



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

THE UNITED KINGDOM VEHICLE APPROVAL AUTHORITY

Rev 1/03



COMMUNICATION CONCERNING THE APPROVAL GRANTED OF A TYPE
OF DIRECTION INDICATOR PURSUANT TO REGULATION NO 6.01

Approval No: 1252

Extension: 02

1. Trade name or mark of the device: As before and Farplas and Cobo
2. Manufacturer's name for the type of device: DIR 0200.001
3. Manufacturer's name and address:

Luxvision Limited
Unit 24
Dawkins Road Industrial Estate
Poole
Dorset
BH15 4JD
United Kingdom
4. If applicable, name and address of the manufacturer's representative: Not applicable
5. Submitted for approval on: As before and 19 December 2006
6. Technical service responsible for conducting approval tests: BSI Product Services
7. Date of test report issued by that service: As before and 9 February 2007
8. Number of test report issued by that service: As before and 247/4933529



9. Concise description:

Category: 2a

Number and category of filament lamp(s): 36 LEDs operating at either 12/24 volts 4 watts

10. Position of the approval mark: Moulded on lens

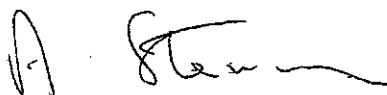
11. Reason(s) for extension (if applicable): 1) Alternative lens colour
2) Addition of trade name Farplas and Cobo

12. Approval GRANTED

13. Place: BRISTOL

14. Date: 26 FEBRUARY 2007

15. Signature:



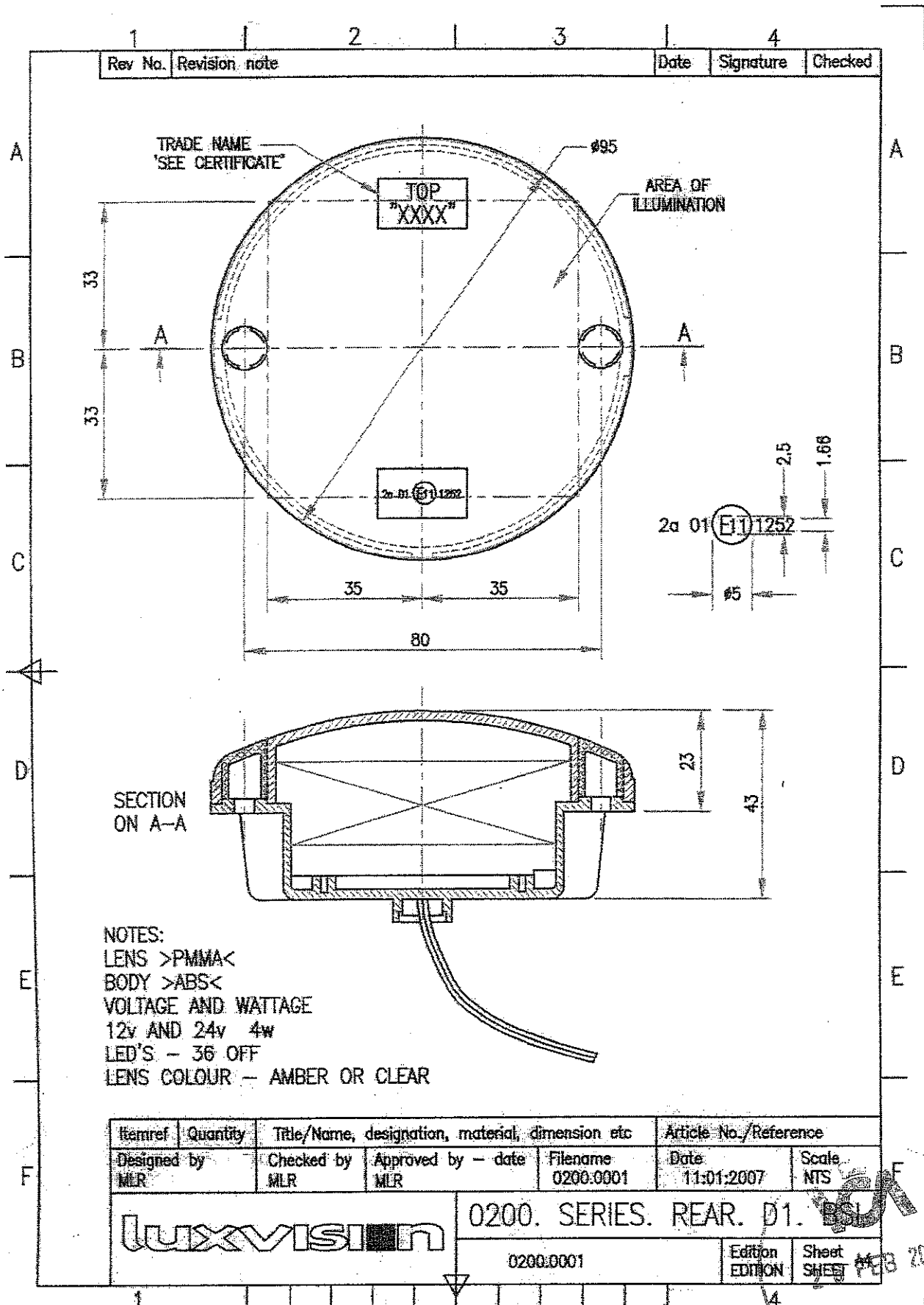
A W STENNING
Head of Product Certification

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.

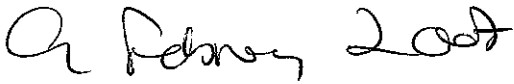
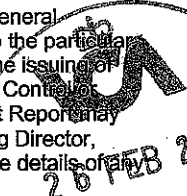
EAG173101



DIAGRAMS



Test Report

Report No	247/4933529	EAG173101	This Report consists of 7 pages
Client	Vehicle Certification Agency on behalf of Luxvision Limited Unit 24, Dawkins Road Industrial Estate Poole Dorset BH15 4JD		
Authority & date	Vehicle Certification Agency dated 14 December 2006		
Items tested	DIR.0200.001 direction indicator lamp		
Specification	ECE Regulation 6.01		
Results	The sample submitted complied with the requirements of the above specification		
Prepared by	P Ottavio Senior Technician Engineer 		
Authorized by	C Stratford Principal Engineer - Section Head, Lighting Technology 		
Issue Date	2 February 2007 		
Conditions of issue	This Test Report is issued subject to the conditions stated in current issue of PS082 'General conditions relating to acceptance of testing'. The results contained herein apply only to the particular sample/s tested and to the specific tests carried out, as detailed in this Test Report. The issuing of this Test Report does not indicate any measure of Approval, Certification, Supervision, Control or Surveillance by BSI of any product. No extract, abridgement or abstraction from a Test Report may be published or used to advertise a product without the written consent of the Managing Director, BSI Product Services, who reserves the absolute right to agree or reject all or any of the details of any items or publicity for which consent may be sought.  28 FEB 2007 APPROVAL AUTHORITY		

1. INTRODUCTION

Samples submitted: DIR.0200.*** rear direction indicator lamp for use in both 12 and 24 volt clear lens systems.

Date submitted: 19 December 2006

Date of test 6 January 2007

ECE Regulation: 6.01 Up to and including Add.5/Rev.3/Amend.4
'Uniform provisions concerning the approval of direction indicators for motor vehicles and their trailers'.

1.1 Approval tests on the following functions of the unit were requested by the applicant:

Extension with test on a Category 2a direction indicator to cover the following:

- Addition of type with clear lens
- Addition of trade names Farplas and Cobo.

To satisfy worst case requirements photometric and colorimetric measurements were made on one sample.

1.2 Types and number of lamps used:

36 LED array operating at either 12 or 24 volts 4 watts

1.3 Versions of unit manufactured covered by this Report:

A single version of the unit was manufactured for mounting on either side of the vehicle.

2. CONCLUSIONS:

The samples submitted complied with the requirements of ECE Regulation 6.01 as category 2a amber direction indicators for use in both a 12 and 24 volt system. Therefore the original approval can be extended accordingly.



3. BRIEF DESCRIPTION OF THE UNIT

See attached drawing.

The lamp was manufactured by:

Shanghai CATA Signal Co Ltd
Zhongxin Village
Xuanqiao Town
Nanhui District
Shanghai
PR China

4. MARKING

See attached drawing.



5. PHOTOMETRIC TESTS

All photometric measurements were made in accordance with the procedures detailed in the appropriate Specifications.

The photometer incorporated a filter which closely corrected its spectral response to the CIE spectral luminous efficiency of the human eye for photopic vision.

The equipment was calibrated using luminous intensity standard lamps and where necessary colour filters, all with calibrations traceable to the National Physical Laboratory, Teddington.

6. RESULTS

The results of the photometric tests are given on the following data sheets:

The chromaticity coordinates of the light emitted were:

$x = 0.593$ $y = 0.406$ $z = 0.001$

NOTE

The manufacturer declared that the apparent surface was the light emitting surface.



DATA SHEET FOR PHOTOMETRIC TESTS ON A DIRECTION INDICATOR TO ECE REGULATION 6.01

VCA Job No: EAG173101

Manufacturer: Shanghai CATA Signal Co Ltd for Luxvision Ltd

Unit Identification: DIR.0200.001

Category: 2a

Fitted with light source: LED

PHOTOMETRIC PERFORMANCE

Values are given in candelas. The notations U, D, L and R refer to the measuring point Up, Down, Left or Right of the reference axis.

Test Angles Vertical	Horizontal	Luminous Intensity (Candelas)		Limit Min
		12 V Sample	24 V Sample	
10° U	5° R	52.6	66.6	10
	5° L	47.6	66.7	10
	20° R	16.7	20.9	5
5° U	10° R	61.7	63.3	10
	V	85.0	98.8	35
	10° L	52.3	68.4	10
	20° L	14.2	15.1	5
H	10° R	70.8	77.5	17.5
	5° R	95.5	104	45
	V	103	114	50
	5° L	90.1	103	Max 350 45
	10° L	62.1	65.6	17.5
5° D	20° R	20.6	18.7	5
	10° R	71.0	73.4	10
	V	105	106	35
	10° L	59.6	63.6	10
	20° L	15.3	13.5	5
10° D	5° R	81.9	74.5	10
	5° L	72.4	72.4	10



**DATA SHEET FOR PHOTOMETRIC TESTS ON A DIRECTION INDICATOR LAMP TO ECE
REGULATION 6.01**

VCA Job No: EAG173101
Manufacturer: Shanghai CATA Signal Co Ltd for Luxvision Ltd
Unit Identification: DIR.0200.001
Fitted with light source: LED

PHOTOMETRIC RESULTS

Outside the reference axis, within the fields specified in the appropriate arrangement diagram;
i.e., within a zone 45° inboard, 80° outboard from the reference axis, 15 ° above or below the
horizontal:

The minimum intensity was 1.10 cd for 12 V Sample

and 1.10 cd for 24 V Sample

Minimum limit: 0.30 cd.

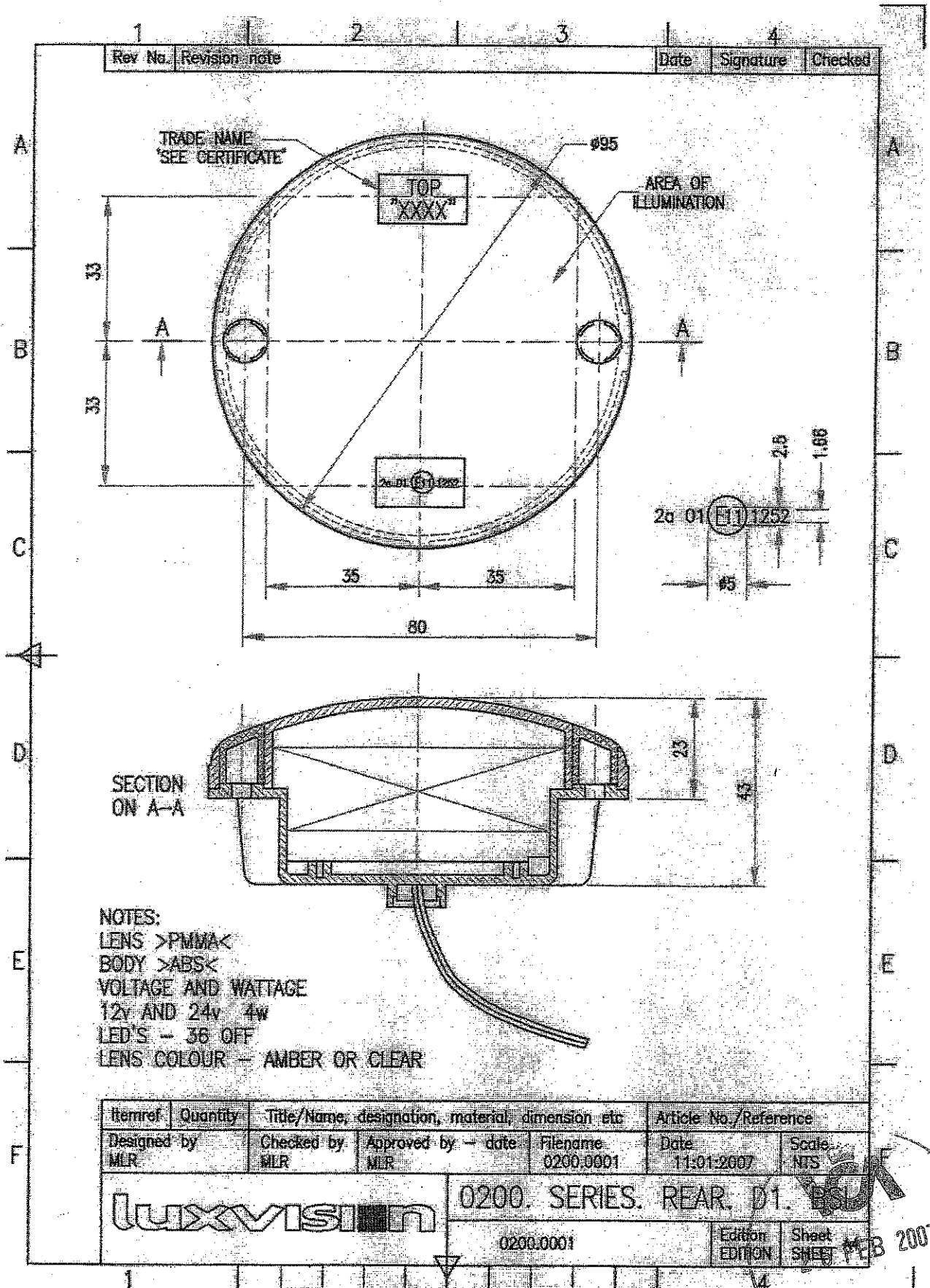
The maximum intensity was 163 cd for 12 V Sample at HV

and 169 cd for 24 V Sample at HV

Maximum limit: 350 cd.



DIAGRAMS





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 ⁽¹⁾/
~~APPROVAL EXTENDED ⁽⁴⁾~~ / ~~APPROVAL REFUSED ⁽⁴⁾~~ / ~~APPROVAL~~
~~WITHDRAWN ⁽⁴⁾~~ / ~~PRODUCTION DEFINITELY DISCONTINUED ⁽⁴⁾~~ OF A
TYPE OF DIRECTION INDICATOR PURSUANT TO REGULATION NO 6.01

Approval No: 015603

Extension No: Not applicable

1. Trade name or mark of the device: Luxvision
2. Manufacturer's name for the type of device: RCL200 Series
3. Manufacturer's name and address:
Luxvision Limited
Unit 24
Dawkins Road Industrial Estate
Poole
BH15 4JD
United Kingdom
4. If applicable, name and address of the manufacturer's representative: Not applicable
5. Submitted for approval on: 26 July 2010
6. Technical service responsible for conducting approval tests: BSI Product Services
7. Date of test report issued by that service: 16 March 2011
8. Number of test report issued by that service: 247/7560152 Issue 2



9. Concise description:

Category: ~~1, 1a, 1b, 2a, 2b, 3, 4, 5, 6~~ ^{(1) (2)}

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

Voltage and wattage: 12V or 24V

Light source module specific identification code: Not applicable

Only for installation on M₁ and/or N₁ category vehicles: M1 onlyOnly for limited mounting height of equal to or less than 750 mm above the ground: yes/no ⁽¹⁾

Geometrical conditions of installation and relating variations, if any: None

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

(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/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 ⁽¹⁾

10. Position of the approval mark: On the lens

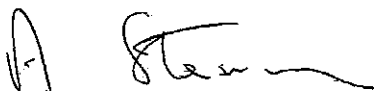
11. Reason(s) for extension (if applicable): Not applicable

12. Approval ~~GRANTED/EXTENDED/REFUSED/WITHDRAWN~~ ⁽¹⁾

13. Place: BRISTOL

14. Date: 17 MARCH 2011

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.



- (1) Strike out what does not apply.
- (2) For direction indicator lamps of categories 1, 1a, 1b, 2a and 2b, information regarding the signal according to paragraph 6.2.2.





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 ⁽¹⁾/
~~APPROVAL EXTENDED ⁽⁴⁾~~ / ~~APPROVAL REFUSED ⁽⁴⁾~~ / ~~APPROVAL~~
~~WITHDRAWN ⁽⁴⁾~~ / ~~PRODUCTION DEFINITELY DISCONTINUED ⁽⁴⁾~~ OF A
TYPE OF DEVICE PURSUANT TO REGULATION NO. 7.02 SUPPLEMENT
17

Approval No: 025603 Extension No: Not applicable

1. Trade name or mark of the device: Luxvision
2. Manufacturer's name for the type of device: RCL.0200 Series
3. Manufacturer's name and address:
Luxvision Limited
Unit 24
Dawkins Road Industrial Estate
Poole
BH15 4JD
United Kingdom
4. If applicable, name and address of the manufacturer's representative: Not applicable
5. Submitted for approval on: 26 July 2010
6. Technical service responsible for conducting approval tests: BSI Product Services
7. Date of report issued by that service: 16 March 2011
8. Number of report issued by that service: 247/7560152 Issue 2



9. Concise description:

9.1 By category of lamp: R-S1

For mounting ~~either outside or inside or both~~ ⁽¹⁾

Colour of light emitted: Red

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

Voltage and wattage: 12V or 24V, 1W and 3W

Light source module specific identification code: Not applicable

Only for installation on M1 and/or N1 category vehicles: M1 only

Only for limited mounting height of equal to or less than 750 mm above the ground:
~~yes/no~~ ⁽¹⁾

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

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

(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/variable intensity control: Not applicable

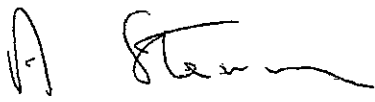
Electronic light source control gear/variable intensity control manufacturer and identification number (when the light source control gear is part of the lamp but is not included into the lamp body): Not applicable

Variable luminous intensity: ~~yes/no~~ ⁽¹⁾

9.2 Function(s) produced by an interdependent lamp forming part of an interdependent lamp system:

Front position lamp	yes/no ⁽¹⁾
R1 Rear position lamp	yes/no ⁽¹⁾
R2 Rear position lamp	yes/no ⁽¹⁾
S1 Stop lamp	yes/no ⁽¹⁾
S2 Stop lamp	yes/no ⁽¹⁾
S3 Stop lamp	yes/no ⁽¹⁾
S4 Stop lamp	yes/no ⁽¹⁾
End-outline marker lamp	yes/no ⁽¹⁾



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: BRISTOL
14. Date: 17 MARCH 2011
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.

(1) Strike out what does not apply



Test Report



Report No	247/7560152 Issue 2 EAL217660	This Report consists of 17 pages
Client	Vehicle Certification Agency on behalf of Luxvision Limited Unit 24 Dawkins Road Industrial Estate Poole BH15 4JD	
Authority & date	Vehicle Certification Agency dated 26 July 2010	
Items tested	RCL 0200 Series Stop, Tail and Direction Indicator	
Specification	ECE Regulations 6.01 and 7.02	
Results	The samples submitted comply with the relevant requirements of the above Regulations Issue 2 of this Report supersedes all previous issues. The amendment giving rise to this issue of the Report can be ascertained by contacting the authorizing signatory.	
Prepared by	N. Debrick Technician Engineer – Lighting Technology 	
Authorized by	 Paul Ottavio Senior Technician Engineer – Lighting Technology	
Issue Date	16 March 2011	
Conditions of issue	This Test Report is issued subject to the conditions stated in current issue of CP0322 'Conditions of Contract for Testing'. The results contained herein apply only to the particular sample/s tested and to the specific tests carried out, as detailed in this Test Report. The issuing of this Test Report does not indicate any measure of Approval, Certification, Supervision, Control or Surveillance by BSI of any product. No extract, abridgement or abstraction from a Test Report may be published or used to advertise a product without the written consent of the Managing Director. BSI Testing Services reserves the absolute right to agree or reject all or any of the details of any items or publicity for which consent may be sought.	

1. INTRODUCTION

Samples submitted: RCL.0200 Series Stop, Tail and Direction Indicator

Date submitted: 26 July 2010

Testing started: 12 November 2010

ECE Regulations:

6.01 up to and including Add.5/Rev.4/Amend.5 'Uniform provisions concerning the approval of direction indicators for power driven vehicles and their trailers'.

7.02 up to and including Add.6/Rev.5/Amend.2 'Uniform provisions concerning the approval of front and rear position (side) lamps, stop-lamps and end-outline marker lamps for motor vehicles (except motor cycles) and their trailers'.

1.1 Approval tests on the following functions of the unit were requested by the applicant:

- a) Cat 2a direction indicator
- b) Stop
- c) Rear position (side) lamp

1.2 Types and number of lamps used:

- a) Direction indicator: 16 LED's 12V/24V 3W
- b) Stop: 16 LED's 12V/24V 3W
- c) Rear position (side lamp): 16 LED's 12V/24V 1W

1.3 Versions of unit manufactured covered by this Report:

Four versions of the unit for mounting on either side of the vehicle: 12V with clear lens or amber/red variant and 24V with clear lens or amber/red variant.

2. CONCLUSIONS

The samples submitted complied with the requirements of ECE Regulation 6.01 as Category 2a directional indicators.

The samples submitted complied with the requirements of ECE Regulation 7.02 as a R1-S1 stop lamp and red rear position (side) lamp.



3. BRIEF DESCRIPTION OF THE UNIT

Drawing reference:	See attached drawings
Housing material:	PC-ABS
Lens material:	PMMA

4. MARKING

POSITION

4.1	Manufacturer's trade name or mark	See attached drawings
4.2	Model identification	See attached drawings
4.3	Approval mark	See attached drawings
4.4	Lamp type	See attached drawings



5. PHOTOMETRIC TESTS

All photometric measurements were made in accordance with the procedures detailed in the appropriate Specifications.

The functions were tested with the stated light sources operated as specified in the relevant ECE Regulation.

The photometer incorporated a filter which closely corrected its spectral response to the CIE spectral luminous efficiency of the human eye for photopic vision.

The equipment was calibrated using luminous intensity standard lamps and where necessary colour filters, all with calibrations traceable to the National Physical Laboratory, Teddington.

6. RESULTS

The results of the photometric tests are given on the following pages of this report.

The chromaticity coordinates of the light emitted was:

Stop 12V Clear:	x = 0.693	y = 0.305	z = 0.002
Tail 12V Clear:	x = 0.692	y = 0.307	z = 0.001
Direction Indicator 12V Clear:	x = 0.600	y = 0.398	z = 0.002
Stop 24V Clear:	x = 0.693	y = 0.305	z = 0.002
Tail 24V Clear:	x = 0.692	y = 0.306	z = 0.002
Direction Indicator 24V Clear:	x = 0.599	y = 0.399	z = 0.002
Stop 12V Amber/Red:	x = 0.696	y = 0.302	z = 0.002
Tail 12V Amber/Red:	x = 0.695	y = 0.303	z = 0.002
Direction Indicator 12V Amber/Red:	x = 0.602	y = 0.396	z = 0.002
Stop 24V Amber/Red	x = 0.696	y = 0.302	z = 0.002
Tail 24V Amber/Red:	x = 0.695	y = 0.304	z = 0.001
Direction Indicator 24V Amber/Red	x = 0.599	y = 0.399	z = 0.002



**DATA SHEET FOR PHOTOMETRIC TESTS ON A CATEGORY 2a DIRECTION INDICATOR
TO ECE REGULATION 6.01**

VCA Job No: EAL217660

Manufacturer: Luxvision Limited

Unit Identification: RCL.0200

Category: 2a

Lens: Clear Lens

PHOTOMETRIC PERFORMANCE

Values are given in candelas. The notations U, D, L and R refer to the measuring point Up, Down, Left or Right of the reference axis.

Test Angles		Luminous Intensity (Candelas)			
		Limit			
Vertical	Horizontal	Sample 12V	Sample 24V	Min	Max
10° U	5° R	41.5	40.5	10	500
	5° L	46.5	41.2	10	500
	20° R	16.5	14.5	5	500
5° U	10° R	57.2	57.3	10	500
	V	119	103	35	500
	10° L	74.4	60.0	10	500
	20° L	18.2	15.3	5	500
H	10° R	80.1	80.1	17.5	500
	5° R	114	103	45	500
	V	122	108	50	500
	5° L	120	108	45	500
	10° L	90.1	771	17.5	500
5° D	20° R	13.4	16.4	5	500
	10° R	53.1	51.6	10	500
	V	104	97.5	35	500
	10° L	64.9	53.3	10	500
	20° L	19.7	14.2	5	500
10° D	5° R	32.6	30.4	10	500
	5° L	37.5	32.1	10	500



**DATA SHEET FOR PHOTOMETRIC TESTS ON A CATEGORY 2a DIRECTION INDICATOR
TO ECE REGULATION 6.01**

VCA Job No: EAL217660
Manufacturer: Luxvision Limited
Unit Identification: RCL.0200
Category: 2a
Lens: Clear Lens

PHOTOMETRIC RESULTS

Outside the reference axis, within the fields specified in the appropriate arrangement diagram, ie. within a zone 45° inboard, 80° outboard from the reference axis, 15° above or below the horizontal:

The minimum intensity was	1.1	cd for 12V sample
	and 1.0	cd for 24V sample
Minimum limit	0.3	cd
The maximum intensity was	203	cd for 12V sample
	and 143	cd for 24V sample
Maximum limit	500	cd



DATA SHEET FOR PHOTOMETRIC TESTS ON A CATEGORY 2a DIRECTION INDICATOR TO ECE REGULATION 6.01

VCA Job No: EAL217660

Manufacturer: Luxvision Limited

Unit Identification: RCL.0200

Category: 2a

Lens: Amber/Red Lens

PHOTOMETRIC PERFORMANCE

Values are given in candelas. The notations U, D, L and R refer to the measuring point Up, Down, Left or Right of the reference axis.

Test Angles		Luminous Intensity (Candelas)			
				Limit	
Vertical	Horizontal	Sample 12V	Sample 24V	Min	Max
10° U	5° R	42.6	29.1	10	500
	5° L	37.8	33.9	10	500
5° U	20° R	16.4	13.3	5	500
	10° R	66.1	54.5	10	500
	V	113	99.4	35	500
	10° L	59.4	52.8	10	500
	20° L	17.0	13.7	5	500
H	10° R	83.1	75.2	17.5	500
	5° R	108	104	45	500
	V	111	108	50	500
	5° L	105	103	45	500
	10° L	73.1	77.6	17.5	500
5° D	20° R	15.1	11.2	5	500
	10° R	51.6	45.7	10	500
	V	91.1	101	35	500
	10° L	43.5	65.6	10	500
	20° L	14.4	17.8	5	500
10° D	5° R	29.2	35.6	10	500
	5° L	23.8	37.1	10	500



**DATA SHEET FOR PHOTOMETRIC TESTS ON A CATEGORY 2a DIRECTION INDICATOR
TO ECE REGULATION 6.01**

VCA Job No: EAL217660
Manufacturer: Luxvision Limited
Unit Identification: RCL.0200
Category: 2a
Lens: Amber/Red Lens

PHOTOMETRIC RESULTS

Outside the reference axis, within the fields specified in the appropriate arrangement diagram, ie. within a zone 45° inboard, 80° outboard from the reference axis, 15° above and below the horizontal:

The minimum intensity was	0.7	cd for 12V sample
	and 0.6	cd for 24V sample
Minimum limit	0.3	cd
The maximum intensity was	152	cd for 12V sample
	and 143	cd for 24V sample
Maximum limit	500	cd



DATA SHEET FOR PHOTOMETRIC TESTS ON A TAIL LAMP OF CATEGORY R1 TO ECE REGULATION 7.02

VCA Job No: EAL217660

Manufacturer: Luxvision Limited

Unit Identification: RCL.0200

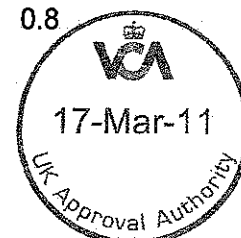
Category: R1

Lens: Clear Lens

PHOTOMETRIC PERFORMANCE

Values are given in candelas. The notations U, D, L and R refer to the measuring points Up, Down, Left or Right of the reference axis.

Test Angles	Vertical	Horizontal	Luminous Intensity (Candelas)		
			Sample 12V	Sample 24V	Limit Min
10° U		5° L	4.5	4.7	0.8
		5° R	4.0	4.1	0.8
5° U		20° L	2.0	2.1	0.4
		10° L	7.3	7.1	0.8
		V	10.9	11.1	2.8
		10° R	6.4	6.9	0.8
		20° R	1.7	2.1	0.4
H		10° L	11.0	10.6	1.4
		5° L	12.1	12.3	3.6
		V	12.1	12.9	4
					17 Max
		5° R	11.0	11.4	3.6
		10° R	9.1	10.4	1.4
5° D		20° L	2.6	2.0	0.4
		10° L	9.1	8.8	0.8
		V	12.1	12.3	2.8
		10° R	7.1	7.4	0.8
		20° R	1.8	2.1	0.4
10° D		5° L	6.1	6.2	0.8
		5° R	5.1	5.1	0.8



DATA SHEET FOR PHOTOMETRIC TESTS ON A TAIL LAMP OF CATEGORY R1 TO ECE REGULATION 7.02

VCA Job No: EAL217660
Manufacturer: Luxvision Limited
Unit Identification: RCL.0200
Category: R1
Lens: Clear Lens

PHOTOMETRIC RESULTS

Outside the reference axis, within the fields specified in the appropriate arrangement diagram, ie. within a zone 45° inboard, 45° outboard from the reference axis, 15° above and below the horizontal:

The minimum intensity was 0.1 cd for 12V sample
and 0.1 cd for 24V sample
Minimum limit 0.05 cd

The maximum intensity was 11.2 cd for 12V sample
and 13.0 cd for 24V sample
Maximum limit 17 cd

For a red rear lamp incorporated with a stop lamp:

Minimum ratio between the luminous intensities of the two lamps turned on simultaneously and of the red rear lamp alone in the field limited by $\pm 10^\circ$ H and $\pm 5^\circ$ V exceeded 10:1

Minimum limit: 5:1

Note

Within the field of light distribution the pattern was checked and found to be substantially uniform.



DATA SHEET FOR PHOTOMETRIC TESTS ON A TAIL LAMP OF CATEGORY R1 TO ECE REGULATION 7.02

VCA Job No: EAL217660

Manufacturer: Luxvision Limited

Unit Identification: RCL.0200

Category: R1

Lens: Amber/Red Lens

PHOTOMETRIC PERFORMANCE

Values are given in candelas. The notations U, D, L and R refer to the measuring points Up, Down, Left or Right of the reference axis.

Test Angles Vertical	Horizontal	Luminous Intensity (Candelas)		
		Sample 12V	Sample 24V	Limit Min
10° U	5° L	3.7	4.4	0.8
	5° R	4.1	4.1	0.8
5° U	20° L	1.7	2.0	0.4
	10° L	6.2	7.1	0.8
	V	10.0	9.9	2.8
	10° R	6.8	5.2	0.8
	20° R	2.1	1.6	0.4
H	10° L	8.7	8.7	1.4
	5° L	11.2	10.4	3.6
	V	11.0	10.2	4
				17 Max
	5° R	10.8	9.4	3.6
	10° R	10.3	7.9	1.4
5° D	20° L	1.7	1.9	0.4
	10° L	7.5	5.9	0.8
	V	11.0	10.1	2.8
	10° R	7.7	6.4	0.8
	20° R	2.0	1.5	0.4
10° D	5° L	5.1	4.0	0.8
	5° R	5.0	3.9	0.8



DATA SHEET FOR PHOTOMETRIC TESTS ON A TAIL LAMP OF CATEGORY R1 TO ECE REGULATION 7.02

VCA Job No: EAL217660
Manufacturer: Luxvision Limited
Unit Identification: RCL.0200
Category: R1
Lens: Amber/Red Lens

PHOTOMETRIC RESULTS

Outside the reference axis, within the fields specified in the appropriate arrangement diagram, ie. within a zone 45° inboard, 45° outboard from the reference axis, 15° above and below the horizontal:

The minimum intensity was 0.1 cd for 12V sample
and 0.1 cd for 24V sample

Minimum limit 0.05 cd

The maximum intensity was 11.3 cd for 12V sample
and 9.7 cd for 24V sample

Maximum limit 17 cd

For a red rear lamp incorporated with a stop lamp:

Minimum ratio between the luminous intensities of the two lamps turned on simultaneously and of the red rear lamp alone in the field limited by $\pm 10^\circ$ H and $\pm 5^\circ$ V exceeded 10:1

Minimum limit: 5:1

Note

Within the field of light distribution the pattern was checked and found to be substantially uniform.



DATA SHEET FOR PHOTOMETRIC TESTS ON A STOP LAMP OF CATEGORY S1 TO ECE REGULATION 7.02

VCA Job No: EAL217660
 Manufacturer: Luxvision Limited
 Unit Identification: RCL.0200
 Category: S1
 Lens: Clear Lens

PHOTOMETRIC PERFORMANCE

Values are given in candelas. The notations U, D, L and R refer to the measuring points Up, Down, Left or Right of the reference axis.

Test Angles Vertical	Horizontal	Luminous Intensity (Candelas)		
		Sample 12V	Sample 24V	Limit Min
10° U	5° L	39.9	40.2	12
	5° R	35.8	35.4	12
5° U	20° L	17.4	18.2	6
	10° L	64.2	61.0	12
	V	95.8	94.4	42
	10° R	56.9	59.3	12
	20° R	14.7	17.4	6
H	10° L	96.7	90.5	21
	5° L	107	105	54
	V	106	110	60
				260 max
	5° R	97.4	97.7	54
	10° R	80.2	88.0	21
5° D	20° L	22.2	17.3	6
	10° L	79.0	74.2	12
	V	107	106	42
	10° R	62.6	63.0	12
	20° R	15.4	17.5	6
10° D	5° L	52.6	52.0	12
	5° R	45.1	43.3	12



DATA SHEET FOR PHOTOMETRIC TESTS ON A STOP LAMP OF CATEGORY S1 TO ECE REGULATION 7.02

VCA Job No: EAL217660
Manufacturer: Luxvision Limited
Unit Identification: RCL.0200
Category: S1
Lens: Clear Lens

PHOTOMETRIC RESULTS

Outside the reference axis, within the fields specified in the appropriate arrangement diagram, ie. within a zone 45° inboard, 45° outboard from the reference axis, 15° above and below the horizontal:

The minimum intensity was 0.9 cd for 12V sample
and 0.9 cd for 24V sample

Minimum limit 0.3 cd

The maximum intensity was 113 cd for 12V sample
and 132 cd for 24V sample

Maximum limit 260 cd

For a red rear lamp incorporated with a stop lamp:

Minimum ratio between the luminous intensities of the two lamps turned on simultaneously and of the red rear lamp alone in the field limited by $\pm 10^\circ$ H and $\pm 5^\circ$ V exceeded 10:1

Minimum limit: 5:1

Note

Within the field of light distribution the pattern was checked and found to be substantially uniform.



DATA SHEET FOR PHOTOMETRIC TESTS ON A STOP LAMP OF CATEGORY S1 TO ECE REGULATION 7.02

VCA Job No: EAL217660
 Manufacturer: Luxvision Limited
 Unit Identification: RCL.0200
 Category: S1
 Lens: Amber/Red Lens

PHOTOMETRIC PERFORMANCE

Values are given in candelas. The notations U, D, L and R refer to the measuring points Up, Down, Left or Right of the reference axis.

Test Angles Vertical	Horizontal	Luminous Intensity (Candelas)		
		Sample 12V	Sample 24V	Limit Min
10° U	5° L	33.5	40.0	12
	5° R	36.6	38.1	12
5° U	20° L	16.2	17.8	6
	10° L	56.7	64.6	12
	V	89.9	91.3	42
	10° R	60.5	47.9	12
	20° R	18.4	14.5	6
H	10° L	77.6	79.9	21
	5° L	101	95.8	54
	V	99.6	94.3	60
				260 max
	5° R	96.4	86.8	54
	10° R	91.8	72.6	21
5° D	20° L	15.6	17.3	6
	10° L	66.7	54.9	12
	V	100	92.9	42
	10° R	69.6	58.8	12
	20° R	17.8	14.2	6
10° D	5° L	45.5	37.3	12
	5° R	44.7	35.8	12



DATA SHEET FOR PHOTOMETRIC TESTS ON A STOP LAMP OF CATEGORY S1 TO ECE REGULATION 7.02

VCA Job No: EAL217660
Manufacturer: Luxvision Limited
Unit Identification: RCL.0200
Category: S1
Lens: Amber/Red Lens

PHOTOMETRIC RESULTS

Outside the reference axis, within the fields specified in the appropriate arrangement diagram, ie. within a zone 45° inboard, 45° outboard from the reference axis, 15° above and below the horizontal:

The minimum intensity was 0.9 cd for 12V sample
and 0.8 cd for 24V sample

Minimum limit 0.3 cd

The maximum intensity was 109 cd for 12V sample
and 101 cd for 24V sample

Maximum limit 260 cd

For a red rear lamp incorporated with a stop lamp:

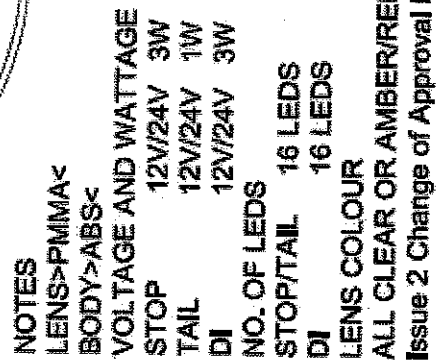
Minimum ratio between the luminous intensities of the two lamps turned on simultaneously and of the red rear lamp alone in the field limited by $\pm 10^\circ$ H and $\pm 5^\circ$ V exceeded 10:1

Minimum limit: 5:1

Note

Within the field of light distribution the pattern was checked and found to be substantially uniform.





luxvision	Designed by MLR	Checked by MLR	Approved by - date MLR	Material	Date 26/01/2011	Scale
	0200.STOP/TAILO/DI			Type	Edition	Sheet

END OF REPORT





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

THE UNITED KINGDOM VEHICLE APPROVAL AUTHORITY

Rev 1/03



COMMUNICATION CONCERNING THE APPROVAL GRANTED OF A
TYPE OF DEVICE PURSUANT TO REGULATION NO: 7.02

Approval No: 021671

Extension: 2

1. Trade name or mark of the device: Farplas and Cobo
2. Manufacturer's name for the type of device: STL.0200.001
3. Manufacturer's name and address:

Luxvision Limited
Unit 24
Dawkins Road Industrial Estate
Poole
Dorset
BH15 4 JD
United Kingdom
4. If applicable, name and address of the manufacturer's representative: Not applicable
5. Submitted for approval on: As before and 19 December 2006
6. Technical service responsible for conducting approval tests: BSI Product Services
7. Date of report issued by that service: As before and 27 March 2007
8. Number of report issued by that service: As before and 247/4933525 Issue 2



9. Concise description⁽³⁾:

By category of lamp: R-S1

For mounting either outside or inside or both: Outside

Colour of light emitted: Red

Number and category of filament lamp(s): 36 x LED 12 or 24 volts 4 watts (Stop) / 1 watt (Rear)

Geometrical conditions or installation and relating variations if any: See drawing

Only for limited mounting height or equal to or less than 750mm above the ground: No

10. Position of the approval mark: Moulded on lens

11. Reason(s) for extension (if applicable):

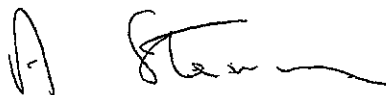
1. Alternative lens colour
2. Addition of trade names Farplas and Cobo

12. Approval: GRANTED

13. Place: BRISTOL

14. Date: 11 APRIL 2007

15. Signature:



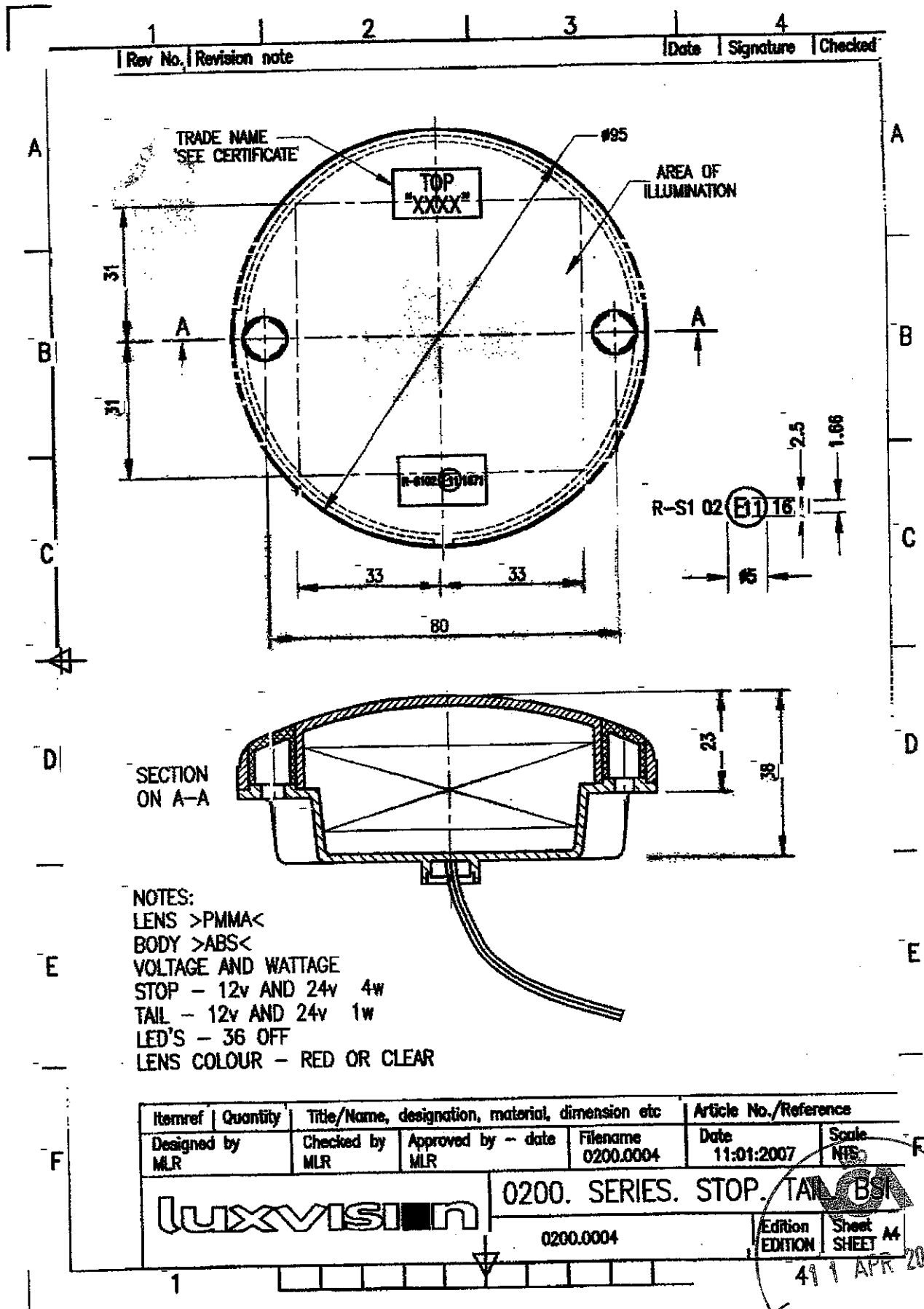
A W STENNING
Head of Product Certification

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.

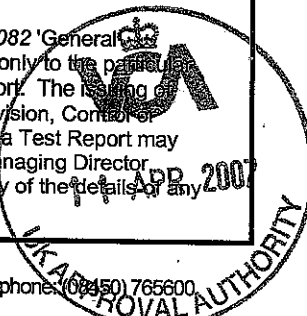
EAG173100



DRAWING



Test Report

Report No	247/4933525 Issue 2	EAG173100	This Report consists of 9 pages
Client	Vehicle Certification Agency on behalf of Luxvision Ltd Unit 24 Dawkins Road Industrial Estate Poole BH15 4JD		
Authority & date	Vehicle Certification Agency dated 14 December 2006		
Items tested	STL.0200.001 stop and red rear position (side) lamp		
Specification	ECE Regulation 7.02		
Results	The samples submitted complied with the requirements of the above Specification Issue 2 of this Report supersedes all previous issues. The amendment giving rise to this issue of the Report can be ascertained by contacting the authorizing signatory.		
Prepared by	P Ottavio Senior Technician Engineer 		
Authorized by	C Stratford Section Head, Lighting Technology 		
Issue Date	27 March 2007 		
Conditions of issue	This Test Report is issued subject to the conditions stated in current issue of PS082 'General conditions relating to acceptance of testing'. The results contained herein apply only to the particular sample/s tested and to the specific tests carried out, as detailed in this Test Report. The issuing of this Test Report does not indicate any measure of Approval, Certification, Supervision, Control or Surveillance by BSI of any product. No extract, abridgement or abstraction from a Test Report may be published or used to advertise a product without the written consent of the Managing Director, BSI Product Services, who reserves the absolute right to agree or reject all or any of the details of any items or publicity for which consent may be sought. 		

1. INTRODUCTION

Samples submitted: STL.0200.001 stop and red rear position (side) lamp for use in both 12 and 24 volt systems.

Date submitted: 19 December 2006

Date of test 4 January 2007

ECE Regulation: 7.02 'Uniform provisions concerning the approval of front and rear position (side) lamps, stop-lamps and end-outline marker lamps for motor vehicles (except motor cycles) and their trailers'.

1.1 Approval tests on the following functions of the unit were requested by the applicant:

Extension of approval on a stop and red rear position (side) lamp to cover the following:

- Additional use of a clear lens
- Additional trade names Farplas and Cobo.

To satisfy worst case requirements photometric and colorimetric measurements were made on one sample of each voltage.

1.2 Types and number of lamps used:

36 LED array operating at either 12 or 24 volts 4/1 watt

1.3 Versions of unit manufactured covered by this Report:

A single version of the unit was manufactured for mounting on either side of the vehicle.

2. CONCLUSIONS:

The samples submitted complied with the requirements of ECE Regulation 7.02 as a stop lamp and red rear position (side) lamp for use in both a 12 and 24 volt system. The original approval granted may therefore be extended accordingly.



3. BRIEF DESCRIPTION OF THE UNIT

See attached drawing.

The lamp was manufactured by:

Shanghai CATA Signal Co Ltd
Zhongxin Village
Xuanqiao Town
Nanhui District
Shanghai
PR China

4. MARKING

See attached drawing.



5. PHOTOMETRIC TESTS

All photometric measurements were made in accordance with the procedures detailed in the appropriate Specifications.

The photometer incorporated a filter which closely corrected its spectral response to the CIE spectral luminous efficiency of the human eye for photopic vision.

The equipment was calibrated using luminous intensity standard lamps and where necessary colour filters, all with calibrations traceable to the National Physical Laboratory, Teddington.

6. RESULTS

The results of the photometric tests are given on the following data sheets:

The chromaticity coordinates of the light emitted were:

Red: $x = 0.697$ $y = 0.302$ $z = 0.001$

NOTE

The manufacturer declared that the apparent surface was the light emitting surface.



DATA SHEET FOR PHOTOMETRIC TESTS ON A RED REAR LAMP TO ECE REGULATION 7.02

VCA Job No: EAG173100
 Manufacturer: Shanghai CATA Signal Co Ltd for Luxvision Ltd
 Unit Identification: STL.0200.001
 Fitted with light source: LED

PHOTOMETRIC PERFORMANCE

Values are given in candelas. The notations U, D, L and R refer to the measuring points Up, Down, Left or Right of the reference axis.

Test Angles		Luminous Intensity (Candelas)		
Vertical	Horizontal	Sample 1 24 volt	Sample 2 12 volt	Limit Min
10°U	5°R	6.40	7.40	0.8
	5°L	5.60	7.70	0.8
5°U	20°R	2.20	2.00	0.4
	10°R	6.50	5.90	0.8
	V	9.00	9.30	2.8
	10°L	5.70	5.70	0.8
	20°L	1.50	1.80	0.4
H	10°R	6.50	6.40	1.4
	5°R	9.00	8.30	3.6
	V	9.40	9.00	4 min 12 max
	5°L	7.60	7.50	3.6
	10°L	5.20	5.30	1.4
5°D	20°R	1.80	1.30	0.4
	10°R	6.10	5.00	0.8
	V	7.90	6.20	2.8
	10°L	4.80	4.10	0.8
	20°L	1.30	1.20	0.4
10°D	5°R	5.60	3.90	
	5°L	4.90	3.50	



DATA SHEET FOR PHOTOMETRIC TESTS ON A RED REAR TO ECE REGULATION 7.02

VCA Job No: EAG173100
Manufacturer: Shanghai CATA Signal Co Ltd for Luxvision Ltd
Unit Identification: STL. 0200.001
Fitted with light source: LED

PHOTOMETRIC RESULTS

Outside the reference axis, within the fields specified in the appropriate arrangement diagram, ie. Within a zone 45° inboard, 45° outboard from the reference axis, 15° above or below the horizontal:

The minimum intensity was	0.1	cd. for Sample 1 (24 Volts)
	and	0.1
		cd. for Sample 2 (12 Volts)
Minimum limit	0.05	cd.
The maximum intensity was	9.76	cd. for Sample 1 (24 Volts) at HV
	and	9.54
		cd. for Sample 2 (12 Volts) at HV
Maximum limit	12	cd.

Note Within the field of light distribution the pattern was checked and found to be substantially uniform.



DATA SHEET FOR PHOTOMETRIC TESTS ON A STOP LAMP OF CATEGORY S1 TO ECE REGULATION 7.02

VCA Job No: EAG173100

Manufacturer: Shanghai CATA Signal Co Ltd for Luxvision Ltd

Unit Lamp Identification: STL. 0200.001

Fitted with light source: LED

PHOTOMETRIC PERFORMANCE

Values are given in candelas. The notations U, D, L and R refer to the measuring positions Up, Down, Left or Right of the reference axis.

Test Angles		Luminous Intensity (Candelas)		
Vertical	Horizontal	Sample 1 24 volt	Sample 2 12 volt	Limit Min
10°U	5°R	91.5	79.8	12
	5°L	93.1	71.7	12
	20°R	25.0	28.1	6
5°U	10°R	74.4	79.5	12
	V	115	113	42
	10°L	71.0	69.4	12
	20°L	22.0	18.6	6
H	10°R	79.8	81.1	21
	5°R	104	109	54
	V	112	116	60 min 185 max
	5°L	94.3	92.9	54
	10°L	67.1	61.4	21
	20°R	16.3	20.9	6
5°D	10°R	63.2	74.0	12
	V	78.7	95.2	42
	10°L	51.5	56.4	
	20°L	14.7	15.5	
10°D	5°R	49.1	66.1	
	5°L	44.4	57.8	



DATA SHEET FOR PHOTOMETRIC TESTS ON A STOP LAMP OF CATEGORY S1 TO ECE REGULATION 7.02

VCA Job No: EAG173100
Manufacturer: Shanghai CATA Signal Co Ltd for Luxvision Ltd
Unit identification No: STL. 0200.001
Fitted with light source: LED

PHOTOMETRIC RESULTS

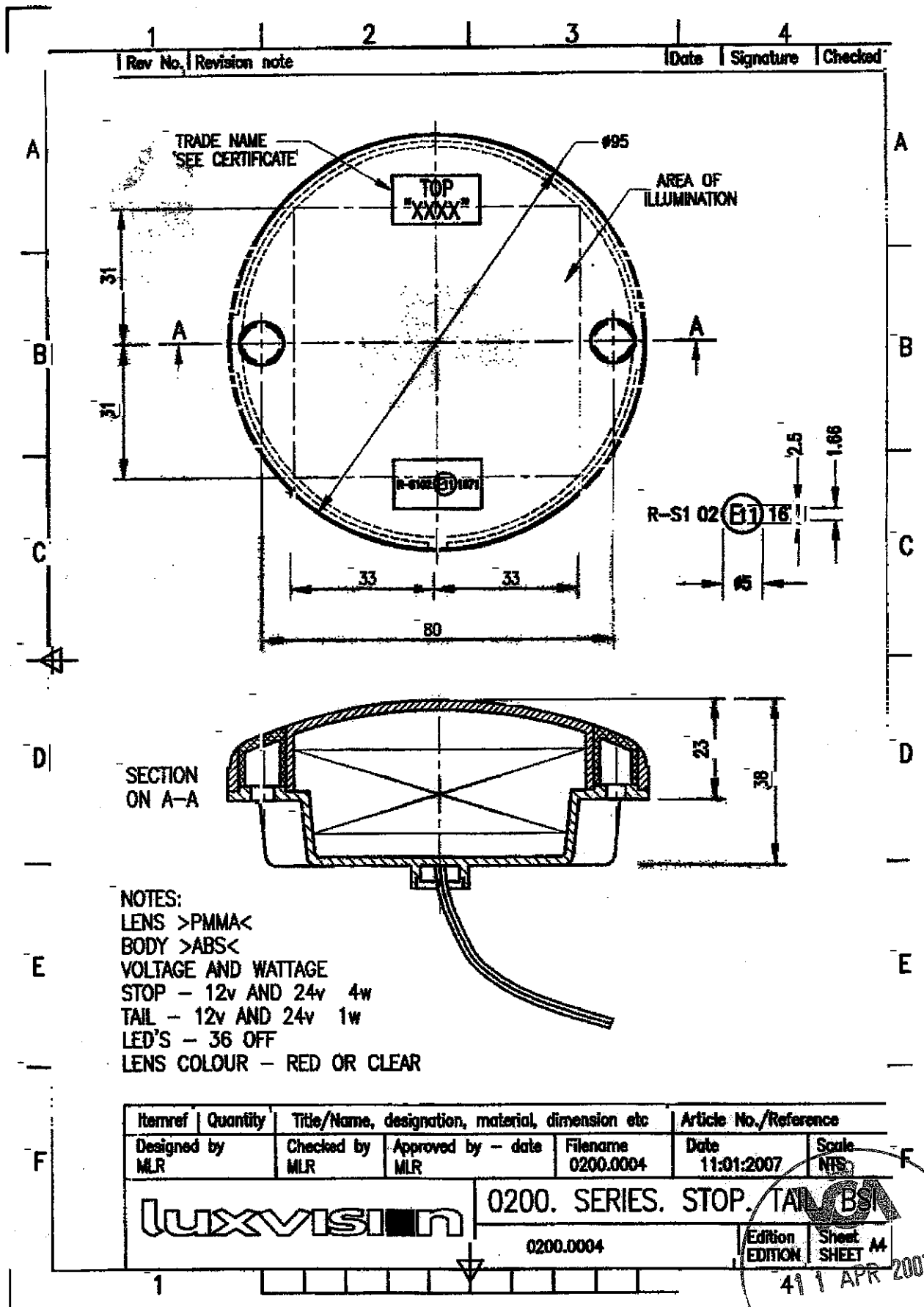
Outside the reference axis, within the fields specified in the appropriate arrangement diagram, ie. within a zone 45° inboard, 80° outboard from the reference axis, 15° above or below the horizontal:

The minimum intensity was	6.0	cd. for Sample 1 (24 Volts)
	and 6.2	cd. for Sample 2 (12 Volts)
Minimum limit	0.30	cd.
The maximum intensity was	134	cd. for Sample 1 (24 Volts) at HV
	and 128	cd. for Sample 2 (12 Volts) at HV
Maximum limit	185	cd.

Note Within the field of light distribution the pattern was checked and found to be substantially uniform.



DRAWING



**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

THE UNITED KINGDOM VEHICLE APPROVAL AUTHORITY

Rev.1/03



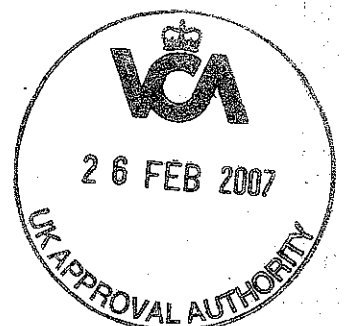
COMMUNICATION CONCERNING THE APPROVAL GRANTED OF A
TYPE OF REAR FOG LAMP FOR POWER-DRIVEN VEHICLES AND
THEIR TRAILERS PURSUANT TO REGULATION NO 38

Approval No: 0153

Extension: 02

1. Trade name or mark of the device: As before and Farplas and Cobo
2. Manufacturer's name for the type of device: FLR 0200.001
3. Manufacturers name and address:

Luxvision Limited
Unit 24
Dawkins Road Industrial Estate
Poole
Dorset
BH15 4JD
United Kingdom
4. If applicable, name and address of the manufacturers representative: Not applicable
5. Submitted for approval on: As before and 19 December 2006
6. Technical service conducting approval tests: BSI Product Services
7. Date of report issued by that service: As before and 9 February 2007
8. Number of report(s) issued by that service: As before and 247/4933510



9. Concise description:

Number and category of filament lamps: 30 LEDs operating at 12 or 24 volts 3 watts

Geometrical conditions of installation and relating variations; if any: See drawing

10. Position of the approval mark: Moulded on lens

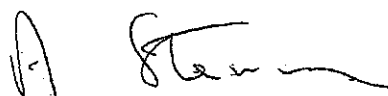
11. Reason(s) for extension (if applicable): 1) Change of number of LEDs from 36 to 30
2) Alternative lens colour
3) Addition of trade names Farplas and Cobo

12. Approval GRANTED

13. Place: BRISTOL

14. Date: 26 FEBRUARY 2007

15. Signature:



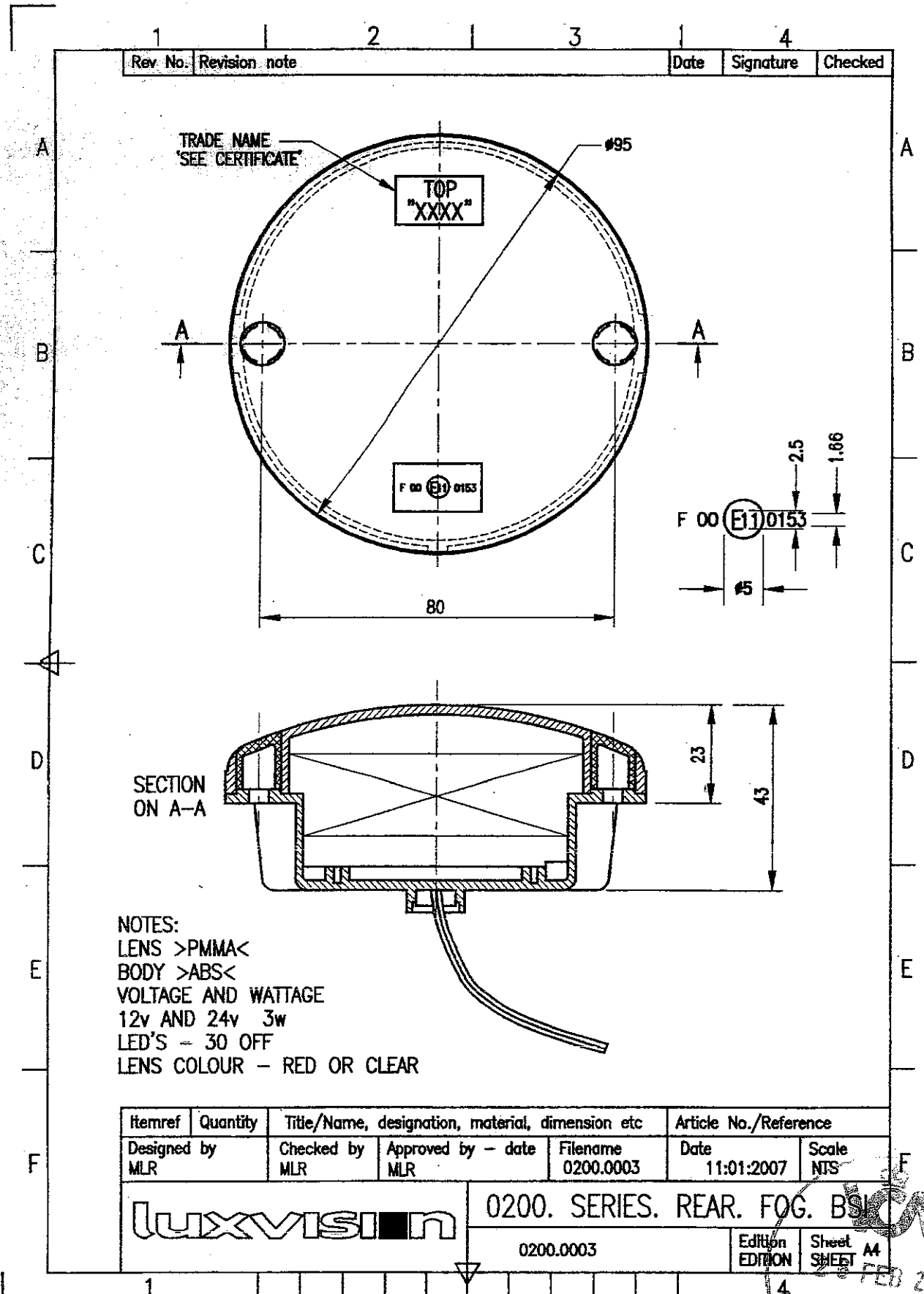
A W STENNING
Head of Product Certification

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.

EAG173099



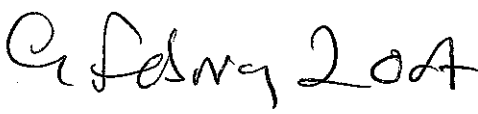
DIAGRAM



28 FEB 2007

4/1 APPROVAL AUTHO

Test Report

Report No	247/4933510	EAG173099	This Report consists of 7 pages
Client	Vehicle Certification Agency on behalf of Luxvision Limited Unit 24, Dawkins Road Industrial Estate Poole Dorset BH15 4JD		
Authority & date	Vehicle Certification Agency dated 14 December 2006		
Items tested	FLR 0200.001 Rear fog lamp		
Specification	ECE Regulation 38		
Results	The samples submitted complied with the requirements of the above specification		
Prepared by	P Ottavio Senior Technician Engineer 		
Authorized by	C Stratford Principal Engineer - Section Head, Lighting Technology 		
Issue Date	9 February 2007 		
Conditions of issue	This Test Report is issued subject to the conditions stated in current issue of PS082 'General conditions relating to acceptance of testing'. The results contained herein apply only to the particular sample/s tested and to the specific tests carried out, as detailed in this Test Report. The issuing of this Test Report does not indicate any measure of Approval, Certification, Supervision, Control or Surveillance by BSI of any product. No extract, abridgement or abstraction from a Test Report may be published or used to advertise a product without the written consent of the Managing Director, BSI Product Services, who reserves the absolute right to agree or reject all or any of the details of any items or publicity for which consent may be sought.  26 FEB 2007		

1. INTRODUCTION

Samples submitted: FLR 0200.001 rear fog lamp for use in both 12 and 24 volt systems.

Date submitted: 19 December 2006

Date of test 4 January 2007

ECE Regulation: 38 up to and including Rev.2/Amend. 1
'Uniform provisions concerning the approval of rear fog lamps for power-driven vehicles and their trailers'.

1.1 Approval tests on the following functions of the unit were requested by the applicant:

Extension with test on a rear fog lamp to cover the following:

- Change of number of LED array from 36 to 30 LEDs.
- Addition of type with clear lens
- Additional trade names Farplas and Cobo.

To satisfy worst case requirements photometric and colorimetric measurements were made on one sample.

1.2 Types and number of lamps used:

30 LED array operating at either 12 or 24 Volts 3 Watts

1.3 Versions of unit manufactured covered by this Report:

A single version of the unit was manufactured for mounting on either side of the vehicle.

2. CONCLUSIONS

The samples submitted complied with the requirements of ECE Regulation 38 as rear fog lamps for use in both a 12 and 24 Volt systems. Therefore the original approval can be extended accordingly.



3. BRIEF DESCRIPTION OF THE UNIT

See attached drawing.

The lamp was manufactured by:

Shanghai CATA Signal Co Ltd
Zhongxin Village
Xuanqiao Town
Nanhui District
Shanghai
PR China

4. MARKING

See attached drawing.



5. PHOTOMETRIC TESTS

All photometric measurements were made in accordance with the procedures detailed in the appropriate Specifications.

The photometer incorporated a filter which closely corrected its spectral response to the CIE spectral luminous efficiency of the human eye for photopic vision.

The equipment was calibrated using luminous intensity standard lamps and where necessary colour filters, all with calibrations traceable to the National Physical Laboratory, Teddington.

6. RESULTS

The results of the photometric tests are given on the following data sheets:

The chromaticity coordinates of the light emitted were:

Red lens:	$x = 0.702$	$y = 0.297$	$z = 0.001$
Clear lens:	$x = 0.699$	$y = 0.299$	$z = 0.002$



DATA SHEET FOR PHOTOMETRIC TEST ON A REAR FOG LAMP TO ECE REGULATION 38

VCA Job No: EAG173099
 Manufacturer: Shanghai CATA Signal Co Ltd for Luxvision Ltd
 Unit Identification: FLR 0200.001 Red lens
 Fitted with light source: LED

PHOTOMETRIC PERFORMANCE - Red lens samples

Values are given in candelas. The notations U, D, L and R refer to the measuring positions Up, Down, Left and Right of the reference axis.

Test Angles		Luminous Intensity (Candelas)		
Vertical	Horizontal	Sample 1 12 volt	Sample 2 24 volt	Limits
H	10° L – R	185	182	150 min
5° U - D	V	175	175	150 min
Minimum intensity between the axes ie: in rhombus shown in annex III Section 3		175	173	75 min
Peak		279	281	300 max
Area of exterior light emitting surface		< 140 cm ² (140cm ² max)		

After the heat test there was no apparent change of the lens or housing material.



DATA SHEET FOR PHOTOMETRIC TEST ON A REAR FOG LAMP TO ECE REGULATION 38

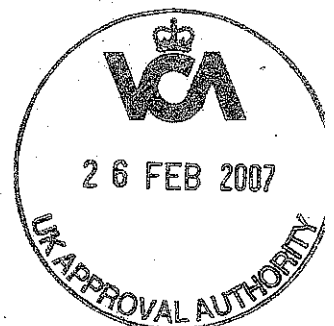
VCA Job No: EAG173099
 Manufacturer: Shanghai CATA Signal Co Ltd for Luxvision Ltd
 Unit Identification: FLR 0200.001 Clear lens
 Fitted with Filament lamp Type: LED

PHOTOMETRIC PERFORMANCE - Clear lens samples

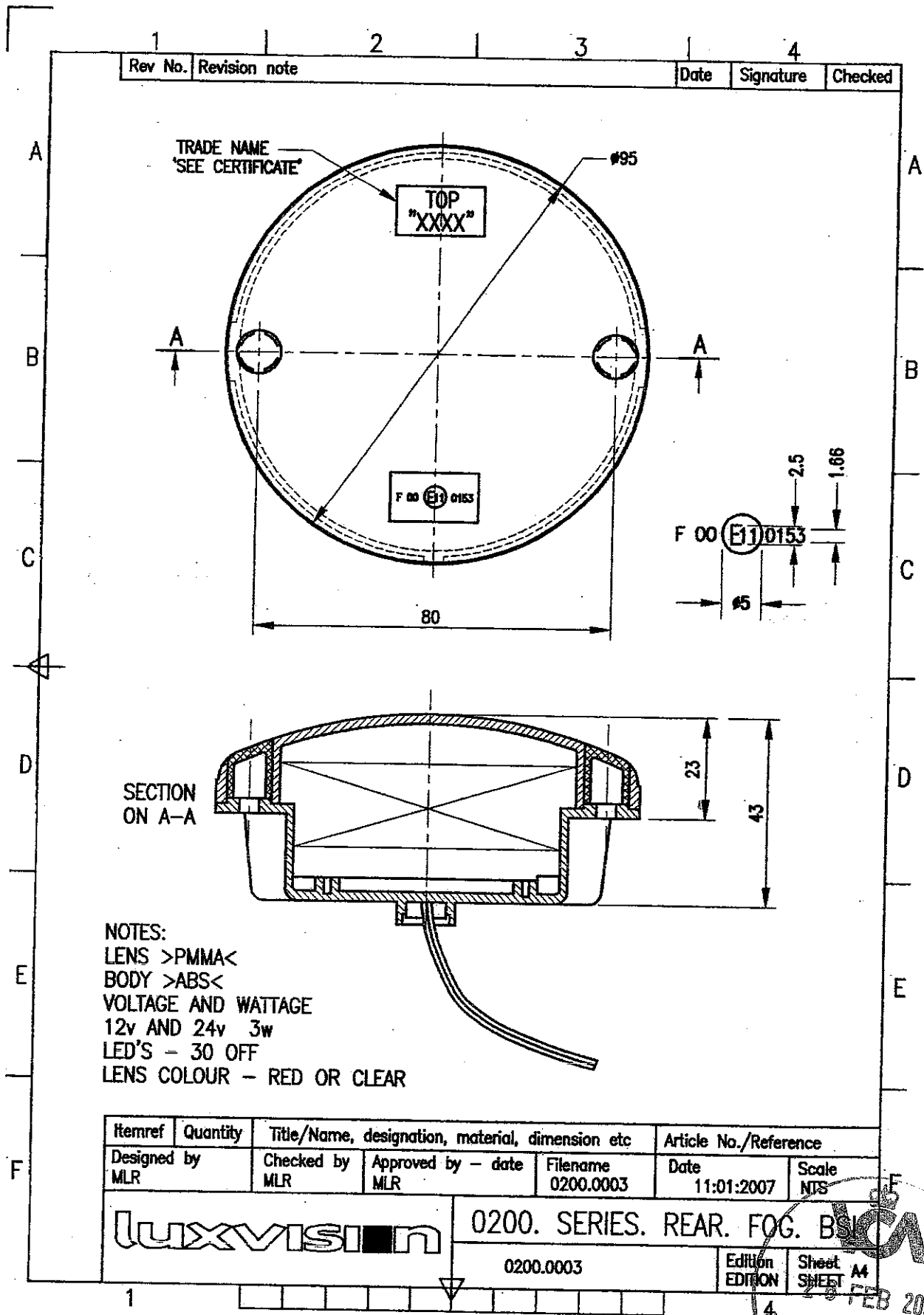
Values are given in candelas. The notations U, D, L and R refer to the measuring positions Up, Down, Left and Right of the reference axis.

Test Angles		Luminous Intensity (Candelas)		
Vertical	Horizontal	Sample 1 12 volt	Sample 2 24 volt	Limits
H	10° L – R	184	193	150 min
5° U - D	V	176	186	150 min
Minimum intensity between the axes ie: in rhombus shown in annex III Section 3		174	186	75 min
Peak		265	286	300 max
Area of exterior light emitting surface		< 140 cm ² (140cm ² max)		

After the heat test there was no apparent change of the lens or housing material.



DIAGRAM





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

THE UNITED KINGDOM VEHICLE APPROVAL AUTHORITY

Rev 1/03



COMMUNICATION CONCERNING THE APPROVAL GRANTED OF A TYPE
OF REVERSING LIGHT PURSUANT TO REGULATION NO 23

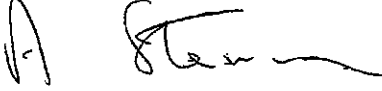
Approval No: 000221

Extension 1

1. Trade name or mark of the device: Luxvision or Rubbolite
2. Manufacturer's name for the type of device: RVL 0200.001
3. Manufacturer's name and address:

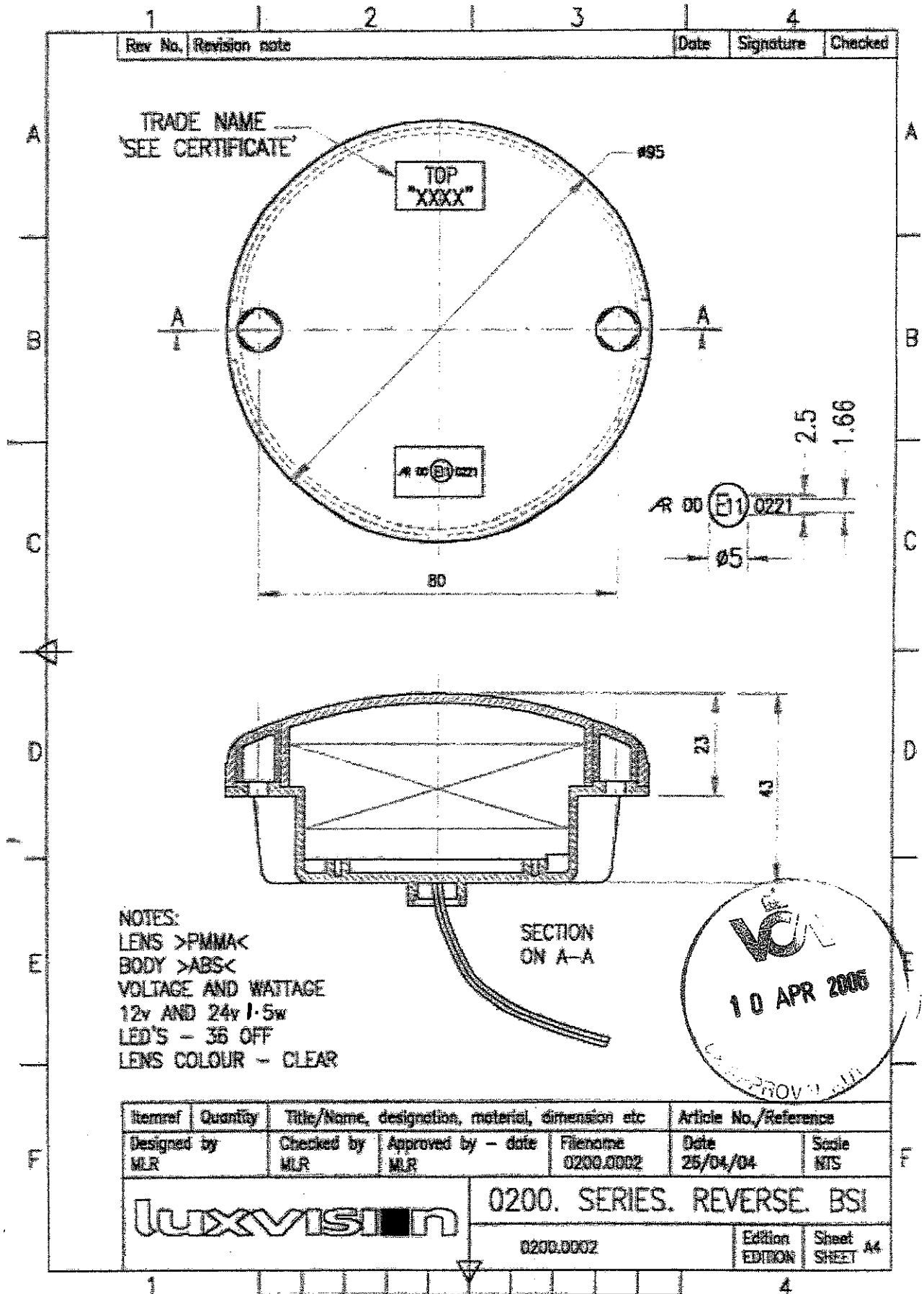
Luxvision Limited
Unit 24
Dawkins Road
Poole
Dorset
BH15 4JD
United Kingdom
4. If applicable, name and address of the manufacturer's representative: Not applicable
5. Submitted for approval on: As before and 9 February 2006
6. Technical service responsible for conducting the approval tests: BSI Product Services
7. Date of report issued by that service: As before and 31 March 2006
8. Number of report issued by that service: As before and 247/4808980



9. Concise description:
- Number and category of filament lamp(s): 30 LEDs operating at 12 or 24 volts 1.5 watts
- Geometrical conditions of installation and relating variations; if any: See manufacturer's information document
10. Position of the approval mark: Moulded on the lens
11. Comments This device shall be installed on a vehicle only as part of a pair of devices: No
12. Reason(s) for extension (if applicable): 1) Modification to reduce wattage
2) Change of address
13. Approval GRANTED
14. Place: BRISTOL
15. Date: 10 APRIL 2006
16. Signature 
- A. W. STENNING
Head of Product Certification
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.

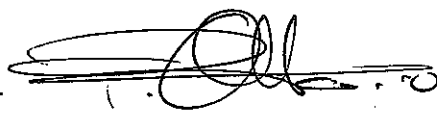
EAF070898





Test Report



Report No	247/4808980	EAF070898	This Report consists of 7 pages
Client	Vehicle Certification Agency on behalf of Luxvision Limited Unit 24 Dawkins Road Industrial Estate Poole Dorset BH15 4JD		
Authority & date	Vehicle Certification Agency dated 21 February 2006		
Items tested	RVL 0200.001 reverse lamp		
Specification	ECE Regulation 23		
Results	The samples submitted complied with the requirements of the above Specification		
Prepared by	P Ottavio Senior Technician Engineer 		
Authorized by	C Stratford Principal Engineer-Section Head, Lighting Technology 		
Issue Date	31 March 2006 		
Conditions of issue	This Test Report is issued subject to the conditions stated in current issue of PS082 'General conditions relating to acceptance of testing'. The results contained herein apply only to the particular sample/s tested and to the specific tests carried out, as detailed in this Test Report. The issuing of this Test Report does not indicate any measure of Approval, Certification, Supervision, Control or Surveillance by BSI of any product. No extract, abridgement or abstraction from a Test Report may be published or used to advertise a product without the written consent of the Managing Director, BSI Product Services, who reserves the absolute right to agree or reject all or any of the details of any items or publicity for which consent may be sought.		

1. INTRODUCTION

Samples submitted: Two samples of RVL0200.001 reverse lamp for use in both 12 and 24 volt systems.

Date submitted: 9 February 2006

Testing commenced: 15 March 2006

ECE Regulation: 23 up to and including Rev.1/Add.22/Rev.2 'Uniform provisions concerning the approval of reversing lights for power-driven vehicles and their trailers'.

1.1 Approval tests on the following functions of the unit were requested by the applicant:

Reversing lamp

1.2 Types and number of lamps used:

30 LED array operating at either 12 or 24 volts 1.5 watts

1.3 Versions of unit manufactured covered by this Report:

One version of the unit was manufactured for mounting on either side of the vehicle. For the purposes of this test it was only considered necessary to test one 12 volt and one 24 volt version.

Note: The purpose of this test is to extend the original approval to cover a reduction in wattage.

2. CONCLUSIONS:

The samples submitted complied with the requirements of ECE Regulation 23 as reverse lamps for use in both a 12 and 24 volt system.



3. BRIEF DESCRIPTION OF THE UNIT

Drawing reference: See drawing in BSI Report No 247/4518252 Issue 2
EAC018431

Housing material and finish: ABS

Reflector material and finish: Metalised ABS

Lens material: Clear PMMA

For further details refer to the attached drawing.

The lamp was manufactured by:

Shanghai CATA Signal Co Limited
No 3 ZhongXin Village
Xuan Qiao Town
Nan Hui District
Shanghai 201314
China

4. MARKING

See drawing in BSI Report No 247/4518252 Issue 2 EAC018431 for details.



5. PHOTOMETRIC TESTS

All photometric measurements were made in accordance with the procedures detailed in the appropriate Specifications.

The photometer incorporated a filter which closely corrected its spectral response to the CIE spectral luminous efficiency of the human eye for photopic vision.

The equipment was calibrated using luminous intensity standard lamps and where necessary colour filters, all with calibrations traceable to the National Physical Laboratory, Teddington.



DATA SHEET FOR PHOTOMETRIC TESTS ON A REVERSING LAMP TO ECE REGULATION 23

VCA Job No: EAF070898

Manufacturer: Shanghai CATA Signal Co Ltd for Luxvision Ltd

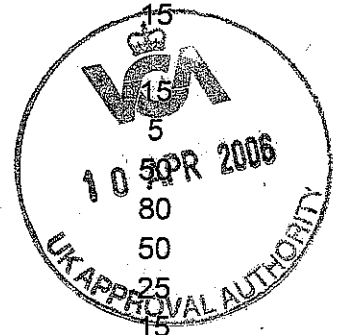
Unit Identification: RVL 0200.001

Fitted with Filament Lamp Type: LED

PHOTOMETRIC PERFORMANCE

Values are given in candelas. The notations U, D, L and R refer to the measuring positions Up, Down, Left or Right of the reference axis.

Test Angles		Luminous Intensity (Candelas)		
Vertical	Horizontal	Sample 1 12 volt	Sample 2 24 volt	Limit Min
10°U	10°R	32.6	16.9	10
	V	99.9	67.7	15
	10°L	33.2	30.4	10
	45°R	21.5	16.6	15
	10°R	86.3	45.3	20
5°U	V	167	135	25
	10°L	83.7	73.1	20
	45°L	28.0	15.0	15
	45°R	50.0	37.8	15
	30°R	102	53.9	25
H	10°R	139	95.1	50
	V	186	159	80
	10°L	131	126	50
	30°L	102	95.9	25
	45°L	59.9	43.0	15
5°D	45°R	36.0	31.6	15
	30°R	79.4	44.8	5
	10°R	104	81.2	80
	V	174	151	50
	10°L	96.5	108	25
	30°L	48.6	86.2	15
	45°L	37.4	43.8	



**DATA SHEET FOR PHOTOMETRIC TESTS ON A REVERSING LAMP TO ECE
REGULATION 23**

PHOTOMETRIC PERFORMANCE

VCA Job No: EAF070898
Manufacturer: Shanghai CATA Signal Co Ltd for Luxvision Ltd
Unit Identification: RVL 0200.001
Fitted with Filament lamp Type: LED

Maximum	Sample 1: 197	(300 max at
	Sample 2: 170	(horizontal
		(and above.
		(600 max below
		(horizontal.



