ECE TYPE-APPROVAL CERTIFICATE

E24

Communication concerning:[2] Approval granted
~~Approval extended~~
~~Approval refused~~
~~Approval withdrawn~~
~~Production definitely discontinued~~

of a type of device or system pursuant to UN Regulation No. 149

Class of the device:	***B***	Change index:	***0***
Approval No:	***E24*149R00/06*0863*00***		
Unique Identifier (UI) (If applicable)		***N/A***	
Reason(s) for extension (if applicable):		***N/A***	

1. Trade name or mark of the device or system: ***LY***

2. Manufacturer's name for the type of device or system: ***LY-HC02-7INCH***

3. Manufacturer's name and address: ***Guangzhou Sup-light Electronic Technology Co.,Ltd. 101,Building A, 1 Yiheng Road, Qinghu Caitian North Street,Junhe Street,Baiyun District, Guangzhou,Guangdong 510000 P.R.China***

4. If applicable, name and address of manufacturer's representative: ***N/A***

5. Submitted for approval on: ***26.12.2023***

6. Technical Service responsible for conducting approval tests: ***TÜV SÜD Auto Service GmbH, Westendstraße 199, D-80686 München***

7. Date of report issued by that service: ***15.12.2023***

8. Number of report issued by that service: ***23-02985-CX-SHA-00***

[1] Distinguishing number of the country which has granted/extended/refused/withdrawn approval (see approval provisions in the Regulation).
[2] Strike out what does not apply.

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Approval No: ***E24*149R00/06*0863*00***

9. Brief description:

9.1. For Headlamps of Classes A and B[1]	
9.1.1. Category as described by the relevant marking:[3]	***HR PL***
9.1.2. Number, category and kind of light source(s):	***20*LEDs for driving beam, non-replaceable***
9.1.3. Reference luminous flux used for the principal passing-beam (lm):	***N/A***
9.1.4. Principal passing-beam operated at approximately (V):	***N/A***
9.1.5. Measures according to paragraph 4.12. of this Regulation:	***N/A***
9.1.6. Number and specific identification code(s) of LED module(s) and for each LED module a statement whether it is replaceable or not: *yes/~~no~~*[1]	***Yes, non-replaceable***
9.1.7. Number and specific identification code(s) of electronic light source Control gear(s)	***N/A***
9.1.8. Total objective luminous flux as described in paragraph 4.5.2.6. of this Regulation exceeds 2.00 10^3 lumens: yes/no/does not apply[1]	***N/A***
9.1.9. The adjustment of the cut-off has been determined at: 10 m/25 m/does not apply[1]	***N/A***
The determination of the minimum sharpness of the "cut-off" has been carried out at: 10 m/25 m/does not apply[1]	***N/A***
9.2. For headlamps of Class D	
9.2.1. Headlamp/system submitted for approval as type:[4]	***N/A***

[3] Indicate the appropriate marking selected from the list below:

C, C, C, R, R PL, CR, CR, CR, C/R, C/R, C/R, C/, C/, C/,

C, PL, C PL, C PL, CR PL, CR PL, CR PL, C/R PL, C/R PL, C/R PL,

C/PL, C/PL, C/PL

HC, HC, HC, HR, HR PL, HCR, HCR, HCR, HC/R, HC/R, HC/R, HC/, HC/, HC/,

HC PL, HC PL, HC PL, HCR PL, HCR PL, HCR PL, HC/R PL, HC/R PL, HC/R PL,

HC/PL, HC/PL, HC/PL

[4] Indicate the appropriate marking selected from the list below:

DC, DC/, DC/PL, DR, DCR, DC/R, DC PL, DR PL, DCR PL, DC/R PL,

DC, DCR, DC/R, DC/, DC PL, DCR PL, DC/R PL, DC/PL, PL, PL,

DC, DCR, DC/R, DC/, DC PL, DCR PL, DC/R PL, DC/PL,

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9.2.2. The passing beam light source may/may not1 be lit simultaneously with the driving beam light source and/or another reciprocally incorporated headlamp. ***N/A***

9.2.3. The rated voltage of the device is: ***N/A***

9.2.4. Number, category and kind of light source(s): ***N/A***

9.2.4.1. If more than one objective luminous flux value is specified: ***N/A***

Objective luminous flux value used for the principal passing beam ***N/A***

9.2.4.2. If more than one objective luminous flux value is specified: ***N/A***

Objective luminous flux value used for the driving beam ***N/A***

9.2.5. Trade name and identification number of separate ballast(s) or part(s) of ballast(s): ***N/A***

9.2.6. The adjustment of the "cut-off" has been determined at 10 m/25 m.(2) ***N/A***

The determination of the minimum sharpness of the "cut-off" has been carried out at 10 m/25 m.[1] ***N/A***

9.2.7. Number and specific identification code(s) of LED module(s): ***N/A***

9.2.8. Distributed lighting system with one common gas-discharge light source: Yes/No[1] ***N/A***

9.2.9. Remarks (if any): ***N/A***

9.2.10. Measures according to paragraph 4.12. of this Regulation: ***N/A***

9.3. For AFS – Systems

9.3.1. Category as described by the relevant marking[5] ***N/A***

9.3.2. Number, category and kind of light source(s) ***N/A***

9.3.2.1. Number and specific identification code(s) of LED module(s) and for each LED module a statement whether it is replaceable or not: yes/no[1] ***N/A***

9.3.2.2. Number and specific identification code(s) of electronic light source control gear(s), if applicable ***N/A***

9.3.2.3. Total objective luminous flux as described in paragraph 4.5.2.6. of This Regulation exceeds 2,000 lumen: yes/no[1] ***N/A***

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9.3.3. (a) Indications according to paragraph 5.3.5.1. of this Regulation (which lighting unit(s) provide a "cut-off" as defined in Annex 5 of this Regulation, that projects into a zone extending from 6 degrees left to 4 degrees right and upwards from a horizontal line positioned at 0.8 degree down) ***N/A***

(b) The adjustment of the "cut-off" has been determined at 10 m / 25 m[1] ***N/A***

(c) The determination of the minimum sharpness of the "cut-off" has been carried out at 10 m / 25 m[1] ***N/A***

9.3.4. The vehicle(s) for which the system is intended as original equipment ***N/A***

9.3.5. Whether approval is sought for a system which is not intended to be included as part of the approval of a vehicle type according to UN Regulation No. 48: yes/no[1] ***N/A***

9.3.5.1. If in the affirmative: information sufficient to identify the vehicle(s) for which the system is intended ***N/A***

9.3.6. Indications according to paragraph 5.3.5.2. of this Regulation (which class E passing beam mode(s), if any, comply with a "data set" of Table 14 of this Regulation) ***N/A***

9.3.7. Whether approval is sought for a system intended to be installed on vehicles only, which provide means for a stabilization/limitation of the system's supply: yes/no[1] ***N/A***

9.3.8. The adjustment of the "cut-off" has been determined at 10 m / 25 m.[1] ***N/A***

The determination of the minimum sharpness of the "cut-off" has been Carried out at 10 m / 25 m.[1] ***N/A***

9.3.9. The system is designed to provide passing beams of:[6] ***N/A***

9.3.9.1. Class C □ Class V □ Class E □ Class W □

9.3.9.2. With the following mode(s), identified by the designation(s), if it applies[14]

Mode No. C	Mode No. V	Mode No. E	Mode No. W
Mode No. C	Mode No. V	Mode No. E	Mode No. W
Mode No. C	Mode No. V	Mode No. E	Mode No. W

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[5] Indicate the appropriate marking as foreseen according to this Regulation for each installation unit or assembly of installation units.
[6] Mark with an X where applicable.
[7] To be extended if more modes are provided.
[8] To be continued if more units are provided.

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9.3.9.3. Where the lighting units indicated below are energized[5,7,8] for the mode No.

(a) If no bend lighting applies:
Left side No.1 □ No.3 □ No.5 □ No.7 □ No. 9 □ No.11 □
Right side No.2 □ No.4 □ No.6 □ No.8 □ No.10 □ No.12 □
(b) If bend lighting of category 1 applies:
Left side No.1 □ No.3 □ No.5 □ No.7 □ No. 9 □ No.11 □
Right side No.2 □ No.4 □ No.6 □ No.8 □ No.10 □ No.12 □
(c) if bend lighting of category 2 applies:
Left side No.1 □ No.3 □ No.5 □ No.7 □ No. 9 □ No.11 □
Right side No.2 □ No.4 □ No.6 □ No.8 □ No.10 □ No.12 □

9.3.9.4. The lighting units marked below are energized, when the system is in its neutral state[5,7]

Left side No.1 □ No.3 □ No.5 □ No.7 □ No. 9 □ No.11 □
Right side No.2 □ No.4 □ No.6 □ No.8 □ No.10 □ No.12 □

9.3.9.5. The lighting units marked below are energized, when the system is in its traffic change function[5,6,7]

(a) If no bend lighting applies:
Left side No.1 □ No.3 □ No.5 □ No.7 □ No. 9 □ No.11 □
Right side No.2 □ No.4 □ No.6 □ No.8 □ No.10 □ No.12 □
(b) If bend lighting of category 1 applies:
Left side No.1 □ No.3 □ No.5 □ No.7 □ No. 9 □ No.11 □
Right side No.2 □ No.4 □ No.6 □ No.8 □ No.10 □ No.12 □
(c) if bend lighting of category 2 applies:
Left side No.1 □ No.3 □ No.5 □ No.7 □ No. 9 □ No.11 □
Right side No.2 □ No.4 □ No.6 □ No.8 □ No.10 □ No.12 □

9.3.10. The system is designed to provide a main beam[5,6,7]:

9.3.10.1. Yes □ No □

9.3.10.2. With the following mode(s), identified by the designation(s), if it applies:
Main beam mode No. M
Main beam mode No. M
Main beam mode No. M

9.3.10.3. Where the lighting units marked below are energized, for mode No.
(a) If no bend lighting applies:
Left side No.1 □ No.3 □ No.5 □ No.7 □ No. 9 □ No.11 □
Right side No.2 □ No.4 □ No.6 □ No.8 □ No.10 □ No.12 □
(b) If bend lighting applies:
Left side No.1 □ No.3 □ No.5 □ No.7 □ No. 9 □ No.11 □
Right side No.2 □ No.4 □ No.6 □ No.8 □ No.10 □ No.12 □

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9.3.10.4. The lighting units marked below are energized, when the system is in its neutral state[6,8]

Left side No.1 □ No.3 □ No.5 □ No.7 □ No. 9 □ No.11 □
Right side No.2 □ No.4 □ No.6 □ No.8 □ No.10 □ No.12 □

9.3.10.5. The system is designed to provide an adaptation of the driving beam for:

Right-Hand and Left-Hand traffic: yes □ no □
Right-Hand traffic only: yes □ no □
Left-Hand traffic only: yes □ no □

9.4. For headlamps of Classes AS, BS, CS, DS and ES1

9.4.1. Category as described by the relevant marking:[9] ***N/A***

9.4.2. Number, category and kind of light source(s), if any: ***N/A***

9.4.3. Number and specific identification code(s) of LED modules and for eachL ED module a statement whether it is replaceable or not: yes/no[1] ***N/A***

9.4.4. Number and specific identification code(s) of electronic light source control gear(s), if any: ***N/A***

9.4.5. The determination of "cut-off" sharpness yes / no[1] ***N/A***

If yes, it was carried out at 10 m / 25 m[1]

9.4.6. Trade name and identification number of separate ballast(s) or part(s) of ballast(s): ***N/A***

9.4.7. The passing beam light source may/may not[1] be lit simultaneously with the driving beam light source and/or another reciprocally incorporated headlamp. ***N/A***

9.4.8. The minimum bank angle(s) to satisfy the requirement of paragraph 5.4.5.2., if any ***N/A***

9.4.9. Primary Driving Beam: yes / no[1] ***N/A***
Secondary Driving Beam: yes / no[1] ***N/A***
The Secondary Driving Beam shall only be operated together with a passing beam or a primary driving beam. ***N/A***

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[9] Indicate the appropriate marking selected from the list below:

C-AS,	C- BS,	R- BS,	CR- BS,	C/ -BS,	C/R-BS,
	C-BS PL,	R-BS PL,	CR-BS PL,	C/ -BS PL,	C/R-BS PL,
WC-CS,	WC-DS,	WR-CS	WR-DS,	WCR-CS,	WCR-DS,
WC/-CS,	WC/-DS,	WC/R-CS,	WC/R-DS,	WC-CS PL,	
WC-DS PL,	WR-CS PL,	WR-DS PL,	WCR-CS PL,	WCR-DS PL,	

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9.5. For front fog lamps Class F3

9.5.1. Class as described by the relevant marking:
(F3, F3/, F3PL, F3/PL) ***N/A***

9.5.2. Number, category and kind of light source(s): ***N/A***

9.5.3 LED module: yes/~~no~~[1] and for each LED module a statement whether it is replaceable or not: yes/no[1] ***N/A***

9.5.4. LED module specific identification code: ***N/A***

9.5.5. Application of electronic light source control gear:[10] yes/no[1]

Supply to the light source: ***N/A***
Specification of the light source control gear: ***N/A***
Input voltage:[11] ***N/A***
In the case of an electronic light source control gear not being part of the lamp: ***N/A***
Output signal specification: ***N/A***

9.5.6. Colour of light emitted: ***N/A***

9.5.7. Luminous flux of the light source (see paragraph 4.5.2.6.) greater than 2,000 lumens: yes/no[1] ***N/A***

9.5.8. Luminous intensity is variable: … yes/no[1] ***N/A***

9.5.9. The determination of the cut-off gradient (if measured) was carried out at 10 m / 25 m[1] ***N/A***

9.6. For cornering lamps

9.6.1. Number, category and kind of light source(s):[12] ***N/A***

9.6.2. Voltage and wattage: ***N/A***

WC/CS PL,	WC/-DS PL,	WC/R-CS PL,	WC/R-DS PL,		
WC+-CS,	WC+-DS,	WC+R-CS,	WC+R-DS,	C+-BS,	C+R-BS,
WC+-CS PL,	WC+-DS PL,	WC+R-CS PL,	WC+R-DS PL,	C+-BS PL,	C+R-BS PL
WC-ES,	WR-ES,	WCR-ES,	WC/-ES,	WC/R-ES,	WC-ES PL,
WR-ES PL,	WCR-ES PL,	WC/-ES PL,	WC/R-ES PL		
WC+-ES,	WC+R-ES,	WC+-ES PL,	WC+R-ES PL		

[10] The voltage specifications shall include the tolerances or voltage range as specified by the manufacturer and verified by this approval.

[11] The parameters of the input voltage including duty cycle, frequency, pulse shape and peak voltage shall be included.

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Approval No: ***E24*149R00/06*0863*00***

9.6.3. Light source module: yes/no[1] ***N/A***

9.6.4. Light source module specific identification code: ***N/A***

9.6.5. Application of an electronic light source control gear:
(a) Being part of the lamp yes/no[1]
(b) Being not part of the lamp yes/no[1]

9.6.6. Input voltage supplied by an electronic light source control gear: ***N/A***

9.6.7. Electronic light source control gear manufacturer and identification number (when the light source control gear is part of the lamp but is not included into the lamp body): ***N/A***

9.6.8. Geometrical conditions of installation and relating variations, if any: ***N/A***

10. Approval mark(s) position(s): ***On the lens***

11. Reason(s) for extension of approval (if applicable): ***N/A***

12. Approval granted / ~~extended / refused / withdrawn~~[1] ***Granted***

13. Place: ***Dublin***

14. Date: ***19th February, 2024***

15. Signature:

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

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[12] For cornering lamps with non-replaceable light sources indicate the number and total wattage of the light sources used.

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Approval No: ***E24*149R00/06*0863*00***

Index to the Information Package

Date of issue:	***19th February, 2024***
Date of latest amendment:	***N/A***
Reason for extension/revision	***N/A***

1. Additional conditions, and advisory notes on legal alternatives

2. Test report(s)

- numbers(s):	***23-02985-CX-SHA-00***
- date of issue:	***15.12.2023***
- date of latest amendment:	***N/A***

3. Information document

- numbers(s):	***LY-HC02-7INCH-00***
- date of issue:	***16.10.2023***
- date of latest amendment:	***N/A***

Documentation: ***14 pages***

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Approval No: ***E24*149R00/06*0863*00***

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

A: Additional conditions:

1. The lamp, Type *LY-HC02-7INCH* shall be marked as prescribed by the regulation.
2. Fitting instructions shall be supplied with each lamp, giving details of any limitations in the use of the lamp.
3. The lamp should be fitted in accordance with the fitting instructions.
4. The attached technical report, with any of its attachments, forms part of this Type Approval certificate.
5. Each individual product from series production shall be to the measurements specified in the attached drawings, and shall be manufactured only from the materials specified in the Approval documents.
6. Changes in the product are permitted only with the explicit permission of NSAI. Breaches of this requirement will lead to a withdrawal of the Type Approval, and in addition may be subject to criminal prosecution.
7. This Type Approval will expire when it is surrendered by the holder, or withdrawn by NSAI, or when the approved type of product no longer conforms to legal requirements. The recall of the Type Approval can be issued by NSAI when the conditions required for the issuing or continuation of the Type Approval are no longer current, or when the Approval holder is in breach of the duties attached to the Type Approval, or when it is established that the approved type no longer meets the requirements of traffic safety.
8. NSAI may at any time check the correct performance of the duties imposed by the grant of this Type Approval, and in order to do so, may make tests, or have tests made.
9. Changes in the company name, address or manufacturing site, as well as in any of the sales or other agents specified in the issuing of the approval must immediately be notified to the NSAI.
10. The duties imposed by the issuing of this certificate are not transferable. The legal protection of third parties is not affected by this certificate.
11. When the manufacture or sale of the vehicle, system, component or separate technical unit has not been started within one year of the date of issue of this certificate, then NSAI is to be informed. This requirement also applies when the manufacture or sale has been halted for more than one year, or when it ought to have been halted for more than one year. The initial commencement of manufacture or sale, or the resumption of manufacture or sale, shall then be notified to NSAI within one month of commencement or resumption.

B : Legal Options

Any objection to the requirements set out in this certificate shall be made within one month of the date of issue. The objection shall be made, in writing, to NSAI in Dublin

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Test Report

No.: 23-02985-CX-SHA-00

Test of a type of component
with regard to

UN/ECE Regulation No. 149

including all amendments up to
supplement 6 to the 00 series

Approval subject:
Headlamps emitting an asymmetrical driving beam
(Equipped with LEDs)

Approval status			
☑	Granting of a type approval		
☐	Extension/correction to type approval no.	:	---

I. General

Make (trade name of manufacturer)	: LY
Type	: LY-HC02-7INCH
Variants	: N/A
Means of identification of type	: By letters and digits, LY-HC02-7INCH
Category as described by the relevant marking	: HR PL
Number, category and kind of light source(s)	: 20*LEDs for driving beam, non-replaceable
Number and specific identification code(s) of LED modules and for each LED module a statement whether it is replaceable or not	: Yes, non-replaceable
The determination of 'cut-off' sharpness	: N/A
If yes, it was carried out at	: ~~10 m/25 m~~
Trade name and identification number of separate ballast(s) or part(s) of ballast(s)	: N/A

The passing beam light source ~~may~~ / may not be lit simultaneously with the driving beam light source and/or another reciprocally incorporated headlamp.

The minimum bank angle(s) to satisfy the requirement of paragraph 5.4.5. if any	: N/A
Primary Driving Beam	: Yes
Secundary Driving Beam	: No

The Secondary Driving Beam shall only be operated together with a passing beam or a primary driving beam.

Name and address of manufacturer	:	Guangzhou Sup-light Electronic Technology Co.,Ltd. 101,Building A, 1 Yiheng Road,Qinghu Caitian North Street,Junhe Street,Baiyun District, Guangzhou,Guangdong 510000 P.R.China
Address of assembly plant	:	Same as above
Location of the approval mark	:	On the lens
If applicable, name and address of the manufacturer's representative	:	N/A

II. Test results

Refer to the Annex II

III. Enclosures

Annex I Reason of Extension
Annex II Test Result
Information folder No. LY-HC02-7INCH-00 dated 2023-10-16 (YYYY-MM-DD)

IV. Statement of conformity

The mentioned information folder and the type described therein are in accordance with the test basis mentioned above. Sampling plan or method result from the requirements of the test basis. The worst-case configuration was selected in accordance with process description “Requirements for Test Reports (AS-PB-T-02)”. Valid decision rule in accordance with ILAC G8:2019, 4.2.1: in question of meeting the limits the measurement uncertainty was ignored.
The manufacturer is responsible for the information (III.) and the test specimens provided by him. The test results relate only to the test specimens as received and mentioned (II.).
The test specimens are representative for the type described (III.).
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.

TÜV SÜD Auto Service GmbH is designated as Technical Service by:

Approval authority	Country	Registration number
Kraftfahrt-Bundesamt (KBA)	Germany	KBA-P 00100-10
Vehicle Certification Agency (VCA)	United Kingdom	VCA-TS-006
Approval Authority of the Netherlands (RDW)	The Netherlands	RDWT-082-xx
National Standards Authority of Ireland (NSAI)	Ireland	Technical Service Number: 49
Société Nationale de Certification et d'Homologation s.a. (SNCH)	Luxembourg	13/B(g)
Swedish Transport Agency (STA)	Sweden	TT 0024

München, 2023-12-15 (YYYY-MM-DD)

Henry Chen

Annex I Reason of Extension

Correction of : ---

Modification of : ---

Addition of : ---

Deletion of : ---

Annex II Test results

1.	Test conditions		
1.1.	Technical data of the test samples	:	Two samples were tested. Sample No. 1 and sample No. 2. 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. 149.00.
1.3.	Measuring and test equipment	:	Full automatic photometric test system for automobile lamps LMT Lichtmesstechnik GmbH Berlin Type GO H1660
2.	Test results		
2.1.	General Specifications	:	The headlamps have been made as to retain their prescribed photometric characteristics and to remain in good working order when in normal use, in spite of the vibrations to which they may be subjected. Headlamps have been give adequate illumination without dazzle when emitting the passing-beam, and good illumination when emitting the driving-beam.

2.2. Test record of the photometric measurements of the driving beam.

2.2.1. Sample No. 1, test voltage 13.2V.

No.	Point of the measurement	Limits [cd]		Measured values [cd]		Conclusion
		Minimum	Maximum	1 minute	After stability	
1	Imax.	40500.00	215000.00	104595.19	99700.30	Complies
2	HV	0.8Imax.	---	104281.10	99400.91	Complies
3	H-5L	5100.00	---	26227.33	24999.93	Complies
4	H-2.5L	20300.00	---	65311.79	62255.30	Complies
5	H-2.5R	20300.00	---	69635.90	66377.05	Complies
6	H-5R	5100.00	---	30520.02	29091.73	Complies

2.2.2. Sample No. 2, test voltage 13.2V.

No.	Point of the measurement	Limits [cd]		Measured values [cd]		Conclusion
		Minimum	Maximum	1 minute	After stability	
1	Imax.	40500.00	215000.00	115524.13	108343.00	Complies
2	HV	0.8Imax.	---	114151.40	107055.60	Complies
3	H-5L	5100.00	---	31690.39	29720.47	Complies
4	H-2.5L	20300.00	---	69169.75	64870.07	Complies
5	H-2.5R	20300.00	---	76703.93	71935.91	Complies
6	H-5R	5100.00	---	26912.36	25239.45	Complies

Reference Mark (Imax / 4300): 25 *Average of the value for Sample No. 1 and Sample No. 2.

2.3. Stability of photometric performance of headlamp in operation.

2.3.1. Clean headlamp – Sample No. 1.

No.	Point of the measurement	Measured values			
		Value before operating (cd)	Value after operating (cd)	Discrepancy (≤ 10%)	Conclusion
1	Driving beam: Imax.	99700.30	98547.31	1.16%	Complies

2.3.2. Dirty headlamp – Sample No. 1.

No.	Point of the measurement	Measured values			
		Value before operating (cd)	Value after operating (cd)	Discrepancy (≤ 10%)	Conclusion
1	Driving beam: Imax.	98547.31	97811.66	0.75%	Complies

2.4. Tests on plastic lens

2.4.1. Test report for plastic material of the lens attached to the manufacturer's information document.

2.4.2. Tests of the complete headlamp incorporating a lens of plastic material.

2.4.2.1. Test of adherence of coatings - Sample No. 2.
- No appreciable impairment of the gridded area – Complies.

2.4.2.2. Resistance to mechanical deterioration of the lens surface - Sample No. 2.

No.	Point of the measurement	Limits [cd]		Measured values [cd]	Conclusion
		Minimum	Maximum		
1	HV	0.8* $I_{max.}$*0.9	---	106052.20	Complies
2	Driving beam: $I_{max.}$	40500.00	215000.00	107327.53	Complies

* The result complies with the requirements prescribed in paragraph 2.6.1.2. of Annex 6 in this Regulation.

2.5. Test record of the colour

2.5.2. Driving beam - White

	Measured values			Limits
	Sample	x	y	W12 green boundary: y = 0.150 + 0.640 x W23 yellowish green boundary: y = 0.440 W34 yellow boundary: x = 0.500 W45 reddish purple boundary: y = 0.382 W56 purple boundary: y = 0.050 + 0.750 x W61 blue boundary: x = 0.310
After 1 minute	No. 1	0.3134	0.3206	Complies
	No. 2	0.3144	0.3240	Complies
After stability	No. 1	0.3112	0.3174	Complies
	No. 2	0.3111	0.3191	Complies

2.6. Test record of LED modules

2.6.1. Test voltage 13.2V.

2.6.1.1. Red Content

	Limit	measured	Conclusion
Driving beam	$K_{red} \geq 0.05$	0.0770	Complies

2.6.1.2. UV-radiation

	Limit	measured	Conclusion
Driving beam	$K_{UV} \leq 10^{-5}$ W/lm	0.35×10^{-6}	Complies

2.6.1.3. Objective Luminous Flux

	Limit		Measured	Conclusion
	Minimum	Maximum		
Driving beam	---	---	3179.53 lm	Complies

2.7. Apparent surface

Refer to manufacturer's information document: LY-HC02-7INCH-00

3. Specimen submitted to test on : 2023-10-16 (YYYY-MM-DD)

4. Place and date of the test : Dach Science and Technology(Guangzhou) Co., Ltd.
2023-11-28 to 2023-11-29 (YYYY-MM-DD)

First application date : 2023-10-16

1. Specification data

Type	LY-HC02-7INCH	
Function	turn signal Lamp	Driving beam
Emitted colour	Amber	White
Rated Voltage	12V	12V
Rated Wattage	12.7W	50.4W
Applicable Regulation	No. R148.00 Cat.1b	No. R149.00 Class B
Number and category of light source	12*LEDs non-replaceable	20*LEDs non-replaceable
Trade mark	“LY” Marked on the housing	
Approval mark	Marked on the lens	
Remark	The application of an electronic light source control gears: being part of the lamp Input voltage to the electronic light source control gear:12V	

2. Construction and material

Construction	Material	Remarks
Outer Lens	Plastic (PC)	Base material Type: LS2-111 Kind of material:Lexan Manufacturer:GE Bayer Silicones,NL-4600 Bergen op Zoom Coating Type: UVHC3000 Manufacturer:GE Bayer Silicones,NL-4600 Bergen op Zoom
Inner lens of turn signal lamp	Plastic (PC)	Yellow with pattern
Inner lens of driving beam	Plastic (PC)	The upper part is clear without pattern, and lower part is clear with pattern
Housing	ADC12 (ALLOY)	Black
	AL	Silver
Honeycomb decorative panel	Plastic (PC)	Black
Electrical wiring	Copper covered with insulation	---

3.Name and address of manufacturer	:	Guangzhou Sup-light Electronic Technology Co.,Ltd. 101,Building A, 1 Yiheng Road,Qinghu Caitian North Street,Junhe Street,Baiyun District, Guangzhou,Guangdong 510000 P.R.China
4.Name and address of assembly plant	:	Same as above
5.Name and address of representative of manufacturer	:	Not applicable.

6. Apparent surface

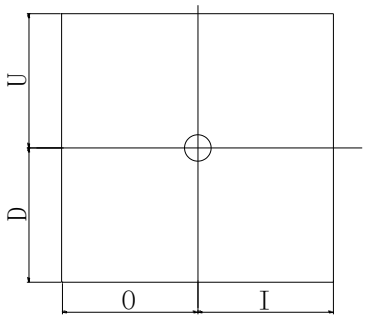
U= Upper limit

D= Down limit

I= Inside limit

O= Outside limit

⊕ :Reference center



Apparent surface based on the

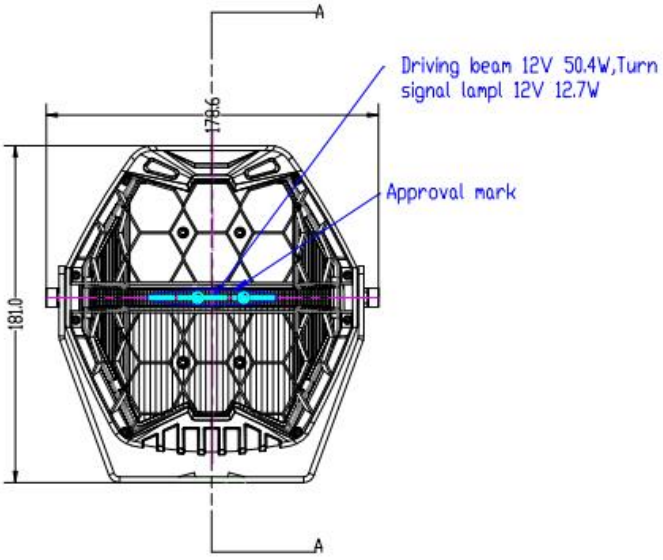
☒ Illuminating surface

☐ light-emitting surface (with outer lens)

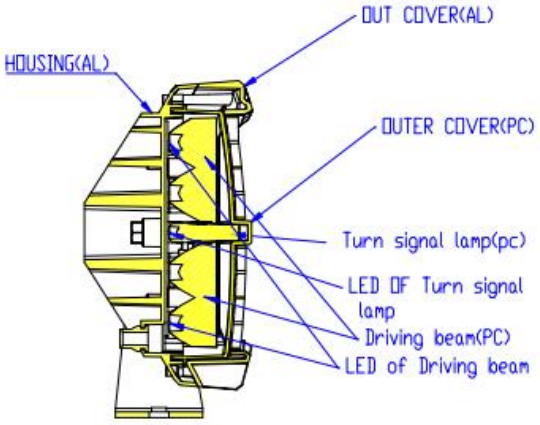
Unit: mm

Function	Limit (O)	Limit (I)	Limit (U)	Limit (D)
Driving beam	60	60	60	60
Turn signal Lamp	60	60	4	4

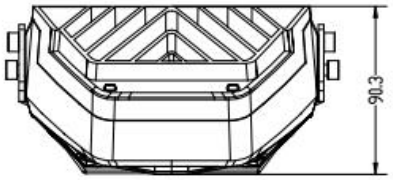
Lamp drawing



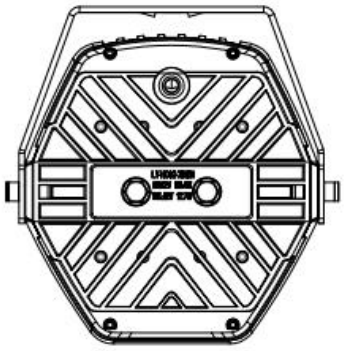
Front View



Sectien A-A



Top View



Back View

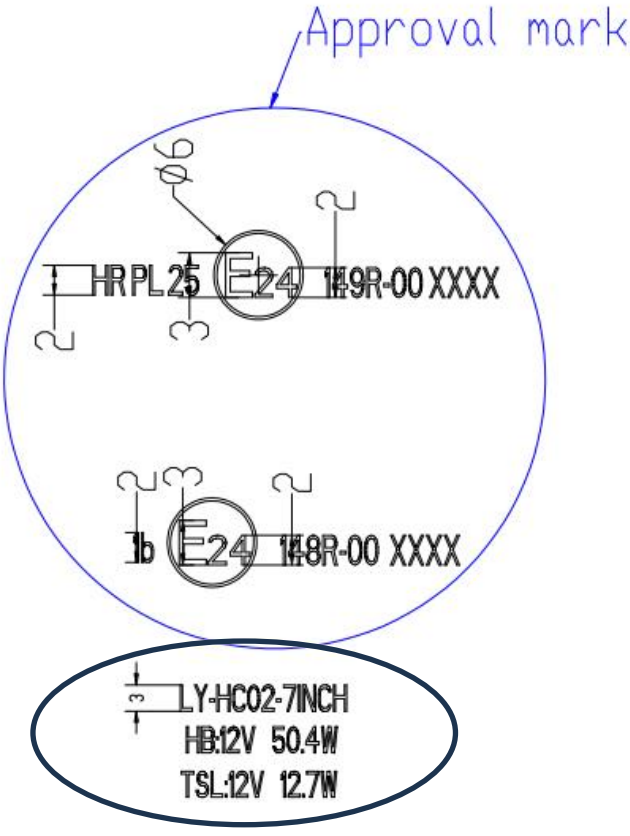
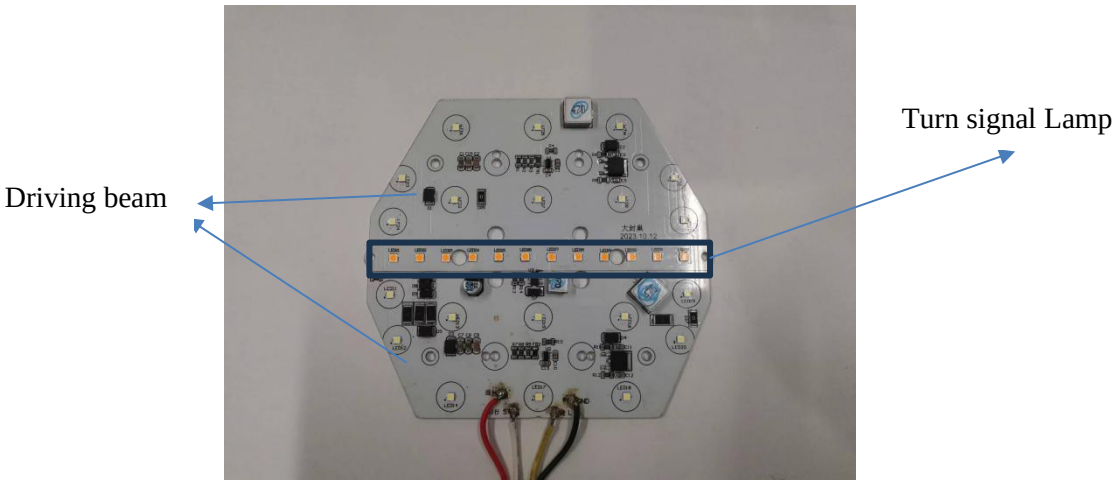
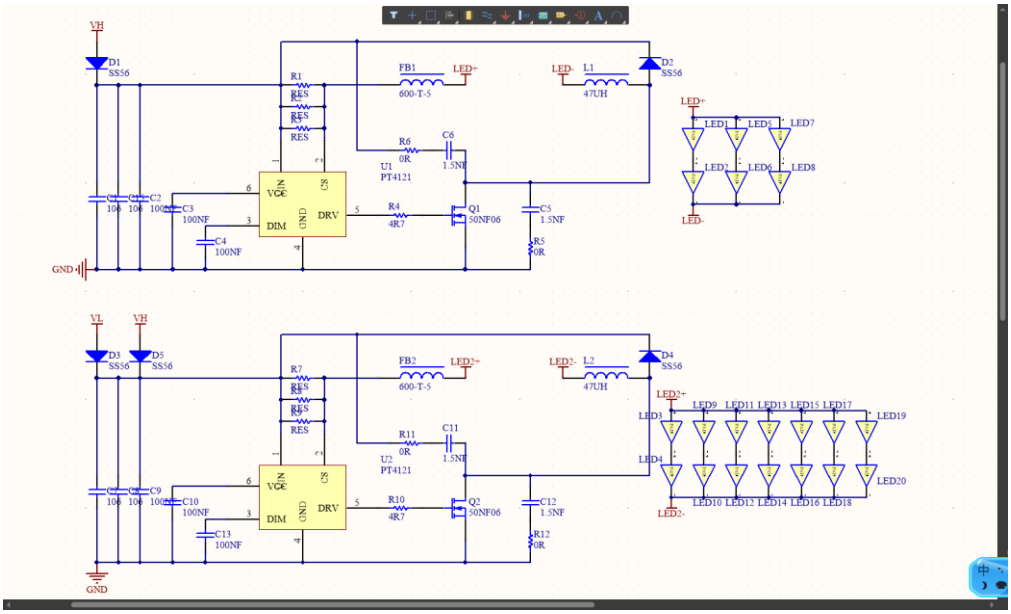


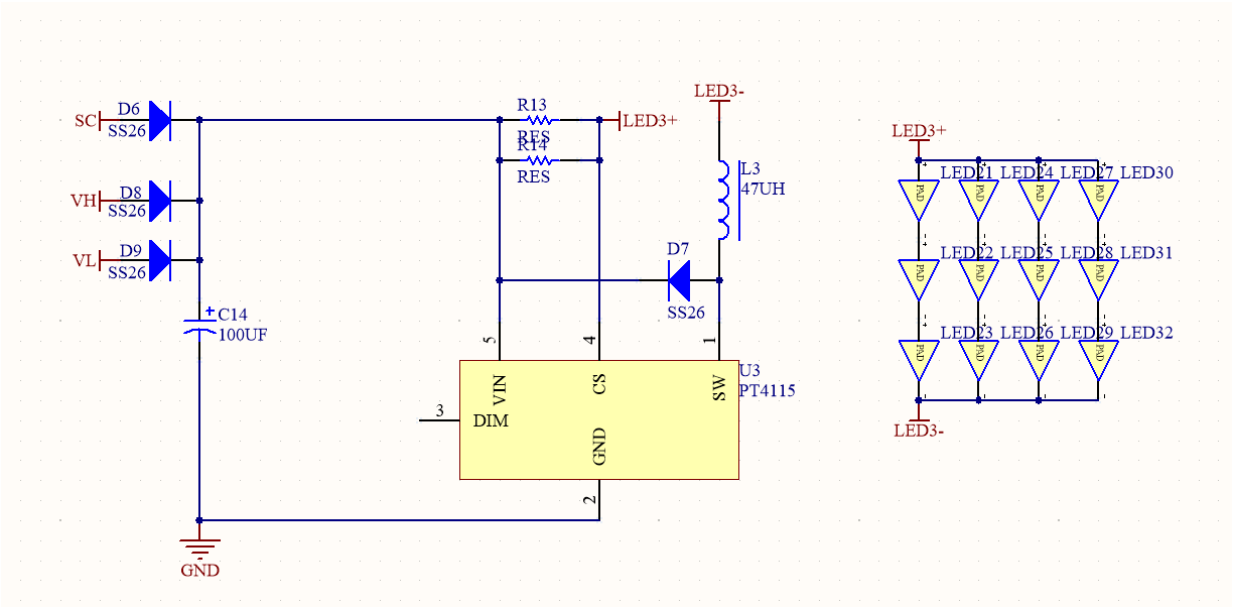
Photo of LED module of Driving beam and Turn signal Lamp



Circuit diagram of Driving beam



Circuit diagram of Turn signal Lamp



PCB of Driving beam and Turn signal Lamp