinates

x (measured):0.431

y (measured):0.411



**TEST REPORT: POSITION, STOP AND OUTLINE MARKER LAMPS**

Regulation 7.02

Rear Position Lamp Photometry - Sample 1**Test voltage:28V(variant2)**

Reading at HV at 1 minute: 10.4

Location	Measured Value at 30 minutes cd	Calculated Value at 1 Minute cd	Required Maximum Value cd	Required Minimum Value cd	Complies
15U, 80R	0.17	0.17	17	0.05	Y
15U, 80L	0.17	0.17	17	0.05	Y
10U, 5L	4.32	4.40	17	0.8	Y
10U, 5R	3.63	3.70	17	0.8	Y
5U, 20R	0.77	0.79	17	0.4	Y
5U, 10R	3.01	3.07	17	0.8	Y
5U, V	6.80	6.93	17	2.8	Y
5U, 10L	4.23	4.31	17	0.8	Y
5U, 20L	1.39	1.42	17	0.4	Y
H, 10L	6.88	7.01	17	1.4	Y
H, 5L	9.75	9.94	17	3.6	Y
H, V	10.20	10.40	17	4	Y
H, 5R	7.54	7.69	17	3.6	Y
H, 10R	3.40	3.47	17	1.4	Y
5D, 20R	0.74	0.75	17	0.4	Y
5D, 10R	2.99	3.05	17	0.8	Y
5D, V	7.02	7.16	17	2.8	Y
5D, 10L	3.95	4.03	17	0.8	Y
5D, 20L	1.33	1.36	17	0.4	Y
10D, 5L	4.00	4.08	17	0.8	Y
10D, 5R	3.51	3.58	17	0.8	Y
15D, 80R	0.17	0.17	17	0.05	Y
15D, 80L	0.17	0.17	17	0.05	Y

Colour coordinates

x (measured):0.660

y (measured):0.334

**TEST REPORT: POSITION, STOP AND OUTLINE MARKER LAMPS**

Regulation 7.02

Rear Position Lamp Photometry - Sample 2**Test voltage:28V(variant2)**

Reading at HV at 1 minute: 10.98

Location	Measured Value at 30 minutes cd	Calculated Value at 1 Minute cd	Required Maximum Value cd	Required Minimum Value cd	Complies
15U, 80R	0.18	0.19	17	0.05	Y
15U, 80L	0.18	0.19	17	0.05	Y
10U, 5L	4.39	4.65	17	0.8	Y
10U, 5R	3.69	3.91	17	0.8	Y
5U, 20R	0.78	0.83	17	0.4	Y
5U, 10R	3.05	3.23	17	0.8	Y
5U, V	6.91	7.32	17	2.8	Y
5U, 10L	4.30	4.55	17	0.8	Y
5U, 20L	1.41	1.49	17	0.4	Y
H, 10L	6.98	7.39	17	1.4	Y
H, 5L	9.88	10.46	17	3.6	Y
H, V	10.37	10.98	17	4	Y
H, 5R	7.62	8.07	17	3.6	Y
H, 10R	3.44	3.64	17	1.4	Y
5D, 20R	0.69	0.73	17	0.4	Y
5D, 10R	2.78	2.94	17	0.8	Y
5D, V	7.11	7.53	17	2.8	Y
5D, 10L	4.76	5.04	17	0.8	Y
5D, 20L	1.56	1.65	17	0.4	Y
10D, 5L	4.32	4.57	17	0.8	Y
10D, 5R	3.45	3.65	17	0.8	Y
15D, 80R	0.17	0.18	17	0.05	Y
15D, 80L	0.17	0.18	17	0.05	Y



TEST REPORT: POSITION, STOP AND OUTLINE MARKER LAMPS

Regulation 7.02

Rear Position Lamp Photometry - Sample 2

Test voltage:13.5V(variant1)

Reading at HV at 1 minute 10.89

Location	Measured Value at 30 minutes cd	Calculated Value at 1 Minute cd	Required Maximum Value cd	Required Minimum Value cd	Complies
15U, 80R	0.18	0.18	17	0.05	Y
15U, 80L	0.18	0.18	17	0.05	Y
10U, 5L	4.47	4.56	17	0.8	Y
10U, 5R	3.74	3.82	17	0.8	Y
5U, 20R	0.78	0.80	17	0.4	Y
5U, 10R	3.07	3.13	17	0.8	Y
5U, V	6.96	7.10	17	2.8	Y
5U, 10L	4.39	4.48	17	0.8	Y
5U, 20L	1.45	1.48	17	0.4	Y
H, 10L	7.21	7.36	17	1.4	Y
H, 5L	9.99	10.20	17	3.6	Y
H, V	10.67	10.89	17	4	Y
H, 5R	7.66	7.82	17	3.6	Y
H, 10R	3.44	3.51	17	1.4	Y
5D, 20R	0.75	0.77	17	0.4	Y
5D, 10R	0.80	0.82	17	0.8	Y
5D, V	7.09	7.24	17	2.8	Y
5D, 10L	4.04	4.12	17	0.8	Y
5D, 20L	1.36	1.39	17	0.4	Y
10D, 5L	4.05	4.13	17	0.8	Y
10D, 5R	3.54	3.61	17	0.8	Y
15D, 80R	0.17	0.17	17	0.05	Y
15D, 80L	0.17	0.17	17	0.05	Y





TEST REPORT: POSITION, STOP AND OUTLINE MARKER LAMPS

Regulation 7.02

Rear Position Lamp Photometry - Sample 2

Test voltage:13.5V(variant1)

Reading at HV at 1 minute 1 0.23

Location	Measured Value at 30 minutes cd	Calculated Value at 1 Minute cd	Required Maximum Value cd	Required Minimum Value cd	Complies
15U, 80R	0.17	0.17	17	0.05	Y
15U, 80L	0.17	0.17	17	0.05	Y
10U, 5L	4.30	4.40	17	0.8	Y
10U, 5R	3.42	3.50	17	0.8	Y
5U, 20R	0.72	0.74	17	0.4	Y
5U, 10R	2.75	2.81	17	0.8	Y
5U, V	6.37	6.52	17	2.8	Y
5U, 10L	4.61	4.72	17	0.8	Y
5U, 20L	1.61	1.65	17	0.4	Y
H, 10L	8.34	8.53	17	1.4	Y
H, 5L	9.80	10.03	17	3.6	Y
H, V	10.00	10.23	17	4	Y
H, 5R	6.79	6.95	17	3.6	Y
H, 10R	3.06	3.13	17	1.4	Y
5D, 20R	0.69	0.71	17	0.4	Y
5D, 10R	2.78	2.84	17	0.8	Y
5D, V	7.11	7.27	17	2.8	Y
5D, 10L	4.76	4.87	17	0.8	Y
5D, 20L	1.56	1.60	17	0.4	Y
10D, 5L	4.32	4.42	17	0.8	Y
10D, 5R	3.45	3.53	17	0.8	Y
15D, 80R	0.17	0.17	17	0.05	Y
15D, 80L	0.17	0.17	17	0.05	Y

