



Repubblica di San Marino
Autorità per l'Omologazione
Republic of San Marino
Authority for Homologation

Via III Settembre, 99
47891 Dogana - Repubblica di San Marino

Comunicazione
Communication

	Concernente ^{2/} Concerning ^{2/}	Il rilascio dell'omologazione Approval granted L'estensione dell'omologazione Approval extended Il rifiuto dell'omologazione Approval refused La revoca dell'omologazione Approval withdrawn La cessazione definitiva della produzione Production definitively discontinued
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of a type of device or system pursuant to Regulation No. 149

Class of the device: DS, B

Change index: 1

Omologazione N. <i>Approval No.</i>	E57*149R01/05*0466	Estensione N. <i>Extension No.</i>	00
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Marchio di omologazione <i>Approval mark</i>	See Manufacturer's Information Document No. L7X-00
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Identificatore Unico (IU) (se applicabile) <i>Unique Identifier (UI) (if applicable)</i>	N/A
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1. Trade name or mark of the device or system: LOBOO

2. Manufacturer's name for the type of device or system:
L7X

3. Manufacturer's name and address: SHENZHEN LOBOO MOTOR ACCESSORIES CO., LTD.
Room 101, 201, 301, Building F, No. 30 Tongfu Road,
Xinsheng Community, Longgang Subdistrict, Longgang
District, Shenzhen(Single business license covering multiple
floors within the same building)
4. If applicable, name and address of the
manufacturer's representative: N/A
5. Submitted for approval on: 01/04/2026
6. Technical Service responsible for conducting
approval tests: **AUTOMOTIVE TECHNICAL SERVICE S.r.l.**
Via Consiglio dei Sessanta, 99
47891 – DOGANA Repubblica di San Marino
7. Date of report issued by that Service: 16/04/2026
8. Number of report issued by that Service: ATS-SM-IR-149-33082
9. Brief description:
- 9.1. ~~For passing-beam headlamps of Classes C and V
and driving-beam headlamps of Classes A, B and
RA¹
The driving-beam of Class RA (auxiliary driving-
beam) shall only be operated together with
driving-beams of Classes A, B or AFS-R.~~
- 9.1.1. Class(es) as described by the relevant
marking:³: HR
- 9.1.1.1. Matched pair: ~~Yes/no~~²
- 9.1.2. Number, category and kind of light sources: 4*LEDs
- Lamp approved for LED substitute light
source(s): ~~Yes/no~~²
- If yes, category of LED substitute light
source(s): N/A
- Rated voltage or range of voltage: 12V
- 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, 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 4.5.6. of this Regulation exceeds 2,000 lumens: ~~yes/no/does not apply~~¹
- 9.1.9. The adjustment of the cut-off has been determined at: ~~10 m/25 m/does not apply~~¹
- 9.1.10. Trade name and identification number of separate ballast(s) or part(s) of ballast(s) if any: N/A
- 9.1.11. The lamp is only intended for installation on vehicles in use: ~~Yes/no~~²
- 9.1.12. The light source(s) producing the principal passing beam may be lit simultaneously with that of any other lighting function in the same body: ~~Yes/no~~²
- If yes, the following lighting function(s) are lit simultaneously: N/A
- 9.2. For AFS and ADB – Systems
- 9.2.1. Class(es) as described by the relevant marking⁴: N/A
- 9.2.2. Number, category and kind of light source(s) N/A
- Lamp approved for LED substitute light source(s): ~~Yes/no~~²
- If yes, category of LED substitute light source(s): N/A
- Rated voltage or range of voltage: N/A
- 9.2.2.1. Number and specific identification code(s) of light source module(s) and for each light source module a statement whether it is replaceable or not: ~~Yes/no~~²
- 9.2.2.2. Number and specific identification code(s) of electronic light source control gear(s), if applicable N/A
- 9.2.2.3. Total objective luminous flux as described in paragraph 4.5.3.6. of this Regulation exceeds $2.00 \cdot 10^3$ lumens: ~~Yes/no~~²

- 9.2.3. (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)
- (b) The adjustment of the "cut-off" has been determined at ~~10 m / 25 m.²~~
- (c) The determination of the minimum sharpness of the "cut-off" has been carried out at ~~10 m / 25 m.²~~
- 9.2.4. The vehicle(s) for which the system is intended as original equipment: N/A
- 9.2.5. Whether approval is sought for an AFS or ADB which is not intended to be included as part of the approval of a vehicle type according to UN Regulation No. 48 or UN Regulation No. 53: ~~Yes/no²~~
- 9.2.5.1. If in the affirmative: information sufficient to identify the vehicle(s) for which the system is intended N/A
- 9.2.6. 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 12 of this Regulation) N/A
- 9.2.7. 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/no²~~
- 9.2.8. The adjustment of the "cut-off" has been determined at ~~10 m / 25 m.²~~
- The determination of the minimum sharpness of the "cut-off" has been carried out at ~~10 m / 25 m.²~~
- 9.2.9. The system is designed to provide passing-beams of:^{5,6} N/A
- 9.2.9.1. Class C ☐ Class V ☐ Class E ☐ Class W ☐
- 9.2.9.2. With the following mode(s), identified by the designation(s), if it applies¹⁴
- | Mode No. C 1 | 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 |

9.2.9.5. Where the light units indicated below are energized^{5,8,9} 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	☐

Note: Indications according to paragraph (a) through (c) above are needed additionally for each further mode.

9.2.9.6. The lighting units marked below are energized, when the system is in its neutral state^{5,8}

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	☐

9.2.9.7. The lighting units marked below are energized, when the system is in its traffic change function^{5,7,8}

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	☐

9.2.10. The system is designed to provide a main beam^{5,7,8}:

9.2.10.1. Yes ☐ No ☐

9.2.10.2. With the following mode(s), identified by the designation(s), if it applies:

Main beam mode No. M 1

Main beam mode No. M

Main beam mode No. M

9.2.10.5. 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	☐

Note: Indications according to paragraph (a) through (c) above are needed additionally for each further mode.

9.2.10.6. The lighting units marked below are energized, when the system is in its neutral state^{6,9}

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	☐

9.2.10.7. 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 ☐

9.2.10.8. ADB system intended to be included as part of the approval of a vehicle type of category L3 according to UN Regulation No. 53:

~~Yes/no~~²

9.2.10.9. The Adaptive driving-beam may produce Driver Assistance Projection according to UN Regulation No. 48:

~~Yes/no~~²

9.2.10.10. The passing-beam may produce Driver Assistance Projection according to UN Regulation No. 48:

~~Yes/no~~²

9.2.11. The system is only intended for installation on vehicles in use:

~~Yes/no~~²

9.2.12. The light source(s) producing the principal passing beam may be lit simultaneously with that of any other lighting function in the same body:

~~Yes/no~~²

If yes, the following lighting function (s) are lit simultaneously

N/A

9.2.13. Measures according to paragraph 4.12. of this Regulation:

N/A

9.3. For headlamps of Classes AS, BS, CS and DS

9.3.1. Class(es) as described by the relevant marking ³	WC-DS
9.3.1.1. Matched pair:	Yes /no ²
9.3.2. Number, category and kind of light source(s), if any:	4*LEDs
Lamp approved for LED substitute light source(s):	Yes /no ²
If yes, category of LED substitute light source(s):	N/A
Rated voltage or range of voltage:	12V
9.3.3. Number and specific identification code(s) of light source modules and for each light source module a statement whether it is replaceable or not:	Yes /no ² , non-replaceable
9.3.4. Number and specific identification code(s) of electronic light source control gear(s), if any:	N/A
9.3.5. The determination of "cut-off" sharpness	Yes /no ²
If yes, it was carried out at	10 m /25 m ¹
9.3.6. Trade name and identification number of separate ballast(s) or part(s) of ballast(s):	N/A
9.3.7. The light source(s) producing the principal passing beam may be lit simultaneously with that of any other lighting function in the same body:	Yes/ no ²
If yes, the following lighting function (s) are lit simultaneously	Driving beam
9.3.8. The minimum bank angle(s) to satisfy the requirement of paragraph 5.4.4.1., if any	N/A
9.3.9. Driving-beam of Class BS:	Yes /no ²
Secondary Driving-beam of Class CS or Class DS:	Yes /no ²
The Secondary Driving-beam shall only be operated together with a passing beam or a driving-beam of Class A or Class B.	N/A
9.3.10. The lamp is only intended for installation on vehicles in use:	Yes /no ²

9.4. For front fog lamps Class F3

9.4.1. Class as described by the relevant marking: ~~(F3, F3/, F3PL, F3/PL)~~

9.4.1.1. Matched pair: ~~Yes/no~~²

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

Lamp approved for LED substitute light source(s): ~~Yes/no~~²

If yes, category of LED substitute light source(s) N/A

Rated voltage or range of voltage: N/A

9.4.3. light source module: ~~Yes/no~~²

and for each light source module a statement whether it is replaceable or not: ~~Yes/no~~²

9.4.4. light source module specific identification code: N/A

9.4.5. Number and specific identification code(s) of electronic light source control gear(s) N/A

9.4.6. Colour of light emitted: ~~white/selective yellow~~²

9.4.7. Luminous flux of the light source (see paragraph 4.5.3.5. of this Regulation) N/A

greater than $2.00 \cdot 10^3$ lumens: ~~Yes/no~~²

9.4.8. Luminous intensity is variable: ~~Yes/no~~²

9.4.9. The determination of the cut-off gradient (if measured) N/A

was carried out at ~~10 m / 25 m~~²

9.4.10. The lamp is only intended for installation on vehicles in use: ~~Yes/no~~²

9.4.11. he light source(s) producing the front fog lamp may be lit simultaneously with that of any other lighting function in the same body: ~~Yes/no~~²

If yes, the following lighting function (s) are lit simultaneously N/A

9.5. For cornering lamps

9.5.1.	Number, category and kind of light source(s): ⁸	N/A
	Lamp approved for LED substitute light source(s):	Yes/no ²
	If yes, category of LED substitute light source(s):	N/A
9.5.2.	Rated voltage or the range of voltage:	N/A
9.5.3.	Light source module:	Yes/no ²
9.5.4.	Light source module specific identification code:	N/A
9.5.5.	Application of electronic light source control gear:	N/A
	(a) Being part of the lamp	Yes/no ²
	(b) Being not part of the lamp	Yes/no ²
9.5.6.	Input voltage supplied by an electronic light source control gear:	N/A
9.5.7.	Electronic light source control gear manufacturer and identification number (when the electronic light source control gear is part of the lamp but is not included into the lamp body):	N/A
9.5.8.	Geometrical conditions of installation and relating variations, if any:	N/A
9.5.9.	The lamp is only intended for installation on vehicles in use:	Yes/no ²
9.6.	Whether an additional test is conducted according to the paragraph 4.19. of this Regulation:	Yes/no ²
10.	Position(s) of the approval mark(s) or Unique Identifier(s) (UI):	On the housing
11.	Reason(s) for extension of approval (if applicable):	N/A
12.	Approval	GRANTED/EXTENDED/REFUSED/WITHDRAWN [‡]

13. Place:

DOGANA – Repubblica di San Marino

14. Date:

16/04/2026

15. Signature:



Ing. Marco Conti
Direttore Generale
General Director

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.

² Strike out what does not apply.

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

⁵ Indicate the appropriate marking as foreseen according to this Regulation for each installation unit or assembly of installation units.

⁶ for AFS for vehicle of category L3 the information through 9.2.9.2. to 9.2.10.5. are not necessary.

⁷ Mark with an X where applicable.

⁸ To be extended if more modes are provided.

⁹ To be continued if more units are provided.

¹⁰ Indicate the appropriate marking selected from the list below:

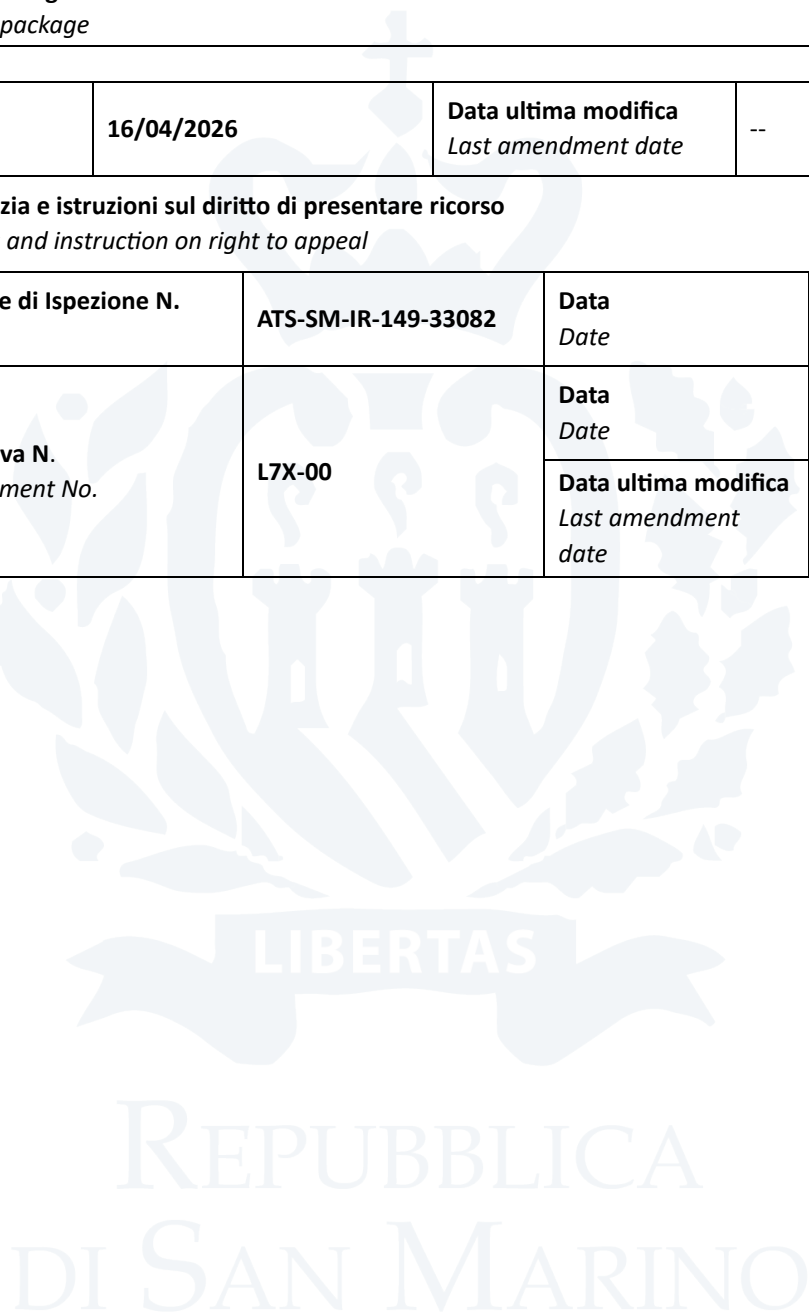
C-AS,	C-BS,	R-BS,	CR-BS,	C/-BS,	C/R-BS,
	C-BS PL,	R-BS PL,	CR-BS PL,	C/-BS PL,	C/R-BS PL,
WC-CS,	WC-DS,	WR-CS	WR-DS,	WCR-CS,	WCR-DS,
WC/-CS,	WC/-DS,	WC/R-CS,	WC/R-DS,	WC-CS PL,	
WC-DS PL,	WR-CS PL,	WR-DS PL,	WCR-CS PL,	WCR-DS PL,	
WC/CS PL,	WC/-DS PL,	WC/R-CS PL,	WC/R-DS PL,		
WC+CS,	WC+DS,	WC+R-CS,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

¹¹ The voltage specifications shall include the tolerances or voltage range as specified by the manufacturer and verified by this approval.

¹² The parameters of the input voltage including duty cycle, frequency, pulse shape and peak voltage shall be included.

¹³ For cornering lamps with non-replaceable light sources indicate the number and total wattage of the light sources used.

Allegato <i>Enclosure</i>				
Al certificato di omologazione ECE N. <i>To ECE approval certificate No.</i>		E57*149R01/05*0466*00		
Indice del fascicolo di omologazione <i>Index to the information package</i>				
Data <i>Date of issue</i>	16/04/2026	Data ultima modifica <i>Last amendment date</i>	--	
1.	Clausole di garanzia e istruzioni sul diritto di presentare ricorso <i>Collateral clauses and instruction on right to appeal</i>			
2.	Rapporto(i) Finale di Ispezione N. <i>Test report(s) No.</i>	ATS-SM-IR-149-33082	Data <i>Date</i>	16/04/2026
3.	Scheda informativa N. <i>Information document No.</i>	L7X-00	Data <i>Date</i>	01/04/2026
			Data ultima modifica <i>Last amendment date</i>	--



Clausole di garanzia e istruzioni sul diritto di presentare ricorso

Clausole di garanzia

La produzione in serie deve essere esattamente conforme ai documenti di omologazione. Le variazioni di produzione in serie sono consentite solo con il consenso espresso dell'**Autorità per l'Omologazione**.

Le variazioni del nome della società, l'indirizzo e lo stabilimento di produzione, nonché una delle parti che hanno l'autorità alla consegna o eventuali rappresentanti nominati al momento del rilascio dell'omologazione, devono essere immediatamente comunicate all'**Autorità per l'Omologazione**. La violazione di queste regole può portare al ritiro dell'omologazione ed inoltre può essere legalmente perseguita.

L'omologazione decade se viene restituita o ritirata o se il tipo omologato non è più conforme ai requisiti di legge. La revoca può essere fatta se non esistono più i requisiti richiesti per il rilascio e la continuazione dell'omologazione, se il titolare dell'omologazione viola gli obblighi dettati dall'omologazione, anche nel caso in cui gli obblighi derivino dalle condizioni assegnate all'interno dell'omologazione, o se è accertato che il tipo approvato non è conforme ai requisiti di sicurezza del traffico e di tutela dell'ambiente.

L'**Autorità per l'Omologazione** può verificare la corretta applicazione della delega conferita rilasciata nella presente omologazione, in qualsiasi momento. In particolare, questo include la verifica della produzione, che sia conforme, nonché le misure di controllo di conformità della produzione. Per questo, possono essere presi dei campioni dalla produzione. I dipendenti o rappresentanti dell'**Autorità per l'Omologazione** possono avere accesso senza ostacoli agli impianti di produzione e stoccaggio.

La delega conferita contenuta nella presente omologazione non è trasferibile. I diritti del marchio di terzi non sono interessati da questa omologazione.

Istruzione su diritto di ricorso

Questa omologazione è appellabile entro un mese dalla notifica. Il ricorso deve essere presentato per iscritto o come una domanda inviata all'**Autorità per l'Omologazione** - Via III Settembre, 99 - 47891 Dogana - Repubblica di San Marino.

Collateral clauses and instruction on right to appeal

Collateral clauses

*The individual production of serial fabrication must be in exact accordance with the approval documents. Changes in the individual production are only allowed with express consent of the **Authority for Homologation**.*

*Changes in the name of the company, the address and the manufacturing plant as well as one of the parties given the authority to delivery or authorized representative named when the approval was granted is to be immediately disclosed to the **Authority for Homologation**. Breach of this regulation can lead to recall of the approval and moreover can be legally prosecuted.*

The approval expires if it is returned or withdrawn or if the type approved no longer complies with the legal requirements. The revocation can be made if the demanded requirements for issuance and the continuance of the approval no longer exist, if the holder of the approval violates the duties involved in the approval, also to the extent that they result from the assigned conditions to this approval, or if it is determined that the approved type does not comply with the requirements of traffic safety or environmental protection.

*The **Authority for Homologation** may check the proper exercise of the conferred authority taken from this approval at any time. In particular this means the compliant production as well as the measures for conformity of production. For this purpose samples can be taken or have taken. The employees or the representatives of the **Authority for Homologation** may get unhindered access to the production and storage facilities.*

The conferred authority contained with issuance of this approval is not transferable. Trade mark rights of third parties are not affected with this approval.

Instruction on right to appeal

*This approval can be appealed within one month after notification. The appeal is to be filed in writing or as a transcript at the **Authority for Homologation** – Via III Settembre, 99 - 47891 Dogana - Repubblica di San Marino.*

Inspection Report

No. ATS-SM-IR-149-33082

Inspection concerning ~~vehicles~~/ components with regard to:

Uniform provisions concerning the approval of road illumination devices (lamps) and systems for power-driven vehicles:

- ~~Headlamps emitting a driving-beam and/or an asymmetrical passing-beam for vehicles of categories L, M, N and T~~
- ~~Adaptive front-lighting systems (AFS) for vehicles of categories M and N~~
- Headlamps emitting a driving-beam and/or a symmetrical passing-beam for vehicles of categories L and T
- Front fog lamps for vehicles of categories L3, L4, L5, L7, M, N and T
- Cornering lamps for vehicles of categories M, N and T

(strike out what does not apply)

performed according to

UN Regulation No. 149

as last amended by

**01 series of amendments
(supplement no. 05)**

of the Economic Commission for Europe

Approval status	
ECE	Number of approval
	E57*149R01/05*0466*00

0. General information

0.1. Make (trade name of manufacturer): LOBOO

0.2. Type: L7X

0.2.1. Variant(s): N/A

0.3. Name and address of manufacturer: SHENZHEN LOBOO MOTOR ACCESSORIES CO., LTD.
Room 101, 201, 301, Building F, No. 30 Tongfu Road,
Xinsheng Community, Longgang Subdistrict, Longgang
District, Shenzhen(Single business license covering
multiple floors within the same building)

0.3.1 Name and address of manufacturer's authorized
representative: N/A

0.3.2. Production plant(s) address(es): SHENZHEN LOBOO MOTOR ACCESSORIES CO., LTD.
Room 101, 201, 301, Building F, No. 30 Tongfu Road,
Xinsheng Community, Longgang Subdistrict, Longgang
District, Shenzhen City, Guangdong Province, China
(Single business license covering multiple floors within
the same building) Zip Code: 518100

0.4. Information document

No.: L7X-00

Date of issue: 01/04/2026

Date of last changed: --

0.5. Position of the approval mark: On the housing

0.6 Vehicle category(ies)

(or, if not applicable, vehicle categories which the
component(s) is (are) suitable for): N/A

1 Tested object(s)

1.1.	Worst case configuration : (justification of the determination)	Single case – no variants.
1.2.	Description:	Vehicle / Object
1.2.1.	Make:	LOBOO
1.2.2.	Manufacturer:	SHENZHEN LOBOO MOTOR ACCESSORIES CO., LTD.
1.2.3.	Type / Variant :	L7X
1.2.4.	Vehicle VIN number / component identification:	See manufacturer information document
1.2.4.1.	Place of marking:	See manufacturer information document
1.2.5.	Main characteristics	
	For passing-beam headlamps of Classes C and V and driving-beam headlamps of Classes A, B and RA The driving-beam of Class RA (auxiliary driving-beam) shall only be operated together with driving-beams of Classes A, B or AFS-R.	
	Class(es) as described by the relevant marking:	HR
	Matched pair:	yes/no
	Number, category and kind of light source(s):	4*LEDs
	Lamp approved for LED substitute light source(s):	yes/no
	If yes, category of LED substitute light source(s):	N/A
	Reference luminous flux used for the principal passing-beam (lm):	N/A
	Rated voltage or range of voltage:	12V
	Principal passing-beam operated at approximately(V):	N/A
	Measures according to paragraph 4.12. of this Regulation:	N/A

Number and specific identification code(s) of LED modules and for each LED module statement whether it is replaceable or not:

~~yes~~/no, non-replaceable

Number and specific identification code(s) of electronic light source control gear(s):

N/A

Total objective luminous flux as described in paragraph 4.5.3.4. of this Regulation exceeds $2.00 \cdot 10^3$ lumens:

~~yes~~/no/does not apply

The adjustment of the cut-off has been determined at:

~~10 m/25 m/does not apply~~

The determination of the minimum sharpness of the "cut-off" has been carried out at:

~~10 m/25 m/does not apply~~

Trade name and identification number of separate ballast(s) or part(s) of ballast(s) if any:

N/A

The lamp is only intended for installation on vehicles in use:

~~yes~~/no

The light source(s) producing the principal passing beam may be lit simultaneously with that of any other lighting function in the same body:

~~yes~~/no

If yes, the following lighting function(s) are lit simultaneously:

N/A

For headlamps of Classes ~~AS, BS, CS and DS~~

Class(es) as described by the relevant marking

WC-DS

Matched pair:

~~yes~~/no

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

4*LEDs

Lamp approved for LED substitute light source(s):

~~yes~~/no

If yes, category of LED substitute light source(s):

N/A

Rated voltage or range of voltage:

12V

Number and specific identification code(s) of light source modules and for each light source module a statement whether it is replaceable or not:

~~yes~~/no, non-replaceable

Number and specific identification code(s) of electronic light source control gear(s), if any:

N/A

The determination of "cut-off" sharpness:

~~yes~~/no

If yes, it was carried out at 10 m / 25 m:

N/A

Trade name and identification number of separate ballast(s) or part(s) of ballast(s):

N/A

The light source(s) producing the principal passing beam may be lit simultaneously with that of any other lighting function in the same body:

~~yes~~/no

If yes, the following lighting function (s) are lit simultaneously:

Driving beam

The minimum bank angle(s) to satisfy the requirement of paragraph 5.4.4.1., if any

N/A

Driving-beam of Class BS:

~~yes~~/no

Secondary Driving-beam of Class CS or Class DS:

~~yes~~/no

The Secondary Driving-beam shall only be operated together with a passing beam or a driving-beam of Class A or Class B.

The lamp is only intended for installation on vehicles in use:

~~yes~~/no

For front fog lamps Class F3

Class as described by the relevant marking:

N/A

Matched pair:

~~yes~~/no

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

N/A

Lamp approved for LED substitute light source(s):

N/A

Inspection Report No.: ATS-SM-IR-149-33082



Of: 16/04/2026

Type: L7X

Manufacturer: SHENZHEN LOBOO MOTOR ACCESSORIES CO., LTD.

If yes, category of LED substitute light source(s)	N/A
Rated voltage or range of voltage:	N/A
light source module:	yes/no
and for each light source module a statement whether it is replaceable or not:	yes/no
light source module specific identification code:	N/A
Number and specific identification code(s) of electronic light source control gear(s).	N/A
Colour of light emitted:	white/selective yellow
Luminous flux of the light source (see paragraph 4.5.3.5. of this Regulation) greater than $2.00 \cdot 10^3$ lumens:	yes/no
Luminous intensity is variable:	yes/no
The determination of the cut-off gradient (if measured) was carried out at:	10 m / 25 m
The lamp is only intended for installation on vehicles in use:	yes/no
The light source(s) producing the front fog lamp may be lit simultaneously with that of any other lighting function in the same body:	yes/no
If yes, the following lighting function (s) are lit simultaneously:	N/A
For cornering lamps	
Number, category and kind of light source(s):	N/A
Lamp approved for LED substitute light source(s):	yes/no
If yes, category of LED substitute light source(s):	N/A
Rated voltage or the range of voltage:	N/A

Inspection Report No.: ATS-SM-IR-149-33082



Of: 16/04/2026

Type: L7X

Manufacturer: SHENZHEN LOBOO MOTOR ACCESSORIES CO., LTD.

Light source module: ~~yes/no~~

Light source module specific identification code: N/A

Application of an electronic light source control gear: N/A

(a) Being part of the lamp ~~yes/no~~

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

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

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

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

The lamp is only intended for installation on vehicles in use: ~~yes/no~~

1.3. Whether an additional test is conducted according to the paragraph 4.19. of this Regulation: ~~yes/no~~

2. Test records

2.1. Conformity with the information document

SI /
YES

NO

NR /
NA

2.2 Test Conditions

In dependence on the particular device(s) tested, test conditions specified into UN R149 apply for each device submitted for approval.

Conform / ~~Not Conform~~

The testing conditions provided for by the Regulation have been verified.

2.3 Equipment for measuring and testing:

See Appendix 3

2.4. Test results and measurements

Below items are from legislation

3 General technical requirements

Lamps submitted for approval are conform to the requirements set forth in paragraphs 4 and 5.

Conform / ~~Not Conform~~

The requirements contained in sections 5 "General specifications" and 6 "Individual specifications" (and in the Annexes referenced in the said sections) of UN Regulations No. 48, 53, 74 or 86, and their series of amendments in force at the time of application for the lamp type approval apply to this Regulation.

Conform / ~~Not Conform~~

The requirements pertinent to each lamp and to the category/ies of vehicle on which the lamp is intended to be installed are applied, where its verification at the moment of lamp type approval is feasible

Conform / ~~Not Conform~~

ECE R149
4.1

The lamps must be so designed and constructed that under normal conditions of use and notwithstanding the vibrations to which they may be subjected in such use, their satisfactory operation remains assured and they retain the characteristics prescribed by this Regulation.

Conform / ~~Not Conform~~

<i>ECE R149</i> 4.2	Lamps shall be so made that they give adequate illumination without dazzle when emitting the passing-beam, and good illumination when emitting the driving-beam.	Conform / Not Conform
<i>ECE R149</i> 4.3	Lamps shall be fitted with a device enabling them to be so adjusted on the vehicles as to comply with the rules applicable to them. Such a device need not be fitted on units in which the reflector and the diffusing lens cannot be separated, provided the use of such units is confined to vehicles on which the lamp setting can be adjusted by other means.	Conform / Not Conform
<i>ECE R149</i> 4.3.1	In case of headlamps of classes AS, BS, CS, DS and of front fog lamps, such a device may or may not provide horizontal adjustment, provided that the headlamps are so designed that they can maintain a proper horizontal aiming even after the vertical aiming adjustment.	Conform / Not Conform
<i>ECE R149</i> 4.3.2	In case of cornering lamps, such a device is not required.	Conform / Not Conform
<i>ECE R149</i> 4.4	Where a lamp producing a principal passing-beam and a lamp producing a driving-beam, each equipped with its own light source(s) or light source module(s), are assembled to form one unit, the adjusting device shall enable the principal passing-beam and the driving-beam to be adjusted individually.	Applicable and conform / Not Applicable
	However, these provisions shall not apply to assemblies whose optical units are indivisible.	Applicable and conform / Not Applicable
<i>ECE R149</i> 4.5	Provisions with regard to light sources	
<i>ECE R149</i> 4.5.1	Use of light sources	
	The lamp shall only be equipped with:	
	- replaceable light source(s) approved according to UN Regulations Nos. 37, 99 and/or 128, provided that no restriction on the use is made at the time of application for type approval, and/or	Conform / Not Conform
	- light source module(s) and/or	Conform / Not Conform
	- non-replaceable light source(s)	Conform / Not Conform

**ECE R149
4.5.2 General requirements with regard to light sources**

**ECE R149
4.5.2.1** In case a light source category or categories or type(s) is restricted for use in lamps on vehicles in use and originally equipped with such lamps, the applicant for type approval of the lamp shall declare that the lamp is only intended for installation on those vehicles; this shall be noted in the communication form. **Conform / Not Conform**

**ECE R149
4.5.2.2** In case of replaceable UN approved light source(s),

(a) The design of the lamp shall be such that the light source(s) can be fixed in no other position but the correct one; **Conform / Not Conform**

(b) The light source(s) holder shall conform to the characteristics given in IEC Publication 60061. The holder data sheet relevant to the category of light source(s) prescribed, applies. In addition, where a category of LED substitute light source(s) is also prescribed, the holder data sheet relevant to the category of LED substitute light source(s) applies. **Conform / Not Conform**

**ECE R149
4.5.2.3** Road illumination devices shall not generate radiated or power line disturbances, which cause a malfunction of other electric/electronic systems of the vehicle. **Conform / Not Conform**

**ECE R149
4.5.2.4** In case of replaceable light source module(s), the design of the light source module(s) shall be such that

(a) it can only be fitted in the designated and correct position and can only be removed with the use of tool(s); and **Conform / Not Conform**

(b) it is tamperproof; and **Conform / Not Conform**

(c) regardless of the use of tool(s), it is not mechanically interchangeable with:
- any replaceable UN approved light source; and/or, **Conform / Not Conform**

- any other replaceable light source module having different characteristics that is located in the same lamp housing. **Conform / Not Conform**

(d) when the light source module is removed and replaced by another module provided by the applicant and bearing the same light source module identification code, the photometric requirements of the lamp or AFS system shall be met.

Conform / Not Conform

ECE R149
4.5.2.4.1

If applicable, light source modules shall comply with the requirements specified in Annex 9.

Conform / Not Conform

ECE R149
4.5.2.5

In the case of lamps equipped with non-replaceable filament light source(s) or light source module(s) equipped with non-replaceable filament light source(s), the applicant shall annex to the type approval documentation a report, acceptable to the Authority responsible for type approval, that demonstrates compliance of these non-replaceable filament light source(s) with the requirements as specified in paragraph 4.11 of IEC 60809, Edition 4.

Conform / Not Conform

ECE R149
4.5.3

Specific requirements with regard to light sources

ECE R149
4.5.3.1

The luminous flux of the light source(s), or the luminous flux of the principal passing-beam, shall be determined according to the provisions in paragraph 4.6.

Conform / Not Conform

ECE R149
4.5.3.2

In case of the principal passing-beam either:

(a) the total objective luminous flux of all light sources (UN approved light sources, light source modules and non-replaceable light sources) producing the principle passing-beam shall be equal or greater than the minimum values shown in Table 3a

Conform / Not Conform

Principle passing-beam classes	Minimum luminous flux in lm
V, C, AFS-C, DS	$1.00 \cdot 10^3$
AS	$1.50 \cdot 10^2$
BS	$3.50 \cdot 10^2$
CS	$5.00 \cdot 10^2$

or

(b) the luminous flux in the principal passing-beam shall meet the requirements in zones I and II, as specified in Table 3b, when aimed according to paragraphs 3.2. (for classes V, C, AFS-C) and 3.3. (for all the other classes) in Annex 5.

Conform / Not Conform

Beam classes	Zone	Forward field	Minimum luminous flux in field in lm
V, C, AFS-C, DS	I	30°L to 30°R and 15°D to 1°U	$4.00 \cdot 10^2$
	II	30°L to 30°R and 3.5°D to 1°U	$2.00 \cdot 10^2$
AS	I	30°L to 30°R and 15°D to 1°U	$6.0 \cdot 10^1$
	II	30°L to 30°R and 3.5°D to 1°U	$3.0 \cdot 10^1$
BS	I	30°L to 30°R and 15°D to 1°U	$1.40 \cdot 10^2$
	II	30°L to 30°R and 3.5°D to 1°U	$7.0 \cdot 10^1$
CS	I	30°L to 30°R and 15°D to 1°U	$2.00 \cdot 10^2$
	II	30°L to 30°R and 3.5°D to 1°U	$1.00 \cdot 10^2$

ECE R149
4.5.3.3

In case of the principle passing-beam the total objective luminous flux of all light sources (UN approved light sources, light source modules and non-replaceable light sources) producing the principle passing-beam shall be equal or smaller than the maximum values shown in Table 4, if any.

Conform / Not Conform

Principle passing-beam classes	Maximum luminous flux in lm
AS	$9.00 \cdot 10^2$
BS	$1.00 \cdot 10^3$
CS	$2.00 \cdot 10^3$

ECE R149
4.5.3.4

Front fog lamps, designed to operate permanently with an additional system to control the intensity of the light emitted, or which are reciprocally incorporated with another function, using a common light source, and designed to operate permanently with an additional system to control the intensity of the light emitted, are permitted.

Conform / Not Conform

ECE R149
4.5.3.5

Except for AFS and cornering lamps, in case of a lamp incorporating one or more light source(s) or light source module(s) producing the principal passing-beam or the front fog beam and having a total objective luminous flux which exceeds $2.00 \cdot 10^3$ lumens, a reference shall be made in the communication form in Annex 1.

Conform / Not Conform

ECE R149
4.5.3.6

In case of an AFS incorporating light sources and/or light source module(s) producing the basic passing-beam and having a total objective luminous flux of the lighting units as indicated under item 9.2.3.(a) of the communication form which exceeds $2.00 \cdot 10^3$ lumen per side, a reference shall be made in the communication form in Annex 1. This information is not necessary in case the AFS is intended for a vehicle of category L₃.

Conform / Not Conform

4 Specific Technical Requirements

4.0.1 Specific requirements applicability

<i>ECE R149 Lamps and their categories</i>	<i>ECE R149 paragraph No.</i>	<i>Inspection Report paragraph No.</i>	<i>Applicable (Yes / No)</i>
Driving beam Class A, B, RA, ADB, BS, CS or DS (symbols "R", "HR", "RA", "XR", "ADB", "R-BS", "WR-CS" or "WR-DS")	Par. 5.1	4.1	Yes
Headlamps to provide a passing-beam of the class C and V (symbols "C" and "V")	Par. 5.2	4.2	No
Adaptive front-lighting systems (AFS) and concerning adaptive driving-beam (ADB) for vehicles of category L3 (symbols "XC", "XCE", "XCV", "XCW", "XR" and "ADB")	Par. 5.3	4.3	No
Headlamps to provide a passing-beam of the Class AS, BS, CS and DS (symbols "C-AS", "C-BS", "WC-CS" and "WC-DS")	Par. 5.4	4.4	Yes
Front fog lamps of the class F3 (symbol "F3")	Par. 5.5	4.5	No
Cornering lamps (symbol K)	Par. 5.6	4.6	No
Test Results for Headlamps that emit multiple beams (according to each specific ECE R149 paragraph 5 prescription)	---	4.7	No

4.0.2 Chronological order of material tests

If applicable, chronological order of materials tests is followed, according to ECE R149 Annex 8, Appendix 1

Applicable and Conform / Not Applicable

4.1 Technical requirements concerning driving-beam of the Class A, B, RA, ADB, BS, CS or DS (symbols "R", "HR", "RA", "XR", "ADB", "R-BS", "WR-CS" or "WR-DS")

Applicable / Not Applicable

ECE R149
5.1.1

The headlamp shall be aimed according to Annex 5, paragraph 3.1. including the allowed specific tolerances of paragraph 4.

Conform / Not Conform

For devices where more than one light source is used to provide the driving-beam, these light sources shall be operated simultaneously to determine the maximum value of the luminous intensity ($I_{\max}$).

Conform / Not Conform

ECE R149
5.1.2

It is also possible that a part of the driving-beam produced by one of these light sources will be used exclusively for short time signals "flash to pass" as declared by the applicant. This shall be indicated in the relevant drawing and a remark shall be made in the communication form.

Conform / Not Conform

ECE R149
5.1.3

For the coordinates of any measuring point/line/zone a 0.25° tolerance is allowed independently at each test point for photometry unless indicated otherwise.

Conform / Not Conform

ECE R149
5.1.4

The luminous intensity distribution of the driving-beam shall meet the requirements of Table 5.

Conform / Not Conform

Element	Angular coordinates in deg.		Minimum luminous intensity in cd					
	vertical	horizontal	Class A	Class B	Class RA (Auxiliary)	Class BS	Class CS (Secondary)	Class DS (Secondary)
2U-V	2°U	0°	$1.00 \cdot 10^3$	$1.70 \cdot 10^3$	-	-	$1.00 \cdot 10^3$	$1.70 \cdot 10^3$
H-12L	0°	12°L	$6.00 \cdot 10^2$	$1.50 \cdot 10^3$	-	-	-	-
H-9L	0°	9°L	$2.00 \cdot 10^3$	$3.40 \cdot 10^3$	-	-	-	-
H-6L	0°	6°L	$3.40 \cdot 10^3$	$5.00 \cdot 10^3$	-	$2.50 \cdot 10^3$	$3.40 \cdot 10^3$	$5.00 \cdot 10^3$
H-3L	0°	3°L	$1.20 \cdot 10^4$	$1.75 \cdot 10^4$	-	$9.00 \cdot 10^3$	$1.20 \cdot 10^4$	$1.75 \cdot 10^4$
H-V ^a	0°	0°	$0.8 \times I_{\max}$	$0.8 \times I_{\max}$	$0.8 \times I_{\max}$	$1.60 \cdot 10^4$	$2.00 \cdot 10^4$	$3.00 \cdot 10^4$
H-3R	0°	3°R	$1.20 \cdot 10^4$	$1.75 \cdot 10^4$	-	$9.00 \cdot 10^3$	$1.20 \cdot 10^4$	$1.75 \cdot 10^4$
H-6R	0°	6°R	$3.40 \cdot 10^3$	$5.00 \cdot 10^3$	-	$2.50 \cdot 10^3$	$3.40 \cdot 10^3$	$5.00 \cdot 10^3$
H-9R	0°	9°R	$2.00 \cdot 10^3$	$3.40 \cdot 10^3$	-	-	-	-
H-12R	0°	12°R	$6.00 \cdot 10^2$	$1.50 \cdot 10^3$	-	-	-	-
$I_{\max}$	-	-	$2.70 \cdot 10^4$	$4.00 \cdot 10^4$	$1.00 \cdot 10^4$	$2.00 \cdot 10^4$	$2.70 \cdot 10^4$	$4.00 \cdot 10^4$

^a In case of a matched pair, the contribution of each lamp on H-V point shall not be less than 40 per cent of the relevant beam class minimum $I_{\max}$ required.

ECE R149
5.1.4.1 Except for classes BS, CS and DS, the point of intersection (HV) of lines H-H and V-V shall be situated within the isocandela 80 per cent of maximum luminous intensity ($I_{\max}$)

Conform / ~~Not Conform~~

ECE R149
5.1.4.2 The maximum value ($I_{\max}$) shall not exceed $2.15 \cdot 10^5$ cd in any direction.

Conform / ~~Not Conform~~

ECE R149
5.1.4.2.1 The reference mark (I'_M) of the maximum luminous intensity shall be obtained by the ratio:

$$I'_M = I_{\max} / 4,300$$

This value shall be rounded off to the value 2.5 - 5 - 7.5 - 10 - 12.5 - 17.5 - 20 - 25 - 27.5 - 30 - 37.5 - 40 - 45 - 50.

10

Test result for luminous intensity

Sample No. 1

No.	Point of the measurement	Limits [cd]		Measured values [cd]		Conclusion
		Minimum	Maximum	1 minute	After stability	
1	$I_{\max}$.	$4.00 \cdot 10^4$	$2.15 \cdot 10^5$	$4.56 \cdot 10^4$	$4.47 \cdot 10^4$	Complies
2	H-V	$0.8 I_{\max}$.	$2.15 \cdot 10^5$	$4.41 \cdot 10^4$	$4.33 \cdot 10^4$	Complies
3	H-12L	$1.50 \cdot 10^3$	$2.15 \cdot 10^5$	$1.39 \cdot 10^4$	$1.37 \cdot 10^4$	Complies
4	H-9L	$3.40 \cdot 10^3$	$2.15 \cdot 10^5$	$1.79 \cdot 10^4$	$1.76 \cdot 10^4$	Complies
5	H-6L	$5.00 \cdot 10^3$	$2.15 \cdot 10^5$	$1.99 \cdot 10^4$	$1.95 \cdot 10^4$	Complies
6	H-3L	$1.75 \cdot 10^4$	$2.15 \cdot 10^5$	$2.10 \cdot 10^4$	$2.06 \cdot 10^4$	Complies
7	H-3R	$1.75 \cdot 10^4$	$2.15 \cdot 10^5$	$2.00 \cdot 10^4$	$1.97 \cdot 10^4$	Complies
8	H-6R	$5.00 \cdot 10^3$	$2.15 \cdot 10^5$	$1.97 \cdot 10^4$	$1.93 \cdot 10^4$	Complies
9	H-9R	$3.40 \cdot 10^3$	$2.15 \cdot 10^5$	$1.88 \cdot 10^4$	$1.85 \cdot 10^4$	Complies
10	H-12R	$1.50 \cdot 10^3$	$2.15 \cdot 10^5$	$1.47 \cdot 10^4$	$1.44 \cdot 10^4$	Complies
11	2U-V	$1.70 \cdot 10^3$	$2.15 \cdot 10^5$	$7.46 \cdot 10^3$	$7.32 \cdot 10^3$	Complies

a In case of a matched pair, the contribution of each lamp on H-V point shall not be less than 40 per cent of the relevant beam class minimum $I_{\max}$ required.

Test result for luminous intensity

Sample No. 2

No.	Point of the measurement	Limits [cd]		Measured values [cd]		Conclusion
		Minimum	Maximum	1 minute	After stability	
1	I _{max} .	$4.00 \cdot 10^4$	$2.15 \cdot 10^5$	$4.48 \cdot 10^4$	$4.39 \cdot 10^4$	Complies
2	H-V	0.8I _{max} .	$2.15 \cdot 10^5$	$4.35 \cdot 10^4$	$4.27 \cdot 10^4$	Complies
3	H-12L	$1.50 \cdot 10^3$	$2.15 \cdot 10^5$	$1.36 \cdot 10^4$	$1.34 \cdot 10^4$	Complies
4	H-9L	$3.40 \cdot 10^3$	$2.15 \cdot 10^5$	$1.63 \cdot 10^4$	$1.60 \cdot 10^4$	Complies
5	H-6L	$5.00 \cdot 10^3$	$2.15 \cdot 10^5$	$1.87 \cdot 10^4$	$1.84 \cdot 10^4$	Complies
6	H-3L	$1.75 \cdot 10^4$	$2.15 \cdot 10^5$	$2.11 \cdot 10^4$	$2.07 \cdot 10^4$	Complies
7	H-3R	$1.75 \cdot 10^4$	$2.15 \cdot 10^5$	$2.07 \cdot 10^4$	$2.03 \cdot 10^4$	Complies
8	H-6R	$5.00 \cdot 10^3$	$2.15 \cdot 10^5$	$1.79 \cdot 10^4$	$1.75 \cdot 10^4$	Complies
9	H-9R	$3.40 \cdot 10^3$	$2.15 \cdot 10^5$	$1.51 \cdot 10^4$	$1.48 \cdot 10^4$	Complies
10	H-12R	$1.50 \cdot 10^3$	$2.15 \cdot 10^5$	$1.32 \cdot 10^4$	$1.29 \cdot 10^4$	Complies
11	2U-V	$1.70 \cdot 10^3$	$2.15 \cdot 10^5$	$8.22 \cdot 10^3$	$8.06 \cdot 10^3$	Complies

a In case of a matched pair, the contribution of each lamp on H-V point shall not be less than 40 per cent of the relevant beam class minimum I_{max} required.

Additional test of headlamps with adjustable reflector

Conform / Not conform

The reflector of driving beam moved vertically $\pm 2^\circ$	Sample No. 1 +2	Sample No. 1 -2	Sample No. 2 +2	Sample No. 2 -2	Limits [cd]	
					Max	Min
HV	--	--	--	--	$2.15 \cdot 10^5$	0.8I _{max} .
I _{max}	--	--	--	--	$2.15 \cdot 10^5$	$4.00 \cdot 10^4$

Colour

The colour of light emitted shall be white.

	Measured values			Limits
	Sample	x	y	
After 1 minute	No. 1	0.3182	0.3205	Complies
	No. 2	0.3175	0.3201	Complies
After stability	No. 1	0.3184	0.3208	Complies
	No. 2	0.3176	0.3204	Complies

4.2 Technical requirements concerning headlamps to provide a passing-beam of the Class C and V (symbols "C" and "V")

Applicable/ Not Applicable

ECE R149 5.2.1 The headlamp shall be aimed according to Annex 5, paragraph 3.2. including the allowed specific tolerances of paragraph 4.

Conform / Not Conform

If, however, vertical adjustment cannot be performed repeatedly to the required position within the allowed tolerances, the instrumental method of Annex 6, paragraph 2. shall be applied to test compliance with the required minimum quality of the asymmetric "cut-off" line and to perform the beam vertical adjustment.

Conform / Not Conform

ECE R149 5.2.1.1 When so aimed, the headlamp:

(i) If its approval is sought solely for provision of a passing-beam⁹, comply with the requirements set out in UN R149 paragraph 5.2.2.;

Applicable and Conform / Not Applicable

(ii) If it is intended to provide both a passing-beam and a driving-beam, comply with the requirements set out in UN R149 paragraphs 5.2.2. and 5.1.

Applicable and Conform / Not Applicable

ECE R149 5.2.1.2 Where a headlamp so aimed does not meet the requirements set out in UN R149 paragraphs 5.2.2. and 5.1., its alignment may be changed according to the provisions in UN R149 Annex 5, paragraph 1.2.3.

Applicable and Conform / Not Applicable

ECE R149 5.2.2 The passing-beam shall meet the luminous intensities at the test points referred to in Table 6 and in Figure A4-V.

Conform / Not Conform

ECE R149 5.2.3 There shall be no lateral variations detrimental to good visibility in any of the zones I, III and IV.

Conform / Not Conform

<i>ECE R149</i> 5.2.4	Headlamps designed to meet the requirements of both right-hand and left-hand traffic, in each of the two setting positions of the optical unit, light source(s) or LED module(s) producing the principal passing-beam, meet the requirements set forth above for the corresponding direction of traffic.	Applicable and Conform / Not Applicable
<i>ECE R149</i> 5.2.5	The requirements in UN R149 paragraph 5.2.2. also apply to headlamps designed to provide bend lighting and/or that include the additional light source(s) or LED module(s) referred to in UN R149 paragraph 5.2.6.2. In the case of a headlamp designed to provide bend lighting its alignment may be changed, provided that the axis of the beam is not displaced vertically by more than 0.2°.	Applicable and Conform / Not Applicable
<i>ECE R149</i> 5.2.5.1	If bend lighting is obtained by:	
<i>ECE R149</i> 5.2.5.1.1	Swivelling the passing-beam or moving horizontally the kink of the elbow of the cut-off, the measurements are carried out after the complete headlamp assembly has been reaimed horizontally, e.g. by means of a goniometer;	Conform / Not Conform
<i>ECE R149</i> 5.2.5.1.2	Moving one or more optical parts of the headlamp without moving horizontally the kink of the elbow of the cut-off, measurements are carried out with these parts being in their extreme operating position;	Conform / Not Conform
<i>ECE R149</i> 5.2.5.1.3	Means of additional light source(s) or LED module(s) without moving horizontally the kink of the elbow of the cut-off, measurements are carried out with this/these light source(s) or LED module(s) activated.	Conform / Not Conform
<i>ECE R149</i> 5.2.6	Additional UN approved light sources and/or additional light source module(s) may be used inside the passing-beam headlamp to contribute to bend lighting;	Applicable and Conform / Not Applicable
<i>ECE R149</i> 5.2.7	Additional UN approved light sources and/or additional light source module(s), inside the passing-beam headlamp, may be used for the purposes of generating infrared radiation. It/they shall only be activated at the same time as the principal light source(s) or light source module(s). In the event that (one of) the principal light source(s) or (one of) the principal light source module(s) fails, this (these) additional light source(s) and/or light source module(s) shall be automatically switched OFF;	Applicable and Conform / Not Applicable

ECE R149
5.2.8 In the event of failure of one or more additional light source(s), or one or more additional light source module(s) as described in paragraphs 5.2.6. and 5.2.7., the headlamp shall continue to fulfil the requirements of the passing-beam. **Applicable and Conform / Not Applicable**

Additional test of headlamps with adjustable reflector **Conform / Not conform**

Colour

The colour of light emitted shall be white. **Conform / Not conform**

Illumination configuration for different traffic conditions **Conform / Not conform**

4.3 Technical requirements concerning adaptive front-lighting systems (AFS)) and concerning adaptive driving-beam (ADB) for vehicles of category L3 (symbols "XC", "XCE", "XCV", "XCW", "XR" and "ADB") **Applicable / Not Applicable**

ECE R149 *5.3.1* General provisions

ECE R149
5.3.1.1 Each system provide a Class C passing-beam according to ECE R149 paragraph 5.3.2.4. and one or more passing-beam(s) of additional class(es); it may incorporate one or more additional modes within each class of passing-beam and the front-lighting functions according to ECE R149 paragraph 5.3.3. and/or 3.1.3.2.l. **Conform / Not Conform**

ECE R149
5.3.1.1.1 Notwithstanding paragraph 5.3.1.1., ADB for vehicles of category L3 shall only comply with the requirements set out in paragraph 5.3.3. and its subparagraphs. **Applicable and Conform / Not Applicable**

ECE R149
5.3.1.2 The system provide automatic modifications, such, that good road illumination is achieved and no discomfort is caused, neither to the driver nor to other road users. **Conform / Not Conform**

ECE R149
5.3.1.3 The system is considered acceptable if it meets the relevant photometric requirements of ECE R149 paragraphs 5.3.2. and 5.3.3. **Applicable and Conform / Not Conform**

ECE R149
5.3.1.4 Photometric measurements are performed according to the applicant's description: **Conform / Not Conform**

ECE R149
5.3.1.4.1 At neutral state; **Applicable / Not Applicable**

ECE R149 At V-signal, W-signal, E-signal, T-signal whichever apply; **Applicable / Not Applicable**
5.3.1.4.2

ECE R149 If applicable, at any other signal(s) and combinations of **Applicable / Not Applicable**
5.3.1.4.3 them, according to the applicant's specification.

***ECE R149* Provisions concerning the passing-beam**
5.3.2

The system, prior to the subsequent test procedures, is set **Conform / Not Conform**
to the neutral state, emitting the Class C passing-beam.

ECE R149 For each side of the system (vehicle) or in the case of AFS **Conform / Not Conform**
5.3.2.1 for vehicles of category L3 for the system the passing-
beam in its neutral state shall produce from at least one
lighting unit a "cut-off" as defined in Annex 5 or,

ECE R149 The system provides other means, e.g. optical features or **Conform / Not Conform**
5.3.2.1.1 temporary auxiliary beams, allowing for unambiguous and
correct aiming.

ECE R149 ECE R149 Annex 5 does not apply to the traffic-change **Applicable / Not Applicable**
5.3.2.1.2 function as described in paragraph 4.12.

ECE R149 The system or part(s) thereof shall be aimed according to **Conform / Not Conform**
5.3.2.2 the requirements of Annex 5 paragraph 3.2. including the
allowed specific tolerances of paragraph 4 so that the
position of the cut-off complies with the requirements
indicated in Table 8. For AFS for vehicles of category L3 the
system or part(s) thereof shall be aimed according to the
requirements of Annex 5 paragraph 3.3.

If, however, vertical adjustment cannot be performed
repeatedly to the required position within the allowed
tolerances, the instrumental method of Annex 6,
paragraph 2. shall be applied to test compliance with the
required minimum quality of the asymmetric "cut-off" line
or of the symmetric "cut-off" line for AFS for vehicles of
category L3 and to perform the beam vertical adjustment. **Applicable and Conform / Not Applicable**

ECE R149 5.3.2.3	When so aimed, the system or part(s) thereof, (a) If its approval is sought solely for provision of the passing-beam, needs to comply with the requirements set out in the relevant paragraphs below;	Applicable and conform / Not Applicable
	(b) If it is intended to provide additional lighting or light signalling functions according to the scope of this Regulation, it complies in addition with the requirements set out in the relevant paragraphs below, if not being adjustable independently.	Applicable and Conform / Not Applicable
ECE R149 5.3.2.4	When emitting a specified mode of the passing-beam, the system shall meet the requirements in the respective section (C, V, E, W) of part A of the Table 7 (photometric values) and in Table 8 (Imax and "cut-off" positions), as well as paragraph 2.1. (asymmetric "cut-off" definition) of Annex 5. For AFS for vehicles of category L3, when emitting a specified mode of the passing-beam, the system shall meet the requirements for passing-beam of Class DS specified in paragraph 5.4. of this Regulation.	Applicable and conform / Not Applicable
ECE R149 5.3.2.5	A bending mode is emitted, provided that:	Conform / Not Conform
ECE R149 5.3.2.5.1	The system meets the respective requirements of part B of Table 7 (photometric values) and item B of Table 8 ("cut-off" provisions), when measured according to the procedure indicated in paragraph 5.3.4., relevant to the category (either category 1 or category 2) of the bending mode, for which approval is sought;	Conform / Not Conform
ECE R149 5.3.2.5.2	When the T-signal corresponds to the vehicle's smallest turn radius to the left (or right), the sum of the luminous intensity values provided by all contributors of the right or the left side of the system shall be at least $2.50 \cdot 10^3$ cd at one or more points in the zone extending from H-H to 2° below H-H and from 10° to 45° left (or right);	Conform / Not Conform
ECE R149 5.3.2.5.3	If approval is sought for a category 1 bending mode, the use of the system is restricted to vehicles where provisions are taken such that the horizontal position of the "kink" of the "cut-off" which is provided by the system, complies with the relevant provisions of paragraph 6.22.7.4.5. (i) of UN Regulation No. 48;	Applicable and Conform / Not Applicable

ECE R149 5.3.2.5.4	If approval is sought for a category 1 bending mode, the system is designed so that, in the case of a failure affecting the lateral movement or modification of the illumination, it must be possible to obtain automatically either photometric conditions corresponding to paragraph 5.3.2.4. or a state with respect to the photometric conditions which yields values not exceeding $1.30 \cdot 10^3$ cd in the zone IIIb, as defined in Table 9, and at least $3.40 \cdot 10^3$ cd in a point of "segment I _{max} ";	Applicable and Conform / Not Applicable
	However, this is not needed if, for positions relative to the system reference axis up to 5° L, at 0.3° U from H-H, and greater than 5° L, at 0.57° U, a value of $8.80 \cdot 10^2$ cd is in no case exceeded.	Applicable and Conform / Not Applicable
ECE R149 5.3.2.6	The system is checked on the basis of the relevant instructions of the manufacturer, indicated in the safety concept according to ECE R149 paragraph 3.1.2.2.3.1.	Conform / Not Conform
ECE R149 5.3.2.7	A system or part(s) thereof, designed to meet the requirements of both right-hand and left-hand traffic must, in each of the two setting positions according to paragraph 4.10. meets the requirements specified for the corresponding direction of traffic.	Conform / Not Conform
ECE R149 5.3.2.8	The system is so made that:	
ECE R149 5.3.2.8.1	Any specified passing-beam mode provides at least $2.50 \cdot 10^3$ cd at point 50V from each side of the system;	Conform / Not Conform
	The mode(s) of the Class V passing-beam are exempted from this requirement;	Applicable / Not Applicable
ECE R149 5.3.2.8.2	Other modes:	
	When signal inputs according to paragraph 5.3.1.4.3. apply, the requirements of the paragraph 5.3.2. are fulfilled.	Applicable and Conform / Not Applicable

Inspection Report No.: ATS-SM-IR-149-33082



Of: 16/04/2026

Type: L7X

Manufacturer: SHENZHEN LOBOO MOTOR ACCESSORIES CO., LTD.

ECE R149
5.3.2.10 The Driver Assistance Projection according to UN Regulation No. 48, paragraph 5.35., may be produced by modifying the passing-beam light distribution within a zone limited by the following angles:

vertically: - 1.2° and below

horizontally: ± 25°

In this zone, the intensity of the projection shall not exceed $2.15 \cdot 10^5$ cd and shall not be less than the minimum intensities prescribed in Table 7.

~~Applicable and Conform~~ / Not Applicable

ECE R149
5.3.2.10.1 The colour of the light emitted for Driver Assistance Projection shall be white.

~~Applicable and Conform~~ / Not Applicable

ECE R149
5.3.2.10.2 In case a Driver Assistance Projection is approved as part of the passing-beam light distribution an indication shall be made in the communication form in Annex 1.

~~Applicable and Conform~~ / Not Applicable



ECE R149 Table 7 – Passing-beam requirements in conjunction with ECE R149 Figure A4-VI
Applicable and Conform / Not Applicable
Notes: In the Table 7, Part A and B:
a The contribution of each side of the system shall not be less than 2.50·10³ cd.
b Requirements according to the provisions indicated in Table 10 apply in addition.
c Position requirements according to the provisions of Table 8 ("Segment I_{max}").
d One pair of position lamps, being incorporated with the system or being intended to be installed together with the system may be activated according to the indications of the applicant.
e Requirements according to the provisions indicated in Table 12 apply in addition.
f The contribution of each side of the system shall not be less than 50% of the required minimum value.

Element	Angular coordinates in deg.		Luminous intensity in cd							
	vertical	horizontal	Class C		Class V		Class E		Class W ^b	
			min	max	min	max	min	max	min	max
Zone III	As specified in Table 9		-	6.25·10 ₂	-	6.25·10 ²	-	8.80·10 ²	-	8.80·10 ²
S50+S50LL+S50RR	As specified in Table 11		1.90·10 _d ²	-	-	-	1.90·10 ^{2 d}	-	1.90·10 ^{2 d}	-
S100+S100LL+S100RR	As specified in Table 11		3.75·10 ^{3 d}	-	-	-	3.75·10 ^{2 d}	-	3.75·10 ^{2 d}	-
BR	1°U	2.5°R	-	1.75·10 ₃		1.75·10 ³	-	1.75·10 ³	-	2.65·10 ³
Segment BLL	0.57°U	20°L to 8°L	-	6.25·10 ₂	-	6.25·10 ²	-	8.80·10 ²	-	8.80·10 ²
B50L	0.57°U	3.43°L	-	3.50·10 ₂	-	3.50·10 ²	-	6.25·10 ^{2 e}	-	6.25·10 ²
P	0°	7°L	6.3·10 ¹	-	6.3·10 ¹	-	-	-	-	-
125R	0.34°D	1.15°R	-	-	-	-	1.20·10 ⁴	-	-	-
75R	0.57°D	1.15°R	1.21·10 ⁴	-	-	-	1.52·10 ⁴	-	1.52·10 ⁴	-
50L	0.86°D	3.43°L	5.00·10 ^{3 f}	3.70·10 ₄	3.55·10 ^{3 f}	3.70·10 ⁴	6.80·10 ^{3 f}	-	6.80·10 ^{3 f}	3.70·10 ⁴
50V	0.86°D	0°	5.10·10 ^{3 f}	-	5.10·10 ³	-	1.01·10 ^{4 a}	-	1.01·10 ^{4 a}	-
50R	0.86°D	1.72°R	1.01·10 ⁴	-	5.10·10 ³	-	-	-	-	-
Segment 50	0.86°D	6.84°L to 6.84°R	2.54·10 ³	-	1.80·10 ³	-	2.54·10 ³	-	2.54·10 ³	-
Segment 40LL	1.07°D	14°L to 9°L	8.50·10 ²	-	6.00·10 ²	-	8.50·10 ²	-	8.50·10 ²	-
40L	1.07°D	9°L	2.80·10 ³	-	1.95·10 ³	-	2.80·10 ³	-	2.80·10 ³	-
40R	1.07°D	9°R	2.80·10 ³	-	1.95·10 ³	-	2.80·10 ³	-	2.80·10 ³	-
Segment 40RR	1.07°D	9°R to 14°R	8.50·10 ²	-	6.00·10 ²	-	8.50·10 ²	-	8.50·10 ²	-
25V	1.72°D	0°	2.50·10 ³	-	1.75·10 ³	-	2.50·10 ³	-	-	-
Segment 25L	1.72°D	16°L to 9°L	1.18·10 ³	-	8.25·10 ²	-	1.18·10 ³	-	1.18·10 ³	-
Segment 25	1.72°D	9°L to 9°R	1.70·10 ³	-	1.20·10 ³	-	1.70·10 ³	-	-	-
Segment 25R	1.72°D	9°R to 16°R	1.18·10 ³	-	8.25·10 ²	-	1.18·10 ³	-	1.18·10 ³	-
Segment 20 and below	2°D	3.5°L to 0°	-	-	-	-	-	-	-	1.76·10 ^{4 b}
Segment 15	2.86°D	20°L to 20°R	4.25·10 ²	-	3.00·10 ²	-	4.25·10 ²	-	-	-
Segment 10	4°D	4.5°L to 2°R	5.00·10 ²	-	3.50·10 ²	-	5.00·10 ²	-	-	-
Segment 10 and below	4°D	4.5°L to 2°R		0.8 x the actual measured value at 50R	-	0.8 x the actual measured value at 50R	-	0.8 x the actual measured value at 50R	-	7.10·10 ³
I _{max} ^c	-	-		-	-	4.41·10 ⁴	-	-	-	-

ECE R149 Table 7, **Part B (bending mode)**: Table 7 applies, however the requirements for point B50L, Zone III and point 50L are indicated hereunder:

~~Applicable and Conform~~ / Not Applicable

P a r t	Element	Angular coordinates in deg.		Luminous intensity in cd							
		vertical	horizontal	Class C		Class V		Class E		Class W ^b	
				min	max	min	max	min	max	min	max
B	Zone III	As specified in Table 9		-	8.80·10 ²	-	8.80·10 ²	-	8.80·10 ²	-	8.80·10 ²
	B50L	0.57°U	3.43°L	-	5.30·10 ²	-	5.30·10 ²	-	-	-	7.90·10 ²
	50L	0.86°D	3.43°L	1.70·10 ³	-	1.70·10 ³	-	3.40·10 ³	-	3.40·10 ³	-

ECE R149 Table 8 - **Passing beam elements angular position/extend, additional requirements**

~~Applicable and Conform~~ / Not Applicable

	Beam part designation and requirement	Angular coordinates in deg.	
		vertical	horizontal
A	Angular position / extend for segment I_{max} The maximum luminous intensity in "Segment I_{max} " as indicated in this Table shall be within the limits as prescribed in " I_{max} " in Table 7.	0.3 ° D to 1.72°D	0.5 ° L to 3 ° R
B	For Class C passing-beams the "cut-off" and part(s) of shall: (a) comply with the requirements of paragraph 1. of Annex 5 and		
	(b) be positioned with its "flat horizontal part" at	0.57°D	-

ECE R149 Table 9 - **Passing-beam zones III, defining corner points (indicated for right-hand traffic)**

~~Applicable and Conform~~ / Not Applicable

Element	Angular coordinates in deg.								
	Corner point No.	1	2	3	4	5	6	7	8
Zone III a for Class C or Class V Passing-beam	vertical	1°U	4°U	4°U	2°U	1.5°U	1.5°U	0°	0°
	horizontal	8°L	8°L	8°R	8°R	6°R	1.5°R	0°	4°L
Zone III b for Class W or Class E Passing-beam	vertical	1°U	4°U	4°U	2°U	1.5°U	1.5°U	0.34°U	0.34°U
	horizontal	8°L	8°L	8°R	8°R	6°R	1.5°R	0.5°L	4°L

ECE R149 Table 10 - **Additional provisions for Class W passing-beam (indicated for right-hand traffic)**~~Applicable and Conform~~ / Not Applicable

Element	Angular coordinates in deg.		Max. luminous intensity in cd
	vertical	horizontal	
E	10°U	20°L to 20°R	1.75·10 ²
F1	10°U to 60°U	10°L	
F2		0°	
F3		10°R	

ECE R149 Table 11 - **Overhead sign requirements, angular position of measurement points (indicated for right-hand traffic)**~~Applicable and Conform~~ / Not Applicable

Element	S50LL	S50	S50RR	S100LL	S100	S100RR
	Angular coordinates in deg.					
vertical	4°U	4°U	4°U	2°U	2°U	2°U
horizontal	8°L	0°	8°R	4°L	0°	4°R

ECE R149 Table 12 - **Additional provisions for Class E passing-beam (indicated for right-hand traffic)**~~Applicable and Conform~~ / Not Applicable

Data Set	Angular coordinates in deg.		Max. luminous intensity in cd
	vertical	horizontal	
E1	0.57°U	3.43°L	5.30·10 ²
E2			4.40·10 ²
E3			3.50·10 ²

ECE R149 5.3.3 Provisions concerning the driving-beam

The system is, prior to the subsequent test procedures, set to the neutral state.

~~Conform~~ / Not Conform

ECE R149 5.3.3.1 The lighting unit(s) of the system is adjusted, according to the instructions of the manufacturer, such that the area of maximum illumination is centred on the point (HV) of intersection of the lines H-H and V-V;

~~Conform~~ / Not Conform

<i>ECE R149</i> 5.3.3.1.1	Any lighting unit(s) which is/are not independently adjustable, or, for which the aiming was done with respect to any measurements under ECE R149 paragraphs 5.3.2., is tested in its/their unchanged position.	Applicable and Conform / Not Applicable
<i>ECE R149</i> 5.3.3.2	When measured according to the provisions laid down in paragraph 5.1. the luminous intensity shall meet the requirements of Class B in Table 5 and of paragraph 5.1.4.2	Conform / Not Conform
<i>ECE R149</i> 5.3.3.3	The illumination or part thereof emitted by an AFS may be automatically laterally moved (or modified to obtain an equivalent effect), provided that:	Applicable and Conform / Not Applicable
<i>ECE R149</i> 5.3.3.3.1	The system meets the requirements of Class B in Table 5 and in paragraph 5.1.4.2. with each lighting unit measured according to the relevant procedure indicated in paragraph 5.3.4.	Conform / Not Conform
<i>ECE R149</i> 5.3.3.4	The system shall be so made that the lighting unit(s) of the right side and of the left side each provide at least 1.62·10 ⁴ cd at the point HV. In case of ADB for vehicles of category L3, each installation unit(s) shall provide at least 1.60·10 ⁴ cd at the point HV.	Applicable and Conform / Not Applicable
<i>ECE R149</i> 5.3.3.5	If the specified beam requirements are not met, a re-aiming of the beam position within the specific tolerances of Annex 5, paragraph 4, is allowed; in the revised position all photometric requirements shall be met.	Conform / Not Conform
<i>ECE R149</i> 5.3.3.6	In the case of adaptation of the driving-beam function the system meets the requirements of the above paragraphs only when it is in the maximum condition of activation.	Conform / Not Conform
<i>ECE R149</i> 5.3.3.7	During adaptation, the driving-beam function shall meet the requirements for all the cases of right-hand and left-hand traffic specified in Part A of Table 13. These requirements shall be verified during the type approval testing in conjunction with a signal generator to be provided by the applicant. This signal generator shall reproduce the signals provided by the vehicle and cause the adaptation of the driving-beam and in particular shall represent the settings so that the photometric compliance can be verified.	Conform / Not Conform

ECE R149
5.3.3.7.1 If the driving-beam function meets the requirements in Part A of Table 13 specified for line 1 to line 3 for oncoming and preceding vehicles (symmetrical beam) the relevant information shall be noticed in the communication document in Annex 1. ~~Applicable and Conform~~ / Not Applicable

ECE R149
5.3.3.7.2 If the requirements of ECE R149 paragraph 5.3.3.7. can be met for right-hand traffic or left-hand traffic only, the relevant information is reported in the communication document in Annex 1. ~~Applicable and Conform~~ / Not Applicable

ECE R149
5.3.3.8. The Driver Assistance Projection according to UN Regulation No. 48, paragraph 5.35., may be part of the driving-beam light distribution within a zone limited by the following angles:

vertically: - 1.2° and below
horizontally: ± 25°

The Driver Assistance Projection may be produced by modifying the beam pattern in the zone defined above, where the luminous intensity in any point of the entire driving beam shall not exceed the maximum value (I_{max}) according to paragraph 5.1.4.2. and not be less than the minimum intensities prescribed in Table 13 Part B.

ECE R149
5.3.3.8.1. The colour of the light emitted for Driver Assistance Projection shall be white. ~~Applicable and Conform~~ / Not Applicable

ECE R149
5.3.3.8.2. In case a Driver Assistance Projection is approved as part of the driving-beam light distribution an indication shall be made in the communication form in Annex 1. ~~Applicable and Conform~~ / Not Applicable

ECE R149 Table 13 - Requirements concerning the adaptation of the driving-beam ~~Applicable and Conform~~ / Not Applicable

Notes: In Table 13, Part A and B

a Angular positions are indicated for right-hand traffic.

b The photometric requirements for each single measuring point or line (angular position) of this lighting function apply to half of the sum of the respective measured values from all lighting units of the system applied for this function. In case of class ADB for vehicle of category L3, not being part of a matched pair, this provision does not apply.

Each of the lines defined in Part A of Table 13, in conjunction with the test points as prescribed in Part B of Table 13 shall be measured individually corresponding to the signal provided by the signal generator.

In the case where the passing-beam, which meets the requirements of paragraph 5.3.2., is continuously operated in conjunction with the adaptation of the driving-beam, the photometric requirements in Part B of Table 13 shall not be applied. For vehicles of category L3, in the case where the passing-beam which meets the requirements of paragraph 5.4.3.3. is continuously operated in conjunction with the adaptation of the driving-beam, the photometric requirements in Part B of Table 13 shall not be applied.

	Element	Angular coordinates in deg.		Max. luminous intensity ^b in cd
		vertical	horizontal	
Part A	Line 1 Left Oncoming vehicle at 50 m in the case of right-hand traffic	0.57°U	4.8°L to 2°L	6.25·10 ²
	Line 1 Right Oncoming vehicle at 50 m in the case of left-hand traffic	0.57°U	2°R to 4.8°R	6.25·10 ²
	Line 2 Left Oncoming vehicle at 100 m in the case of right-hand traffic	0.3°U	2.4°L to 1°L	1.75·10 ³
	Line 2 Right Oncoming vehicle at 100 m in the case of left-hand traffic	0.3°U	1°R to 2.4°R	1.75·10 ³
	Line 3 Left Oncoming vehicle at 200 m in the case of right-hand traffic	0.15°U	1.2°L to 0.5°L	5.45·10 ³
	Line 3 Right Oncoming vehicle at 200 m in the case of left-hand traffic	0.15°U	0.5°R to 1.2°R	5.45·10 ³
	Line 4 Preceding vehicle at 50 m in the case of right-hand traffic	0.3°U	1.7°L to 1°R	1.85·10 ³
			> 1°R to 1.7°R	2.50·10 ³
	Line 4 Preceding vehicle at 50 m in the case of left-hand traffic	0.3°U	1.7°R to 1°L	1.85·10 ³
			> 1°L to 1.7°L	2.50·10 ³
	Line 5 Preceding vehicle at 100 m in the case of right-hand traffic	0.15°U	0.9°L to 0.5°R	5.30·10 ³
			> 0.5°R to 0.9°R	7.00·10 ³
			0.9°R to 0.5°L	5.30·10 ³
	Line 5 Preceding vehicle at 100 m in the case of left-hand traffic	0.15°U	> 0.5°L to 0.9°L	7.00·10 ³
	Line 6 Preceding vehicle at 200 m in the case of left-hand traffic and right-hand traffic	0.1°U	0.45°L to 0.45°R	1.60·10 ⁴

ECE R149 Table 13 – part B

Applicable and Conform / Not Applicable

REQUIREMENTS				
Part B	Test Point	Position /degrees*		Min. Intensity**
		Horizontal	Vertical	(cd)
	50R	1.72 R	D 0.86	5 100
	50V	V	D 0.86	5 100
	50L	3.43 L	D 0.86	2 550
	25LL	16 L	D 1.72	1 180
	25RR	11 R	D 1.72	1 180

**ECE R149
5.3.4 Measurement conditions with respect to bending modes**

**ECE R149
5.3.4.1** In the case of a system or part(s) thereof, which provide a bending mode, the requirements of ECE R149 paragraphs 5.3.2. (passing-beam), and /or 5.3.3. (driving-beam) apply for all states, corresponding to the turn radius of the vehicle. For verification with respect to the passing-beam and the driving-beam the following procedure is used:

Applicable and Conform / Not Applicable

**ECE R149
5.3.4.1.1** The system is tested in the neutral state (central/straight), and, in addition in the state(s) corresponding to the smallest turn radius of the vehicle in both directions using the signal generator, if applicable.

Applicable and Conform / Not Applicable

**ECE R149
5.3.4.1.1.1** Compliance with the requirements of ECE R149 paragraphs 5.3.2.5.2. and 5.3.2.5.4. is checked for both category 1 and category 2 bending modes without additional horizontal re-aim.

Conform / Not Conform

**ECE R149
5.3.4.1.1.2** Compliance with the requirements of paragraphs 5.3.2.5.1. and 5.3.3., whichever applies, is checked:

(a) In case of a category 2 bending mode: without additional horizontal re-aim;

Applicable and Conform / Not Applicable

(b) In case of a category 1 or a driving-beam bending mode: after having horizontally re-aimed the relevant installation unit (by means of the goniometer for example) in the corresponding opposite direction.

Applicable and Conform / Not Applicable

**ECE R149
5.3.4.1.2** When testing a category 1 or category 2 bending mode, for a turn radius of the vehicle other than specified in ECE R149 paragraph 5.3.4.1.1. it is observed whether the light distribution is substantially uniform and no undue glare occurs. If this cannot be confirmed the compliance with the requirement laid down in ECE R149 Table 9 is checked.

Applicable and Conform / Not Applicable

**ECE R149
5.3.5 Other provisions**

**ECE R149
5.3.5.1** It is stated by means of a form conforming to the model in ECE R149 Annex 1, which lighting unit(s) provide a "cut-off" as defined in ECE R149 Annex 5, that projects into a zone extending from 6 degrees left to 4 degrees right and upwards from a horizontal line positioned at 0.8 degrees down.

Conform / Not Conform

**ECE R149
5.3.5.2** It is stated by means of a form conforming to the model in ECE R149 Annex 1, which Class E passing-beam mode(s), if any, comply with a "data set" of ECE R149 Table 14.

Conform / Not Conform

4.4 Technical requirements concerning headlamps to provide a passing-beam of the Class ~~AS, BS, CS, DS and ES~~ (symbols ~~"C-AS", "C-BS", "WC-CS", "WC-DS" and "WC-ES"~~)

Applicable / ~~Not Applicable~~

ECE R149 5.4.1 Aiming procedure

ECE R149
5.4.1.1 The headlamp shall be aimed according to Annex 5, paragraph 3.3. including the allowed specific tolerances of paragraph 4.

Conform / ~~Not Conform~~

If, however, vertical adjustment cannot be performed repeatedly to the required position within the allowed tolerances, the instrumental method of Annex 6, paragraph 2. shall be applied to test compliance with the required minimum quality of the symmetric "cut-off" line and to perform the beam vertical adjustment.

Applicable and Conform / ~~Not Applicable~~

ECE R149
5.4.2 When so aimed, the headlamp must, if its approval is sought solely for provision of a passing-beam, comply with the requirements set out in paragraphs 5.4.3.; if it is intended to provide both a passing-beam and a driving-beam, it shall comply with the requirements set out in paragraphs 5.4.3. and 5.1.

Conform / ~~Not Conform~~

ECE R149
5.4.3 The passing beam meets the requirements as shown in the applicable table below and the applicable figure as shown in Annex 4.

Conform / ~~Not Conform~~

ECE R149
5.4.3.1 For Class AS headlamps (referring to ECE R149 Figure A4-VII in Annex 4):

ECE R149 Table 14 - **Passing beam Class AS**Applicable and Conform / ~~Not Applicable~~

Element	Angular coordinates in deg. ^a		Luminous intensity in cd	
	vertical	horizontal	min	max
Any point in Zone 1	0° to 15°U	5°L to 5°R		3.20·10 ²
Any point on line 25L to 25R	1.72°D	5°L to 5°R	1.10·10 ³ ^b	
Any point on line 12.5L to 12.5R	3.43°D	5°L to 5°R	5.50·10 ²	

Notes: In Table 14

^a0.25° tolerance allowed independently at each test point for photometry unless indicated otherwise.

^bIn case of a matched pair the contribution of each lamp shall not be less than 50% of the required minimum value on 25V (1.72°D- V)

ECE R149 For Class BS headlamps (referring to ECE R149 Figure A4-III
5.4.3.2 in Annex 4):

ECE R149 Table 15 - **Passing-beam class BS**~~Applicable and Conform~~/ Not Applicable

Element	Angular coordinates in deg. ^a		Luminous intensity in cd	
	vertical	horizontal	min	max
Any point in Zone 1	0° to 15°U	5°L to 5°R		7.00·10 ²
Any point on line 50L to 50R except 50V	0.86°D	2.5°L to 2.5°R	1.10·10 ³	
Point 50V	0.86°D	0°	2.20·10 ³ ^b	
Any point on line 25L to 25R	1.72°D	5°L to 5°R	2.20·10 ³	
Any point in Zone 2	0.86°D to 1.72°D	5°L to 5°R	1.10·10 ³	

Notes: In Table 15

^a 0.25° tolerance allowed independently at each test point for photometry unless indicated otherwise.^b In case of a matched pair the contribution of each lamp shall not be less than 50% of the required minimum value for this test point.

ECE R149 For Class CS and DS headlamp (referring to ECE R149 Figure 5.4.3.3 A4-IX in Annex 4):

ECE R149 Table 35 – **Passing-beam Classes CS and DS**Applicable and Conform / ~~Not Applicable~~

Element	Angular coordinates in deg. ^a		Luminous intensity in cd		
	vertical	horizontal	min		max
			Class CS	Class DS	Classes CS, DS
Zone 2	> 4°U to 15°U	8°L to 8°R	--	--	$7.00 \cdot 10^2$
Zone 1	1°U/8°L-4°U/8°L-4°U/8°R-1°U/8°R-0°/4°R-0°/1°R-0.6°U/0°-0°/1°L-0°/4°L-1°U/8°L		--	--	$9.00 \cdot 10^2$
P8	4°U	8°L	$\sum 8 + 9 + 10 \geq 1.50 \cdot 10^2$ ^b		$7.00 \cdot 10^2$
P9	4°U	0°			$7.00 \cdot 10^2$
P10	4°U	8°R			$7.00 \cdot 10^2$
P11	2°U	4°L	$\sum 11 + 12 + 13 \geq 3.00 \cdot 10^2$ ^b		$9.00 \cdot 10^2$
P12	2°U	0°			$9.00 \cdot 10^2$
P13	2°U	4°R			$9.00 \cdot 10^2$
P14L	0°	8°L	$5.0 \cdot 10^1$ ^b	$5.0 \cdot 10^1$ ^b	-
P15L	0°	4°L	$1.00 \cdot 10^2$ ^b	$1.00 \cdot 10^2$ ^b	$9.00 \cdot 10^2$
P7	0°	0°	--	--	$1.70 \cdot 10^3$
P15R	0°	4°R	$1.00 \cdot 10^2$ ^b	$1.00 \cdot 10^2$ ^b	$9.00 \cdot 10^2$
P14R	0°	8°R	$5.0 \cdot 10^1$ ^b	$5.0 \cdot 10^1$ ^b	-
P3	0.86°D	3.5°L			$1.38 \cdot 10^4$
P2	0.86°D	0°	$2.45 \cdot 10^3$ ^c	$4.90 \cdot 10^3$ ^c	-
P1	0.86°D	3.5°R			$1.38 \cdot 10^4$
Segment 123	0.86°D	3.5°R to 3.5°L	$2.00 \cdot 10^3$	$2.00 \cdot 10^3$	-
Segment 4LL	1.07°D	9°L to 3.5°L	$4.25 \cdot 10^2$	$8.50 \cdot 10^2$	-
Segment 4RR	1.07°D	3.5°R to 9°R	$4.25 \cdot 10^2$	$8.50 \cdot 10^2$	-
Segment 5	2°D	15°L to 15°R	$5.50 \cdot 10^2$	$1.10 \cdot 10^3$	--
Segment 6	4°D	20°L to 20°R	$1.50 \cdot 10^2$	$3.00 \cdot 10^2$	0.8 x the actual measured value at point 2

Notes: In Table 16

^a 0.25° tolerance allowed independently at each test point for photometry unless indicated otherwise.

^b The position lamp(s), being incorporated with the headlamp or being intended to be installed together with the headlamp may be activated according to the indications of the applicant.

^c In case of a matched pair the contribution of each lamp shall not be less than 50% of the required minimum value.

<i>ECE R149</i> 5.4.3.3.1.	The light shall be as evenly distributed as possible within zones 1 and 2 for Class CS or DS headlamps.	Conform / Not Conform
<i>ECE R149</i> 5.4.4.	Additional light source(s) and/or additional lighting unit(s) used to produce bend lighting is (are) permitted for vehicles of categories L and T, provided that:	Applicable and Conform / Not Applicable
<i>ECE R149</i> 5.4.4.1.	The following requirement regarding illumination shall be met, when the principal passing-beam(s) and corresponding additional light source(s) used to produce bend lighting are activated simultaneously: (a) Left bank (when the motorcycle is rotated to the left about its longitudinal axis) the luminous intensity values shall not exceed $9.00 \cdot 10^2$ cd in the zone extending from H-H to 15° U and from V-V to 10° L. (b) Right bank (when the motorcycle is rotated to the right about its longitudinal axis) the luminous intensity values shall not exceed $9.00 \cdot 10^2$ cd in the zone extending from H-H to 15° U and from V-V to 10° R.	Applicable and Conform / Not Applicable
<i>ECE R149</i> 5.4.4.2.	This test shall be carried out with the minimum bank angle specified by the applicant simulating the condition by means of the test fixture etc.	Applicable and Conform / Not Applicable
<i>ECE R149</i> 5.4.4.3.	For this measurement, at the request of the applicant, principal passing-beam and additional light source(s) used to produce bend lighting, may be measured individually and the photometric values obtained combined to determine compliance with the specified luminous intensity values.	Applicable and Conform / Not Applicable

4.4.1 Test Results

Headlamp class: DS

4.4.1.1 Luminous intensity of passing beam, sample No. 1

Test point / line / zone	Test point angular coordinates degrees	Required luminous intensity in cd		Measured luminous intensity in cd Sample No. 1	
		Max.	Min.	After 1 min	After stability
1	P1	$1.38 \cdot 10^4$	---	$5.98 \cdot 10^3$	$5.89 \cdot 10^3$
2	P2 ^c	---	$4.90 \cdot 10^3$	$6.01 \cdot 10^3$	$5.92 \cdot 10^3$
3	Segment 6	$0.8 \cdot P2$	$3.00 \cdot 10^2$	$7.14 \cdot 10^2$	$7.03 \cdot 10^2$
4	P3	$1.38 \cdot 10^4$	---	$5.84 \cdot 10^3$	$5.75 \cdot 10^3$
5	0.5U-1.5L	$9.00 \cdot 10^2$	---	$4.90 \cdot 10^2$	$4.82 \cdot 10^2$
6	0.5U-1.5R	$9.00 \cdot 10^2$	---	$5.13 \cdot 10^2$	$5.06 \cdot 10^2$
7	Segment 123	---	$2.00 \cdot 10^3$	$2.89 \cdot 10^3$	$2.85 \cdot 10^3$
8	Segment 4LL	---	$8.50 \cdot 10^2$	$1.78 \cdot 10^3$	$1.75 \cdot 10^3$
9	Segment 4RR	---	$8.50 \cdot 10^2$	$2.02 \cdot 10^3$	$1.99 \cdot 10^3$
10	Segment 5	---	$1.10 \cdot 10^3$	$2.61 \cdot 10^3$	$2.57 \cdot 10^3$
11	P7	$1.70 \cdot 10^3$	---	$1.04 \cdot 10^3$	$1.03 \cdot 10^3$
12	P8	$7.00 \cdot 10^2$	---	$1.71 \cdot 10^2$	$1.69 \cdot 10^2$
13	P9	$7.00 \cdot 10^2$	---	$2.84 \cdot 10^2$	$2.79 \cdot 10^2$
14	P10	$7.00 \cdot 10^2$	---	$1.86 \cdot 10^2$	$1.83 \cdot 10^2$
15	Total(8-10) ^b	---	$1.50 \cdot 10^2$	$6.41 \cdot 10^2$	$6.31 \cdot 10^2$
16	P11	$9.00 \cdot 10^2$	---	$3.38 \cdot 10^2$	$3.33 \cdot 10^2$
17	P12	$9.00 \cdot 10^2$	---	$3.85 \cdot 10^2$	$3.79 \cdot 10^2$
18	P13	$9.00 \cdot 10^2$	---	$3.61 \cdot 10^2$	$3.55 \cdot 10^2$
19	Total(11-13) ^b	---	$3.00 \cdot 10^2$	$1.08 \cdot 10^3$	$1.07 \cdot 10^3$
20	P14L ^b	---	$5.00 \cdot 10^1$	$5.82 \cdot 10^2$	$5.73 \cdot 10^2$
21	P14R ^b	---	$5.00 \cdot 10^1$	$6.24 \cdot 10^2$	$6.14 \cdot 10^2$
22	P15L ^b	$9.00 \cdot 10^2$	$1.00 \cdot 10^2$	$6.51 \cdot 10^2$	$6.41 \cdot 10^2$
23	P15R ^b	$9.00 \cdot 10^2$	$1.00 \cdot 10^2$	$6.74 \cdot 10^2$	$6.64 \cdot 10^2$
24	25V	---	---	$8.20 \cdot 10^3$	$8.08 \cdot 10^3$
25	Zone I	$9.00 \cdot 10^2$	---	$6.86 \cdot 10^2$	$6.76 \cdot 10^2$
26	Zone II	$7.00 \cdot 10^2$	---	$2.88 \cdot 10^2$	$2.84 \cdot 10^2$

b The position lamp(s), being incorporated with the headlamp or being intended to be installed together with the headlamp may be activated according to the indications of the applicant.

c In case of a matched pair the contribution of each lamp shall not be less than 50% of the required minimum value.

4.4.1. Luminous intensity of passing beam, sample No. 2

2

Test point / line / zone	Test point angular coordinates degrees	Required luminous intensity in cd		Measured luminous intensity in cd Sample No. 2	
		Max.	Min.	After 1 min	After stability
1	P1	$1.38 \cdot 10^4$	---	$5.87 \cdot 10^3$	$5.77 \cdot 10^3$
2	P2 ^c	---	$2.45 \cdot 10^3$	$5.95 \cdot 10^3$	$5.85 \cdot 10^3$
3	Segment 6	$0.8 \cdot P2$	$1.50 \cdot 10^2$	$7.92 \cdot 10^2$	$7.79 \cdot 10^2$
4	P3	$1.38 \cdot 10^4$	---	$5.80 \cdot 10^3$	$5.70 \cdot 10^3$
5	0.5U-1.5L	$9.00 \cdot 10^2$	---	$4.58 \cdot 10^2$	$4.50 \cdot 10^2$
6	0.5U-1.5R	$9.00 \cdot 10^2$	---	$4.73 \cdot 10^2$	$4.65 \cdot 10^2$
7	Segment 123	---	$2.00 \cdot 10^3$	$2.73 \cdot 10^3$	$2.68 \cdot 10^3$
8	Segment 4LL	---	$4.25 \cdot 10^2$	$1.72 \cdot 10^3$	$1.69 \cdot 10^3$
9	Segment 4RR	---	$4.25 \cdot 10^2$	$1.85 \cdot 10^3$	$1.82 \cdot 10^3$
10	Segment 5	---	$5.50 \cdot 10^2$	$2.42 \cdot 10^3$	$2.38 \cdot 10^3$
11	P7	$1.70 \cdot 10^3$	---	$9.56 \cdot 10^2$	$9.39 \cdot 10^2$
12	P8	$7.00 \cdot 10^2$	---	$1.44 \cdot 10^2$	$1.41 \cdot 10^2$
13	P9	$7.00 \cdot 10^2$	---	$2.65 \cdot 10^2$	$2.60 \cdot 10^2$
14	P10	$7.00 \cdot 10^2$	---	$1.58 \cdot 10^2$	$1.56 \cdot 10^2$
15	Total(8-10) ^b	---	$1.50 \cdot 10^2$	$5.67 \cdot 10^2$	$5.57 \cdot 10^2$
16	P11	$9.00 \cdot 10^2$	---	$3.17 \cdot 10^2$	$3.11 \cdot 10^2$
17	P12	$9.00 \cdot 10^2$	---	$3.52 \cdot 10^2$	$3.46 \cdot 10^2$
18	P13	$9.00 \cdot 10^2$	---	$3.35 \cdot 10^2$	$3.29 \cdot 10^2$
19	Total(11-13) ^b	---	$3.00 \cdot 10^2$	$1.00 \cdot 10^3$	$9.86 \cdot 10^2$
20	P14L ^b	---	$5.00 \cdot 10^1$	$5.60 \cdot 10^2$	$5.51 \cdot 10^2$
21	P14R ^b	---	$5.00 \cdot 10^1$	$5.88 \cdot 10^2$	$5.78 \cdot 10^2$
22	P15L ^b	$9.00 \cdot 10^2$	$1.00 \cdot 10^2$	$6.37 \cdot 10^2$	$6.26 \cdot 10^2$
23	P15R ^b	$9.00 \cdot 10^2$	$1.00 \cdot 10^2$	$6.52 \cdot 10^2$	$6.41 \cdot 10^2$
24	25V	---	---	$8.03 \cdot 10^3$	$7.89 \cdot 10^3$
25	Zone I	$9.00 \cdot 10^2$	---	$6.65 \cdot 10^2$	$6.54 \cdot 10^2$
26	Zone II	$7.00 \cdot 10^2$	---	$2.72 \cdot 10^2$	$2.68 \cdot 10^2$

b The position lamp(s), being incorporated with the headlamp or being intended to be installed together with the headlamp may be activated according to the indications of the applicant.

c In case of a matched pair the contribution of each lamp shall not be less than 50% of the required minimum value.

4.4.1.3 Additional test of headlamps with adjustable reflector

~~Conform / Not conform~~

The reflector of passing beam moved vertically $\pm 2^\circ$	Sample No. 1 +2	Sample No. 2 +2	Sample No. 1 -2	Sample No. 2 -2	Limits [cd]
P2	--	--	--	--	$> 2.45 \cdot 10^3$
P7	--	--	--	--	$< 1.70 \cdot 10^3$

4.4.1.4 Colour

The colour of light emitted shall be white.

~~Conform / Not conform~~

White:

green boundary: $y = 0.150 + 0.640 x$
 yellowish green boundary: $y = 0.440$
 yellow boundary: $x = 0.500$
 reddish purple boundary: $y = 0.382$
 purple boundary: $y = 0.050 + 0.750 x$
 blue boundary: $x = 0.310$

Passing beam (after 1 min):

	Sample No. 1	Sample No. 2
X	0.3206	0.3214
Y	0.3228	0.3238

Passing beam (after stability):

	Sample No. 1	Sample No. 2
X	0.3210	0.3213
Y	0.3233	0.3244

4.5 Technical requirements concerning front fog lamps of the Class F3 (symbol "F3")

ECE R149
5.5.1.1

The front fog lamp shall be aimed according to Annex 5, paragraph 3.4. including the allowed specific tolerances of paragraph 4.

Conform / Not Conform

If, however, vertical adjustment cannot be performed repeatedly to the required position within the allowed tolerances, the instrumental method of Annex 6, paragraph 2. shall be applied to test compliance with the required minimum quality of the symmetric "cut-off" line and to perform the beam vertical adjustment.

Applicable and Conform / Not Applicable

ECE R149
5.5.1.2

When so adjusted the front fog lamp shall meet the requirements as shown in Table 17 and Figure A4-X.

Conform / Not Conform

ECE R149
5.5.2.

Photometric requirements

ECE R149 Table 17 - **Type approval photometric requirements for front fog lamp**

Applicable and Conform / Not Applicable

Element	Angular coordinates in deg.		Luminous intensity in cd		To comply
	vertical	horizontal	min	max	
P1 and P2	60°U	45°L and 45°R	-	8.5·10 ¹	All points
P3 and P4	40°U	30°L and 30°R			
P5 and P6	30°U	60°L and 60°R			
P7 and P10	20°U	40°L and 40°R			
P8 and P9	20°U	15°L and 15°R			
Line 1	8°U	26°L to 26°R	-	1.30·10 ²	All line
Line 2	4°U	26°L to 26°R	-	1.50·10 ²	All line
Line 3	2°U	26°L to 26°R	-	2.45·10 ²	All line
Line 4	1°U	26°L to 26°R	-	3.60·10 ²	All line
Line 5	0°	10°L to 10°R	-	4.85·10 ²	All line
Line 6 ^a	2.5°D	from 5° inwards to 10° outward	2.70·10 ³	-	All line
Line 7 ^a	6°D	from 5° inwards to 10° outward	-	0.5 x the actual measured max. value on Line 6	All line
Line 8L and 8R	1.5°D to 3.5°D	22°L and 22°R	1.10·10 ³	-	One or more points
Line 9L and 9R	1.5°D to 4.5°D	35°L and 35°R	4.50·10 ²	-	One or more points
Zone D	1.5°D to 3.5°D	10°L to 10°R	-	1.20·10 ⁴	Whole zone

Notes: In Table 17

^a In case of lamps constituting a matched pair, the half of the sum of the respective measured values from both lamps together does not apply to this element (see paragraph 1.5. of Annex 4)

ECE R149
5.5.2.1 The luminous intensity shall be measured either with white light or coloured light as prescribed by the applicant for use of the fog lamp in normal service. Variations in homogeneity detrimental to satisfactory visibility in the zone above the line 5 from 10°L to 10°R are not permitted. **Conform / Not Conform**

ECE R149
5.5.2.2 Inside the field between lines 1 to 5 in Figure A4-X, the beam pattern should be substantially uniform. Discontinuities in intensities detrimental to satisfactory visibility between the lines 6, 7, 8 and 9 are not permitted. **Conform / Not Conform**

ECE R149
5.5.2.3 In the light-distribution as specified in Table 17, single narrow spots or stripes inside the area including the measuring points 1 to 10 and line 1 or inside the area of line 1 and line 2 with not more than $1.75 \cdot 10^2$ cd are allowed, if not extending beyond a conical angle of 2° aperture or a width of 1°. If multiple spots or stripes are present, they shall be separated by a minimum angle of 10°. **Conform / Not Conform**

The colour of light emitted shall be white. **Conform / Not Conform**

Annex 6
2.2 **Measurement of the quality of the "cut-off"**

Annex 6
2.2.2 **Sharpness of "cut-off"**

The value of sharpness factor $G = (\log E\beta - \log E(\beta + 0.1^\circ))$ where β = the vertical position in degrees and E = the illumination on the aiming screen shall not be less than:

(a) 0.13 (minimum sharpness) for passing-beam designed to provide asymmetric "cut-off" line; or **Conform / Not Conform**

(b) 0.08 (minimum sharpness) for passing-beam and front fog lamp designed to provide symmetric "cut-off" line **Conform / Not Conform**

and not greater than 0.40 (maximum sharpness) for passing-beam designed to provide asymmetric "cut-off" line. **Conform / Not Conform**

Annex 6
2.2.3 **Linearity**

The inflection points of the "cut-off" gradient at the vertical lines at 1.5°, 2.5° and 3.5° shall be determined by the equation: $(d2 (\log E) / d\beta^2 = 0)$. The maximum vertical distance between the inflection points determined shall not exceed:

(a) 0.2° for passing-beam designed to provide asymmetric "cut-off" line; or **Conform / Not Conform**

(b) 0.5° for passing-beam and front fog lamp designed to provide symmetric “cut-off” line

Conform / Not Conform

4.6 Technical requirements concerning cornering lamps (symbol K)

ECER149
5.6.1

The cornering lamp shall be installed on the goniometer according to Annex 5, paragraph 3.5. including the allowed specific tolerances of paragraph 4.

Conform / Not Conform

For a left side lamp, the intensity of the light at the specified measuring points and zones shall be as indicated in Table 18.

Conform / Not Conform

Element	Angular coordinates in deg. ^a		Luminous intensity in cd	
	vertical	horizontal	min	max
Zone 1	Above 1°U	90°L to 90°R	-	3.00·10 ²
Zone 2	0° to 1°U	90°L to 90°R	-	6.00·10 ²
Zone 3	Below 0°	90°L to 90°R	-	1.40·10 ⁴
P1	2.5°D	30°L	3.75·10 ²	-
P2	2.5°D	45°L	6.25·10 ²	-
P3	2.5°D	60°L	3.75·10 ²	-

^a 0.25° tolerance allowed independently at each test point for photometry, unless indicated otherwise.

Colour

The colour of light emitted shall be white.

Conform / Not conform

Tests for stability of photometric performance of headlamps in operation (UN R149 Annex 7)

Clean headlamp – Sample No. 1.

Conform / Not Conform

	Point of the measurement	Measured values		
		Value before operating (cd)	Value after operating (cd)	Discrepancy (≤ 10%)
1	Passing beam: P1	5.89·10 ³	6.23·10 ³	5.75%
2	Passing beam: P3	5.75·10 ³	6.11·10 ³	6.20%
3	Passing beam: 0.5U-1.5L*	4.82·10 ²	5.17·10 ²	3.54·10 ¹ cd
4	Passing beam: 0.5U-1.5R*	5.06·10 ²	5.42·10 ²	3.65·10 ¹ cd
5	Driving beam: I _{max} .	4.47·10 ⁴	4.43·10 ⁴	0.88%

* The value measured at points B50L shall not exceed the photometric value measured prior to the test by more than 170cd.

Dirty headlamp – Sample No. 1.

Conform / ~~Not conform~~

	Point of the measurement	Measured values		
		Value before operating (cd)	Value after operating (cd)	Discrepancy ($\leq 10\%$)
1	Passing beam: P1	$6.23 \cdot 10^3$	$6.57 \cdot 10^3$	5.51%
2	Passing beam: P3	$6.11 \cdot 10^3$	$6.42 \cdot 10^3$	5.14%
3	Passing beam: 0.5U-1.5L*	$5.17 \cdot 10^2$	$5.56 \cdot 10^2$	$3.83 \cdot 10^1$ cd
4	Passing beam: 0.5U-1.5R*	$5.42 \cdot 10^2$	$5.81 \cdot 10^2$	$3.88 \cdot 10^1$ cd
5	Driving beam: I _{max} .	$4.43 \cdot 10^4$	$4.39 \cdot 10^4$	0.96%

* The value measured at points B50L shall not exceed the photometric value measured prior to the test by more than 170cd.

Annex 7
3 Vertical position change of the cut-off line under influence of heat - Sample No. 1

Annex 7
3.2.1 The result, expressed in milliradians (mrad), shall be considered as acceptable when:

(a) In case of headlamps or AFS, the absolute value $\Delta r1 = |r3 - r60|$ recorded on the device is not more than 1.0 mrad ($\Delta r1 \leq 1.0$ mrad) upward and not more than 2.0 mrad ($\Delta r1 \leq 2.0$ mrad) downwards.

Conform / ~~Not conform~~
Deviation measured in millirad: 0.35

(b) In case of front fog lamps, the absolute value $\Delta r1 = |r3 - r60|$ recorded on this device is not more than 2.0 mrad ($\Delta r1 \leq 2.0$ mrad).

Conform / ~~Not conform~~

**Testing of lamps incorporating lenses of plastic material
(UN R149 Annex 8)**

N/A

**Tests of the complete headlamp incorporating a lens of
plastic material**

N/A

Annex 8
3.7.1

Resistance to mechanical deterioration of the lens surface

Applicable and Conform / Not Applicable

Annex 8
3.7.1.2.1

In the case of Classes BS, CS, DS and ES, after the test, the results of photometric measurements carried out on the headlamp in accordance with this Regulation shall not exceed:

(a) By more than 30 per cent the maximum values prescribed at point HV and not be more than 10 per cent below the minimum values prescribed at point 50 L and 50 R for Class BS headlamp, 0.86D/3.5R, 0.86D/3.5L for Classes CS, DS and ES headlamp.

or

(b) By more than 10 per cent below the minimum values prescribed for HV in the case of a headlamp producing driving beam only.

Annex 8
3.7.1.2.3

In the case of fog lamps, after the test, the results of photometric measurements prescribed for lines 2 and 5 shall not exceed the maximum values prescribed by more than 30 per cent.

Applicable and Conform / Not Applicable

Annex 8
3.7.2

Adherence of coating of the lens of complete headlamp

Requirements fulfilled.

No impairment of the gridded area registered.

Conform / Not conform

Sample No. 2	
No appreciable impairment of the gridded area.	Conform / Not conform
Impairments at the intersections between squares or at the edges of the cuts do not exceed 15% of the gridded surface.	Conform / Not conform

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Of: 16/04/2026

Type: L7X

Manufacturer: SHENZHEN LOBOO MOTOR ACCESSORIES CO., LTD.

Annex 9 Requirements for LED modules

The value K_{red} is not less than 0.05.

Conform / ~~Not conform~~

Passing beam	$K_{red}=0.0921$
Driving beam	$K_{red}=0.0998$

The UV-radiation of a low-UV-type LED module is not more than 10^{-5} .

Conform / ~~Not conform~~

Passing beam	$K_{uv}=5.92 \times 10^{-6}$
Driving beam	$K_{uv}=6.33 \times 10^{-6}$

Objective luminous flux
Passing beam Class CS
Min: $5.00 \cdot 10^2$ lm

Conform / ~~Not conform~~

Passing beam	$1.25 \cdot 10^3$ lm
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Inspection Report No.: ATS-SM-IR-149-33082



Of: 16/04/2026

Type: L7X

Manufacturer: SHENZHEN LOBOO MOTOR ACCESSORIES CO., LTD.

3 Other information

Place of inspection: Jiangsu Huachen Vehicle Inspection Co., Ltd.
1/F. and 4/F., Building 1, Shuangyu, Xihuan Road, Xinqiao,
Danbei, Danyang, Zhenjiang, Jiangsu, China

Date of inspection: 13/04/2026-14/04/2026

Day(s) of Inspection: Two

Technical service representative(s):	Senior Inspector	Junior Inspector (if applicable)
	Ms. Li Dan	N/A

Manufacturer's representative: N/A

Remarks: N/A

3.1 Appendix

- 1 List of modifications
- 2 Test Photo (s)
- 3 List of main equipment

3.2 Enclosures

Information Folder

L7X-00 dated on 01/04/2026

4. Statement of conformity

The information document as given in paragraph 0.4 and the type described there are in compliance with the test specification mentioned above.

With regard to the required level of performance to be achieved, the tested items were representative for the type to be approved and cover all variants / versions described in the information folder

The tests were carried out in accordance with the relevant requirements of EN ISO/IEC 17025 and EN ISO/IEC 17020 / R149-01 UN/ECE.

The tested object complies / ~~not complies~~ with the prescriptions of the R149-01 ECE/UN.

The inspection report comprises pages 1 to 48 .

The test results relates only to the product tested.

I shall not be reproduced except in full, without written approval of the laboratory.

Dogana, Repubblica di San Marino, 16/04/2026

Number of project and protocol	Originality Check (*)	Automotive Technical Service S.r.l. Inspector  (Ms. Li Dan)	
	 ATS-SM-PR-33082	Automotive Technical Service S.r.l. Deputy Technical Director  (Eng. Bogdan Nicolae Domnescu)	

(*) To check the originality of documents, scan the QR Code or connect to the site <https://www.ats.sm/originality-control-atp-adr-tyapp/> and follow the instruction in it.

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Of: 16/04/2026

Type: L7X

Manufacturer: SHENZHEN LOBOO MOTOR ACCESSORIES CO., LTD.

Appendix 1

List of modifications

Applicable / Not Applicable

Appendix 1

More details for application of

Date :

Correction of : -

Modification of : -

Addition of : -

Deletion of : -



Inspection Report No.:

ATS-SM-IR-149-33082



Of:

16/04/2026

Type:

L7X

Manufacturer:

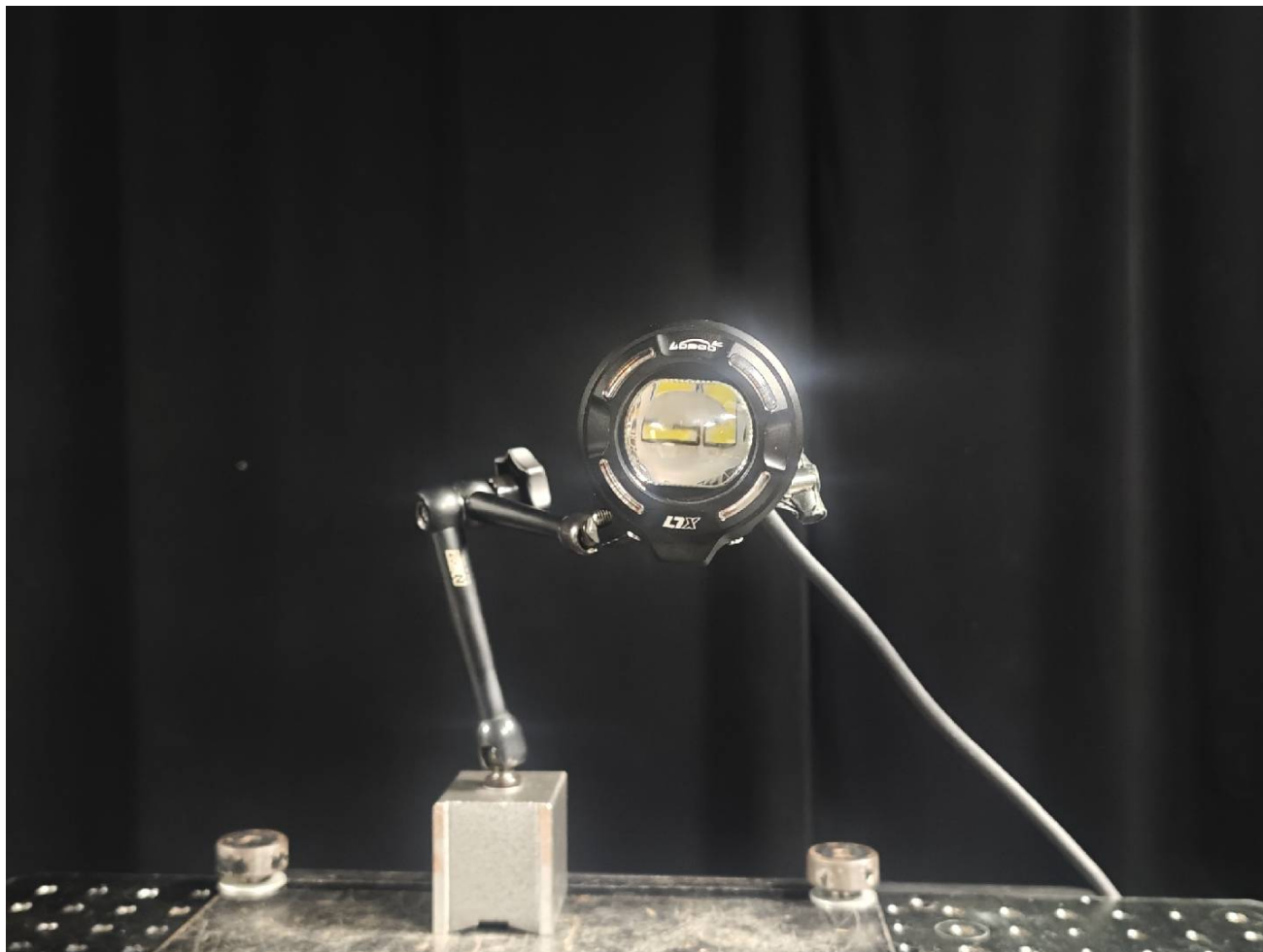
SHENZHEN LOBOO MOTOR ACCESSORIES CO., LTD.

Appendix 2

Test Photo(s)

Applicable / ~~Not Applicable~~

Appendix 2



Inspection Report No.: ATS-SM-IR-149-33082



Of: 16/04/2026

Type: L7X

Manufacturer: SHENZHEN LOBOO MOTOR ACCESSORIES CO., LTD.

Appendix 3

List of main equipment

Applicable / ~~Not Applicable~~

Appendix 3

No.	Name	Type	Serial no.	Calibration due
1	Automotive and signal goniophotometer	GO-HD6	CHCML066	2026-10-08
2	High accuracy intelligent photometer head	ID-1000	CHCML066-4	2026-10-08
3	UV-VIS-near IR Spectrophoto colorimeter	PMS-2000	CHCML021	2026-10-08
4	Paint film scribe	QFH	CHCML010	2026-10-10

All the instruments have been calibrated and are in the period of validity.



Information document No.: L7X-00

First application date : April 1, 2026

1. Specification data

Type	L7X	
Function	Head lamp	
	Passing beam	Driving beam
Color	White	White
Voltage	13.5V	
Application Regulation UN	R149.01 Class DS	R149.01 Class B
Category of light source	4*LEDs non-replaceable light source	
Location of marking	Voltage	Marked on housing
	Trade mark	LOBOO
		Marked on housing
	Approval mark	Marked on housing

2. Construction and material

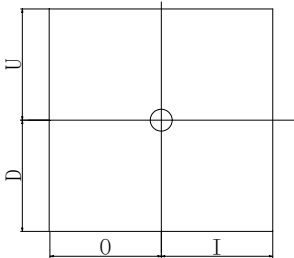
Construction	Material	Remarks
Lens	Glass	Colour: Clear
Housing	Aluminum alloy	--
Electrical Wiring	Copper covered with insulation	--

3. Name and address of manufacturer : SHENZHEN LOBOO MOTOR ACCESSORIES CO., LTD.
Room 101, 201, 301, Building F, No. 30 Tongfu Road,
Xinsheng Community, Longgang Subdistrict, Longgang District, Shenzhen(Single business license covering multiple floorswithin the same building)

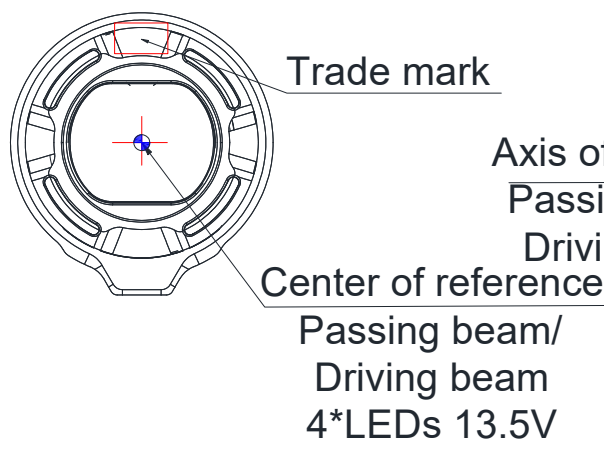
4. Name and address of the assembly plant : SHENZHEN LOBOO MOTOR ACCESSORIES CO., LTD.
Room 101, 201, 301, Building F, No. 30 Tongfu Road,
Xinsheng Community, Longgang Subdistrict, Longgang District, Shenzhen City, Guangdong Province, China (Single business license covering multiple floors within the same building)Zip Code: 518100

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

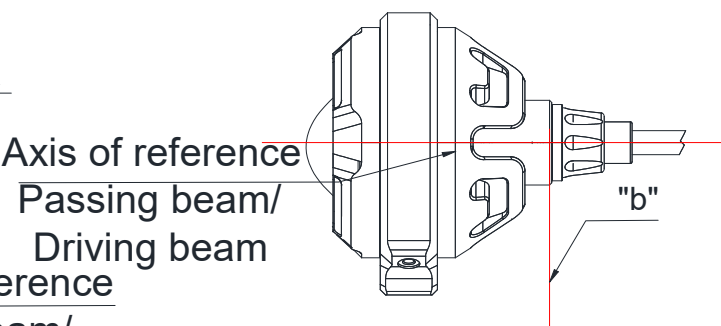
6: Apparent surface

U= Upper limit D= Down limit I= Inside limit O= Outside limit Unit: mm ⊕ :Reference center 				
Function	Limit (O)	Limit (I)	Limit (U)	Limit (D)
Passing beam	21	21	18	18
Driving beam	21	21	18	18
--	--	--	--	--

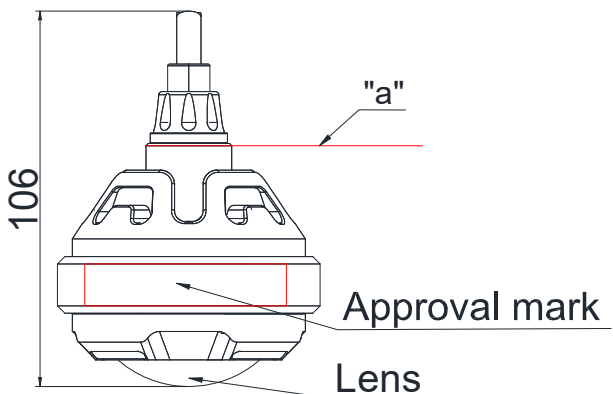
Front view



Side view



Top view



NOTE:

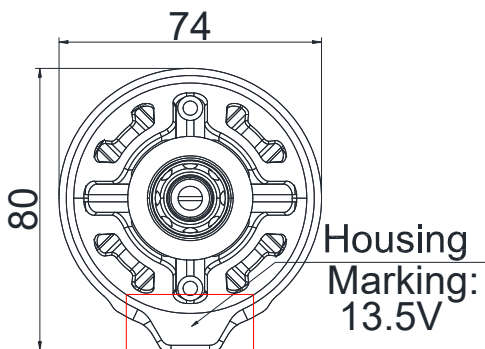
1. "a": Horizontal Plane of Vehicle

2. "b": Longitudinal Plane of Vehicle

Trade mark

LOBOO

Back view



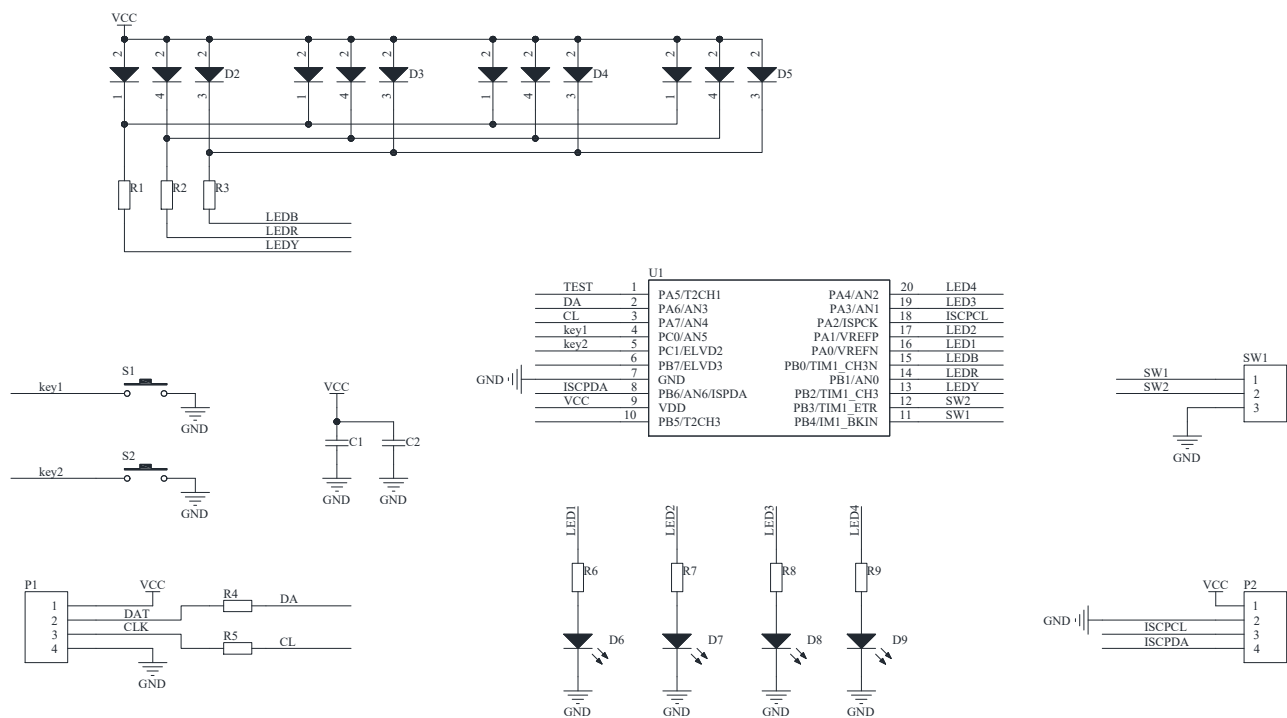
Approval mark



XXXX means an approval number, please refer to the certificate.

General assembly drawing

Passing beam/Driving beam 4*LEDs



Led circuit diagram