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THE UNITED KINGDOM VEHICLE APPROVAL AUTHORITY

Rev 8/99



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

Approval No: 015028

1. Trade name or mark of the device: JUNYAN
2. Manufacturer's name for the type of device: HU205-02-1
3. Manufacturer's name and address:

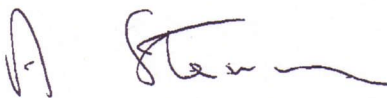
JUN YAN INDUSTRIAL Company Limited
No.121, Wencheng Road
Tainan Hsien
Taiwan
Republic of China
4. If applicable, name and address of the manufacturer's representative: Not applicable
5. Submitted for approval on: 3 August 2007
6. Technical service responsible for conducting the approval tests: Vehicle Certification Agency
7. Date of report issued by that service: 27 September 2007
8. Number of report issued by that service: EAH182594



9. Concise description:
Category: 1

Number and category of filament lamp(s): 1 x PY21W

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

Only for limited mounting height of equal to or less than 750 mm above the ground: No
10. Position of the approval mark: On the lens
11. Reason(s) for extension (if applicable): Not applicable
12. Approval: GRANTED
13. Place: BRISTOL
14. Date 15 October 2007
15. Signature:  A.W. STENNING
Product Certification
16. The list of documents deposited with the Administrative Service which has granted approval is annexed to this communication and may be obtained on request.

EAH182594





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THE UNITED KINGDOM VEHICLE APPROVAL AUTHORITY

Rev 8/02



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

Approval No: 025028

1. Trade name or mark of the device: JUNYAN
2. Manufacturer's name for the type of device: HU205-02-1
3. Manufacturer's name and address:

JUN YAN INDUSTRIAL Company Limited
No.121, Wencheng Road
Tainan Hsien
Taiwan
Republic of China
4. If applicable, name and address of the manufacturer's representative: Not applicable
5. Submitted for approval on: 3 August 2007
6. Technical service responsible for conducting the approval tests: Vehicle Certification Agency
7. Date of report issued by that service: 27 September 2007
8. Number of report issued by that service: EAH182594



9. Concise description:
By category of lamp: A

For mounting either outside or inside or both: Outside

Colour of light emitted: White

Number and category of filament lamp(s): 3 x LED, 12V 0.5W

Special supply voltage: 12 Volts

Application of additional supply system: No

Switched power supply: Not applicable

Geometrical conditions or installation and relating variations if any: Not applicable

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

10. Position of the approval mark: On the lens


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

12. Approval: GRANTED

13. Place: BRISTOL

14. Date: 15 October 2007

15. Signature:



A.W. STENNING
Product Certification

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



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THE UNITED KINGDOM VEHICLE APPROVAL AUTHORITY

Rev 9/93



COMMUNICATION CONCERNING THE APPROVAL GRANTED OF A TYPE OF HEADLAMP PURSUANT TO REGULATION NO 112.00

Approval No: 005028

1. Trade name or mark of the device: JUNYAN
2. Manufacturer's name for the type of device: HU205-02-1
3. Manufacturer's name and address:

JUN YAN INDUSTRIAL Company Limited
No.121, Wencheng Road
Tainan Hsien
Taiwan
Republic of China
4. If applicable, name and address of the manufacturer's representative: Not applicable
5. Submitted for approval on: 3 August 2007
6. Technical service responsible for conducting the approval tests: Vehicle Certification Agency
7. Date of report issued by that service: 27 September 2007
8. Number of report issued by that service: EAH182594



9. Concise description:
Category as described by the relevant marking: HC for passing beam and
HR for driving beam

Number and category(ies) of filament lamp(s):
2 x H1 12V 55W for passing beam and driving beam

10. Approval mark position: On the lens

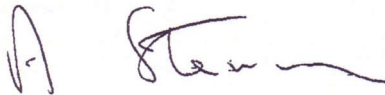
11. Reason(s) for extension of approval: Not applicable

12. Approval: GRANTED

13. Place: BRISTOL

14. Date: 15 October 2007

15. Signature:



A.W. STENNING
Product Certification

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

EAH182594



**VCA REFERENCES**

Test Report Number **EAH182594**
 Number of Pages **10**
 Number of Annexes **3**

TEST DETAILS

Subject **Headlamp**
 Specific Requirements **ECE Reg. 6.01, 7.02 and 112.00.**
 Duration **2007/8/3~9/1**
 Technical Service **Integrated Service of Quality Assessment for
 Vehicle Certification Agency**
 VCA Representative **ARTHUR C. H. CHANG**
 Manufacturer's Representative **Alan Tsai**
 Reason for Test **Type of Approval**

MANUFACTURER DETAILS

Manufacturer's Name **JUN YAN INDUSTRIAL Co., Ltd.**
 Manufacturer's Address **No.121, Wencheng Road, Tainan Hsien, Taiwan,
 Republic of China**
 Premise of Manufacturing **Same As Above**
 Model Type & description **HU205-02-1**
 Category **1 for Front Direction Indicator,
 A for Front Position Lamp,
 HC for Passing beam and
 HR for Driving beam.**

CONCLUSION

The submitted samples are tested in accordance with Specific Requirements and found in compliance with all aspects.

Signature:

Name: **ARTHUR C.H. CHANG**
 Position: **COE of ISOQA**
 Date: **27 September 2007**

**LIST OF ANNEXES**

| Annex | Total page | Subject | Reference |
|-------|------------|----------------------|------------|
| 1 | 1 | Information document | |
| 2 | 2 | Drawings | HU205-02-1 |
| | | PHOTO | HU205-02-1 |
| 3 | 10 | Test Record | 07-0257 |

ECE REGULATION NO. 6

| Item | Parameter | RESULTS | YES/NO |
|-----------|--|--|------------|
| 5. | GENERAL SPECIFICATIONS | | |
| 5.1. | Each device supplied shall conform to the specifications set forth in paragraphs 6. and 8. below. | | <u>YES</u> |
| 5.2. | The devices 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. | | <u>YES</u> |
| 5.3. | Light source module | | <u>N/A</u> |
| 5.3.1. | The design of the light source module(s) shall be such that even in darkness the light source module(s) can be fitted in no position, but the correct one. | | <u>N/A</u> |
| 5.3.2. | The light source module(s) shall be tamperproof. | | <u>N/A</u> |
| 6. | INTENSITY OF LIGHT EMITTED | | |
| 6.1. | The light emitted by each of the two devices supplied must be in the case of the direction indicators of categories 1, 1a, 1b, 2a, 2b, 3 and 4 in the reference axis, in the case of direction indicators of categories 5 and 6 in direction A according to annex 1 of not less than the minimum intensity and of not more than the maximum intensity specified below: | Please see Record No.07-0257 attached | <u>YES</u> |

| Direction indicator ² of category | Minimum intensities cd | Maximum values in cd when used as | | | S1 | S2 | |
|--|------------------------|-----------------------------------|---|--|--------------|--------------|------------|
| | | Single lamp | Lamp (single) marked "D" (see paragraph 4.2.2.3.) | Total for the Assembly of two lamps (see paragraph 4.2.2.3.) | | | |
| 1 | 175 | 700³ | 490 ³ | 980 ³ | 234.0 | 259.4 | <u>YES</u> |
| 1a | 250 | 800 ³ | 560 ³ | 1120 ³ | | | <u>N/A</u> |
| 1b | 400 | 860 ³ | 600 ³ | 1200 ³ | | | <u>N/A</u> |
| 2a | 50 | 350 | 350 | 350 | | | <u>N/A</u> |
| 2b by day | 175 | 700 ³ | 490 ³ | 980 ³ | | | <u>N/A</u> |
| by night | 40 | 120 ³ | 84 ³ | 168 ³ | | | <u>N/A</u> |
| 3 towards the front | 175 | 700 ³ | 490 ³ | 980 ³ | | | <u>N/A</u> |
| towards the rear | 50 | 200 | 140 | 280 | | | <u>N/A</u> |
| 4 towards the front | 175 | 700 ³ | 490 ³ | 980 ³ | | | <u>N/A</u> |
| towards the rear | 0.6 | 200 | 140 | 280 | | | <u>N/A</u> |
| 5 | 0.6 | 200 | 140 | 280 | | | <u>N/A</u> |
| 6 | 50 | 200 | 140 | 280 | | | <u>N/A</u> |

² The installation of front direction indicators of various categories in power-driven vehicles and their trailers is provided for in the Regulations concerning the installation of lighting and light-signalling devices (Regulations Nos. 48 and 53).

³ The total value of maximum intensity for an assembly of two or more lamps is given by multiplying by 1.4 the value prescribed for a single lamp, except for category 2a.

When an assembly of two or more lamps having the same function is deemed to be, for the purpose of installation on a vehicle, a "single lamp" (following the definition of Regulation No. 48 and its series of amendments in force at the time of application for type approval), this assembly shall comply with the minimum intensity required when one lamp has failed, and, all the lamps together shall not exceed the admissible maximum intensity (last column of the table).

In the case of a single lamp containing more than one light source:

(i) all light sources which are connected in series are considered to be one light source;

(ii) the lamp shall comply with the minimum intensity required when any one light source has failed. However, for front or rear direction indicator lamps designed for only two light sources, 50 per cent of the minimum intensity in the axis of reference of the lamp shall be considered sufficient, provide that a note in the communication form states that the lamp is only for use on a vehicle fitted with an operating tell-tale which indicates when any one of these two light sources has failed.

(iii) when all light sources are illuminated the maximum intensity specified for a single lamp may be exceeded provided that the single lamp is not marked "D" and the maximum intensity specified for an assembly of two or more lamps (last column of the table) is not exceeded.

6.2. Outside the reference axis, within the regular field specified in the arrangement diagrams in annex 1 to this Regulation, the intensity of light emitted by each of the two devices supplied must:

6.2.1. In each direction corresponding to the points in the relevant table of luminous-intensity distribution reproduced in annex 4 to this Regulation, be not less than the minimum specified in paragraph 6.1. above multiplied by the percentage specified in the said table for the direction in question;

6.2.1.1. In divergence from paragraphs 6.2. and 6.2.1., for category 4 and 5 direction indicators, to the rear, a minimum value of 0.6 cd is required throughout the fields specified in annex 1;

6.2.2. In no direction within the area from which the indicator lamp is visible, exceed the maximum specified in paragraph 6.1. above;



Please see Record No.07-0257 attached

YES

Please see Record No. 07-0257 attached

YES

6.2.3. Moreover,

6.2.3.1. Throughout the fields defined in the diagrams in annex 1, the intensity of light emitted must be

not less than 0.7 cd for devices of category 1b,

not less than 0.3cd for device of categories 1, 1a, 2a, 3, 4 towards the front and for those of category 2b by day;

**Please see Record
No.07-0257 attached**

N/A

YES

it shall not less than 0.07 cd for device of category 2b by night;

6.2.3.2. For devices for categories 1 and 2b by night and, to the front, for devices of categories 3 and 4, the intensity of the light emitted outside the zone defined by the measuring points $\pm 10^\circ$ H and $\pm 10^\circ$ V (10° -field) must not exceed the following values:

| Direction indicator of category | Maximum values in cd outside the 10° -field | | |
|---------------------------------|--|---|---|
| | Single lamp | Lamp (single) Marked "D" (see paragraph 4.2.2.3.) | Total for the assembly of two lamps(see paragraph 4.2.2.3.) |
| 2b by night | 100 | 70 | 140 |
| 1, 3 and 4 | 400 | 280 | 560 |

N/A

N/A

Between the boundaries of the 10° -field ($\pm 10^\circ$ H and $\pm 10^\circ$ V) and 5° -field($\pm 5^\circ$ H and $\pm 5^\circ$ V), the maximum admissible values of the intensities are linearly increased up to the values as defined in paragraph 6.1.;

6.2.3.3. For devices of category 1a and 1b, the intensity of the light emitted outside the zone defined by the measuring points $\pm 15^\circ$ H and $\pm 15^\circ$ V (15° -field) shall not exceed the following values :

| Direction indicator of category | Maximum values in cd outside the 15° -field | | |
|---------------------------------|--|--|---|
| | Single lamp | Lamp (single) Marked "D"(see paragraph 4.2.2.3.) | Total for the assembly of two lamps(see paragraph 4.2.2.3.) |
| 1a | 250 | 175 | 350 |
| 1b | 400 | 280 | 560 |

Between the boundaries of the 15° -field ($\pm 15^\circ$ H and $\pm 15^\circ$ V) and 5° -field ($\pm 5^\circ$ H and $\pm 5^\circ$ V), the maximum admissible values of the intensities are linearly increased up to the values as defined in paragraph 6.1.;

6.2.3.4. The provisions of paragraph 2.2. of annex 4 to this Regulation on local variations of intensity must be observed.

6.3. In general the intensities shall be measured with the light source(s) continuously alight.

However, depending on the construction of the device, for example, the use of light-emitting diodes (LED), or the need to take precautions to avoid overheating, it is allowed to measure the lamps in flashing mode.

This must be achieved by switching with a frequency of $f=1.5\pm 0.5$ Hz with the pulse width greater than 0.3s, measured at 95 per cent peak light intensity.

In the case of replaceable filament lamps, the filament lamps shall be operated at reference luminous flux during on time.

In all other cases the voltage as required in paragraph 7.1.1. shall be switched with a rise time and fall time shorter than 0.01s; no overshoot is allowed

In the case of measurements taken in flashing mode the reported luminous intensity shall be represented by the maximum intensity.

6.4. In the case of devices of category 2b the time that elapses between electrical supply being switched on and the light output measured on the reference axis to reach 90 per cent of the value measured in accordance with paragraph 6.3. above shall be measured for both the day and the night conditions of use. The time measured for the night condition of use shall not exceed that measured for the day condition of use.

6.5. Annex 4, referred to in paragraph 6.2.1. above, gives particulars of the measurement methods to be used.

**Please see Record
No.07-0257 attached**

YES

7. TEST PROCEDURE

7.1. All measurements shall be made with an uncoloured or amber-coloured standard filament lamp of the category prescribed for the device, the supply voltage being to so regulated as to produce the reference luminous flux prescribed for that category lamp.

**PY21W standard bulb
used**

YES

7.1.1. All measurements on lamps equipped with non-replaceable light sources (filament lamps and other) shall be made at 6.75V, 13.5V or 28.0V respectively.

In the case of light sources supplied by a special power supply, the above test voltage shall be applied to the input terminals of that power supply. The test laboratory may require from the manufacturer the special power supply needed to supply the light sources.

N/A

N/A

7.2. However, in the case of an indicator of category 2b for which an additional system⁴ is used to obtain the night-time intensity, the voltage applied to the system for measuring the night-time intensity shall be that which was applied to the filament lamp for measuring the day-time intensity.

N/A

N/A

⁴ The functioning and installation conditions of the additional device will be defined by special provisions.

7.3. The limits of the apparent surface in direction of the reference axis of a light-signalling device shall be determined.

YES





8. COLOUR OF LIGHT EMITTED

The colour of light emitted inside the field of the light distribution grid defined in paragraph 2 of annex 4 shall be within the limits of the co-ordinates prescribed in annex 5 to this Regulation. Out side the field, no sharp variation of color shall be observed.

YES





ECE REGULATION NO.7

| Item | Parameter | RESULTS | YES/NO |
|----------------------------------|---|---------|------------|
| 5. GENERAL SPECIFICATIONS | | | |
| 5.1 | Each device supplied shall conform to the specification set forth in paragraphs 6 and 8 below. | | <u>YES</u> |
| 5.2 | The devices must be so designed and constructed that in 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. | | <u>YES</u> |
| 5.3 | Lamp having been approved as front or rear position (side) lamps, are deemed being also approved end-outline marker lamps. | | <u>YES</u> |
| 5.4 | Front and rear position (side) lamps which are grouped or combined or reciprocally incorporated may also be used as end-outline marker lamps. | | <u>YES</u> |
| 5.5 | Position (side) lamps, which are reciprocally incorporated with another function, using a common light source, and designed to operate permanently with an additional system to regulated the intensity of the light emitted, are permitted. | | <u>N/A</u> |
| 5.5.1. | However, in the case of rear (side) position lamp reciprocally incorporated with a stop lamp, the device shall either: (i) be a part of a multiple light source arrangement, or (ii) be intended for use in a vehicle equipped with a failure monitoring system for that function. In either case, a note shall be made within the communication document. | | <u>N/A</u> |
| 5.6. | Light source module | | <u>N/A</u> |
| 5.6.1. | The design of the light source module(s) shall be such that even in darkness the light source module(s) can be fitted in no other position, but the correct one. | | <u>N/A</u> |
| 5.6.2. | The light source module(s) shall be tamperproof | | <u>N/A</u> |

6. INTENSITY OF LIGHT EMITTED

6.1. If the reference axis, the light emitted by each of the two devices supplied must be of not less than the minimum intensity and of not more than the maximum intensity specified below:

| 1/ | Minimum Intensities cd | Maximum values in cd when used as | | | S1 | S2 | |
|--|------------------------|-----------------------------------|--|---|------------|------------|------------|
| | | Single lamp | Lamp (single) marked 'D' (paragraph 4.2.2.6) | Total for the assembly of two or more lamps | | | |
| 6.1.1 Front position (side) lamps, Front end-outline marker lamp | 4 | 60 2/ | 42 2/ | 42 2/ | | | <u>N/A</u> |
| 6.1.2 Front position (side) lamps, Incorporated in headlamp | 4 | 84 2/ | - | - | 6.7 | 6.2 | <u>YES</u> |
| 6.1.3 Rear position (side) lamps Rear end-outline marker lamp | 4 | 12 2/ | 8.5 2/ | 17 2/ | | | <u>N/A</u> |
| 6.1.4 Stop-lamps | | | | | | | |
| 6.1.4.1 with 1 level of intensity (category S1) | 60 | 185 2/ | 130 2/ | 260 2/ | | | <u>N/A</u> |
| 6.1.4.2 with 2 levels of intensity (category S2) | | | | | | | <u>N/A</u> |
| 6.1.4.2.1 by day | 130. | 520 2/ | 366 2/ | 728 2/ | | | <u>N/A</u> |
| 6.1.4.2.2 by night | 30. | 80 2/ | 56 2/ | 112 2/ | | | <u>N/A</u> |
| 6.1.4.3 Stop-lamps of category 3 | 25. | 80 | 55 | 110 | | | <u>N/A</u> |

Note to table

1/ The installation of the devices referred to above in power-driven vehicles and their trailers is provided for in the Regulations concerning the installation of lighting and light-signalling devices (Regulations Nos. 48 and 53).

2/ The total value of maximum intensity for an assembly of two or more lamps is given by multiplying by 1.4 the value prescribed for a single lamp.

When an assembly of two or more lamps having the same function is deemed to be, for the purpose of installation on a vehicle, a "single lamp" (following the definition of Regulation No. 48 and its series of amendments in the force at the time of application for type approval), this assembly shall comply with the minimum intensity required when one lamp has failed, and all the lamps together shall not exceed the admissible maximum intensity (last column of the table)

In the case of a single lamp containing more than one light source:

(i) all light sources which are connected in series are considered to be one light source;
(ii) the lamp shall comply with the minimum intensity required when any one light source has failed. However, for lamps designed for only two light sources, 50 per cent of the minimum intensity in the axis of reference of the lamp shall be considered sufficient, provided that a note in the communication form states that the lamp is only for use on a vehicle fitted with an operating tell-tale which indicates when any one of these two light sources has failed.

(iii) when all light sources are illuminated the maximum intensity specified for a single lamp may be exceeded provided that the single lamp is not marked "D" and the maximum intensity specified for an assembly of two or more lamps (last column of the table) is not exceeded.



YES

N/A

N/A

N/A

N/A

N/A

N/A



| | | | | |
|-----------|---|------------|--|------------|
| 6.2. | Outside the reference axis and within the angular fields defined in the diagrams in annex 1 to this Regulation, the intensity of the light emitted by each of the two devices supplied must: | | | <u>YES</u> |
| 6.2.1. | In each direction corresponding to the points in the light distribution table reproduced in annex 4 to this Regulation, be not less than the product of the minimum specified in paragraph 6.1. above by the percentage specified in the said table for the direction in question; | | Please see Record No. 07-0257 attached. | <u>YES</u> |
| 6.2.2. | In no direction within the space from which the light-signalling device is visible, exceed the maximum specified in paragraph 6.1. above; | | Same as above. | <u>YES</u> |
| 6.2.3. | However, a luminous intensity of 60 cd shall be permitted for rear position (side) lamps reciprocally incorporated with stop-lamps (see paragraph 6.1.3. above) below a plane forming an angle of 5° with and downward from the horizontal plane; | | | <u>N/A</u> |
| 6.2.4. | Moreover,. | | | |
| 6.2.4.1. | Throughout the fields defined in the diagrams in annex 1, the intensity of the light emitted must be | S1 | S2 | |
| | not less than 0.05 cd for front and rear position (side) lamps and end-outline marker lamps, | 0.1 | 0.1 | <u>YES</u> |
| | not less than 0.3 cd for stop-lamps with one level of intensity, and | | | <u>N/A</u> |
| | for stop-lamps with two levels of intensity | | | <u>N/A</u> |
| | 0.3 cd by day and. | | | <u>N/A</u> |
| | 0.07 cd by night; | | | <u>N/A</u> |
| 6.2.4.2. | If a rear position (side) lamp is reciprocally incorporated with a stop-lamp, the ratio between the luminous intensities actually measured of the two lamps when turned on simultaneously at the intensity of the rear position (side) lamp when turned on alone should be at least 5 : 1 in the field delimited by the straight horizontal lines passing through ±5° V and the straight vertical lines passing through ±10° H of the light distribution table. If the stop-lamp has two levels of intensity, this requirement must be satisfied when the night condition is switched on; | | | <u>N/A</u> |
| | If the rear position (side) lamp or the stop lamp or both contain more than one light source and are considered as a single lamp as defined in note 2 of the table in paragraph 6.1 above, the values to be considered are those obtained with all sources in operation; | | | <u>N/A</u> |
| 6.2.4.3. | The provisions of paragraph 2.2. of annex 4 to this Regulation on local variations of intensity must be observed. | | | <u>YES</u> |
| 6.3. | The intensities shall be measured with the filament lamp(s) continuously alight and, in the case of devices emitting selective-yellow or red light, in coloured light. | | White light emitted. | <u>YES</u> |
| 6.4. | In the case of a stop-lamp providing two levels of intensity the time that elapses between electrical supply being switched on and the light output measured on the reference axis to reach 90% of the value measured in accordance with paragraph 6.3. above shall be measured for both the day and the night conditions of use. The time measured for the night condition of use shall not exceed that measured for the day condition of use. | | | <u>N/A</u> |
| 6.5. | Annex 4, to which reference is made in paragraph 6.2.1. above, gives particulars of the methods of measurement to be used. | | | <u>YES</u> |
| 7. | TEST PROCEDURE | | | |
| 7.1. | All measurements, photometric and colorimetric, shall be made with a colourless standard filament lamp of the category prescribed for the device, the supply voltage being so regulated as to produce the reference luminous flux required for that category of lamp. | | | <u>N/A</u> |
| 7.1.1. | In the case of a system with more than one intensity, the reference luminous flux prescribed for the specific category of filament lamp shall be applied to the greatest intensity. | | | <u>N/A</u> |
| 7.1.2. | All measurements, photometric and colorimetric, on lamps equipped with non-replaceable light sources (filament lamps and other) shall be at 6.75 V, 13.5 V or 28.0 V respectively. | | LED made at 13.5V | <u>YES</u> |
| 7.1.3. | In the case of light sources supplied by a special power supply, the above test voltages shall be applied to the input terminals of that power supply. The test laboratory may require from the manufacturer the special power supply needed to supply the light sources. | | | <u>N/A</u> |
| 7.2. | However, in the case of stop-lamp for which an additional system is used to obtain the night-time intensity, the voltage supplied to the system for measuring the night-time intensity shall be that which was supplied to the filament lamp for measuring the day-time intensity. 2/ | | | <u>N/A</u> |
| 2/ | The functioning and installation conditions of these additional system shall be defined by special provisions. | | | |
| 7.3. | Where a rear position (side) lamp is reciprocally incorporated with a dual-intensity stop-lamp and is designed to operate permanently with an additional system to regulate the intensity of the light emitted, measurement of the light emitted shall be performed with the same voltage supplied to the system as would, if applied to the filament lamp, enable the lamp to produce the prescribed normal luminous flux. | | | <u>N/A</u> |
| 7.3.1. | Where a position (side) lamp is reciprocally incorporated with another lamp, and is designed to operate permanently with an additional system to regulate the intensity of the light emitted, measurement of the light emitted shall be performed at 6.75 V, 13.5 V or 28 V respectively, where the additional system is part of the device. | | | <u>N/A</u> |
| 7.3.2. | Where the additional system is not part of the device, then the tests shall be performed at the rated secondary design voltage applied to the light source. The test laboratory may require from the manufacturer the additional system needed to regulate the light source. | | | <u>N/A</u> |
| 7.4. | The vertical and horizontal outlines of the illuminating surface of a light-signaling device shall be determined and measured in relation to the centre of reference. | | | <u>YES</u> |





- 7.6. In the case of a category S3 stop lamp, which is intended to be mounted inside the vehicle, a sample plate or sample plates (in case of different possibilities) as supplied (see paragraph 2.2.5) shall be positioned in front of the lamp to be tested, in the geometrical position(s) as described in the application drawing(s) (see paragraph 2.2.1.). N/A
8. **COLOUR OF LIGHT EMITTED**
The colour of light emitted inside the field of the light distribution grid defined in paragraph 2 of annex 4 shall be within the limits of the co-ordinates prescribed in annex 5 to this Regulation. Outside the field, no sharp variation of color shall be observed. YES
- Please see Record No. 07-0257 attached.**





ECE REGULATION NO. 112

| Item | Parameter | Results | YES/NO |
|-----------|--|--|------------|
| 5. | GENERAL SPECIFICATIONS | | |
| 5.1. | Each sample shall conform to the specifications set forth in paragraphs 6. to 8. below. | | <u>YES</u> |
| 5.2. | Headlamp shall be so made as to retain their prescribed photometric characteristics and to remain in good working order when in normal use, in spite of the vibrations to which they may be subjected. | | <u>YES</u> |
| 5.2.1. | Headlamps 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 unites is confined to vehicles on which the headlamp setting can be adjusted by other means. Where a headlamp providing a passing beam and a headlamp providing a driving beam, each equipped with its own filament lamp, are assembled to form a composite unit the adjusting device shall enable each optical system individually to be duly adjusted. | | <u>YES</u> |
| 5.2.2. | However, these provisions shall not apply to headlamp assemblies whose reflectors are indivisible. For this type of assembly the requirements of paragraph 6.3. of this Regulation shall apply. | | <u>N/A</u> |
| 5.3. | The headlamp shall be equipped with filament lamp(s) approved according to Regulation No. 37. Any Regulation No. 37 filament lamp may be used, provided that no restriction on the application is made in the table of contents of Regulation No.37. <u>6/</u> | | <u>YES</u> |
| <u>6/</u> | H1R1 and/or H9 filament lamps shall only be permitted to produce passing beam in conjunction with the installation of headlamp cleaning device(s) conforming to Regulation No.45 In addition, with respect to vertical inclination, the provision of paragraph 6.2.6.2.2. of Regulation No.48 01 series of amendments, shall not be applied when these lamps are installed. This restriction shall apply as long as there is no general agreement on the use of levelling devices and headlamp cleaners with respect to the level of the performance of the headlamp. | | <u>N/A</u> |
| 5.4. | The components by which a filament lamp is fixed to the reflector shall be so made that, even in darkness, the filament lamp can be fixed in no position but the correct one. <u>7/</u> | | <u>YES</u> |
| 5.5. | The filament lamp holder shall conform to the characteristics given in IEC Publication 61-2, third edition, 1969. The holder data sheet relevant to the category of filament lamp used, applies. | | <u>YES</u> |
| <u>7/</u> | A headlamp is regarded as satisfying the requirements of this paragraph if the filament lamp can be easily fitted into headlamp and the positioning lugs can be correctly fitted into their slots even in darkness. | | <u>YES</u> |
| 5.6. | Headlamps designed to satisfy the requirements both of right-hand and left-hand traffic may be adapted for traffic on a given side of the road either by an appropriate initial setting when fitted on the vehicle or by selective setting by the user. Such initial or selective setting may consist, for example, of fixing either the optical unit at a given angle on the vehicle or the filament lamp at a given angle in relation to the optical unit. In all cases, only two different and clearly distinct settings, one for right-hand and one for left-hand traffic, shall be possible, and the design shall preclude inadvertent shifting from one setting to the other or setting in an intermediate position. Where two different setting positions are provided for the filament lamp, the components for attaching the filament lamp to the reflector must be so designed and made that, in each of its two settings, the filament lamp will be held in position with the precision required for headlamps designed for traffic on only one side of the road. Conformity with the requirements this paragraph shall be verified by visual inspection and, where necessary, by a test fitting. | For one traffic system only | <u>N/A</u> |
| 5.7. | Complementary tests shall be done according to the requirements of annex 4 to ensure that in use there is no excessive change in photometric performance. | Please see Record No.07-0257 attached | <u>YES</u> |
| 5.8. | If the lens of the headlamp is of plastic material, test shall be done according to the requirements of annex 6. | | <u>YES</u> |
| 5.9. | On headlamps designed to provide alternately a driving beam and a passing beam, or a passing beam and/or a driving beam designed to become bend lighting, any mechanical, electromechanical or other device incorporated in the headlamp for these purposes shall be so constructed that: | | <u>N/A</u> |
| 5.9.1. | the device is strong enough to withstand 50,000 operations without suffering damage despite the vibrations to which it may be subjected in normal use; | | <u>N/A</u> |
| 5.9.2. | in the case of failure the illumination above the line H-H shall not exceed the values of a passing beam according to paragraph 6.2.5.; in addition, on headlamps designed to provide a passing beam and/or a driving beam to become a bend lighting, a minimum illumination of at least 5 lux shall be fulfilled in test point 25V (VV line, D75 cm). | | <u>N/A</u> |
| 5.9.3. | either the passing beam or the driving beam shall always be obtained without any possibility of the mechanism stopping in between two position; | | <u>N/A</u> |
| 5.9.4. | the user cannot, with ordinary tools, change the shape or position of the moving parts. | | <u>N/A</u> |
| 6. | ILLUMINATION | | |
| 6.1 | <u>General provisions</u> | | |
| 6.1.1. | Headlamp shall be so made that they give adequate illumination without dazzle when emitting the passing beam, and good illumination when emitting the driving beam. | | <u>YES</u> |





- 6.1.2. The illumination produced by the headlamp shall be determined by mean of a vertical screen set up 25 m forwards of the headlamp and at right angles to its axes as shown in annex 3 to this Regulation. YES
- 6.1.3. The headlamps shall be checked by means of an uncolored standard (etalon) filament lamp designed for a rated voltage of 12V. During the checking of the headlamp, the voltage at the terminals of the filament lamp shall be regulated so as to obtain the reference luminous flux as indicated at the relevant data sheet of Regulation No. 37. **H1 Standard bulb used** YES
- 6.1.4. The headlamp shall be considered acceptable if it meets the requirements of this paragraph 6 with at least one standard (etalon) filament lamp, which may be submitted with the headlamp. YES
- 6.2. Provisions concerning passing beams**
- 6.2.1. The passing beam must produce a sufficiently sharp "cut-off" to permit a satisfactory adjustment with its aid. The "cut-off" must be a horizontal straight line on the side opposite to the direction of the traffic for which the headlamp is intended; on the other side, it must not extend beyond either the broken line HV, H₁, H₄ formed by a straight line HV, H₁ marking a 45° angle with the horizontal and the straight line H₁, H₄, 25 cm above the straight line hh. or the straight line HV, H₃, inclined at an angle of 15° above the horizontal (see annex 3). A "cut-off" extending beyond both line HV, H₄ and line H₂, H₄ and resulting from a combination of the two above possibilities shall in no circumstances be permitted. YES
- 6.2.2. The headlamp shall be so aimed that :
 - 6.2.2.1. in the case of headlamps designed to meet the requirements of right-hand traffic, the "cut-off" on the left-hand of the screen **8/** is horizontal and, in the case of headlamps designed to meet the requirements of left-hand traffic, the "cut-off" on the right-hand of the screen is horizontal; YES
 - 8/** The test screen must be sufficiently wide to allow examination of the "cut-off" over a range of at least 5° on either side of the line vv. YES
 - 6.2.2.2. this horizontal part of the "cut-off" is situated on the screen 25 cm below the level hh (see annex 3); YES
 - 6.2.2.3. the "elbow" of the "cut-off" is on line vv. **9/** YES
- 9/** If the beam does not have a cut-off with a clear "elbow", the lateral adjustment shall be effected in the manner which best satisfies the requirements for illumination at points 75R and 50R for right-hand traffic and for points 75L and 50L for left-hand traffic. YES
- 6.2.3. When so aimed, the headlamp need, if its approval is sought solely for provision of a passing beam, **10/** comply only with the requirements set out in paragraphs 6.2.5. to 6.2.7. and 6.2.9. below; N/A
 - if it is intended to provide both a passing beam and a driving beam, it shall comply with the requirements set out in paragraphs 6.2.5. to 6.2.7. and 6.3. YES
- 10/** Such a special "passing beam" headlamp may incorporate a driving beam not subject to requirements. N/A
- 6.2.4. Where a headlamp so aimed does not meet the requirements set out in paragraphs 6.2.5. to 6.2.7. and 6.3., its alignment may be changed, provided that the axis of the beam is not displaced laterally by more than 1° (= 44 cm) to the right or left. **11/** To facilitate alignment by means of the "cut-off", the headlamp may be partially occulted in order to sharpen the "cut-off". YES
- 11/** The limit of realignment of 1° towards the right or left is not incompatible with upward or downward vertical realignment. The latter is limited only by the requirements of paragraph 6.3. However, the horizontal part of the "cut-off" should not extend beyond the line hh (the provisions of paragraph 6.3. are not applicable to headlamps intended to meet the requirements of this Regulation only for provision of a passing beam). YES
- 6.2.5. The illumination produced on the screen by the passing beam shall meet the following requirements : YES



| Point on measuring screen | | Required illumination in lux | | Sample 1 | Sample 2 | |
|---------------------------------|--------------------------------|------------------------------|------------------|-------------|-------------|------------|
| Headlamp for right hand traffic | Headlamp for left hand traffic | Class A headlamp | Class B headlamp | | | |
| Point B 50 L | Point B 50 R | ≤ 0.4 | ≤ 0.4 | <u>0.3</u> | <u>0.2</u> | <u>YES</u> |
| " 75 R | " 75 L | ≥ 6 | ≥ 12 | <u>13.1</u> | <u>12.3</u> | <u>YES</u> |
| " 75 L | " 75 R | ≤ 12 | ≤ 12 | <u>1.5</u> | <u>0.7</u> | <u>YES</u> |
| " 50 L | " 50 R | ≤ 15 | ≤ 15 | <u>4.7</u> | <u>4.8</u> | <u>YES</u> |
| " 50 R | " 50 L | ≥ 6 | ≥ 12 | <u>15.4</u> | <u>19.0</u> | <u>YES</u> |
| " 50 V | " 50 V | - | ≥ 6 | <u>13.6</u> | <u>12.1</u> | <u>YES</u> |
| " 25 L | " 25 R | ≥ 1.5 | ≥ 2 | <u>2.7</u> | <u>2.7</u> | <u>YES</u> |
| " 25 R | " 25 L | ≥ 1.5 | ≥ 2 | <u>2.2</u> | <u>2.8</u> | <u>YES</u> |
| Any point in zone III | | ≤ 0.7 | ≤ 0.7 | <u>0.7</u> | <u>0.7</u> | <u>YES</u> |
| Any point in zone IV | | ≥ 2 | ≥ 3 | <u>4.1</u> | <u>3.9</u> | <u>YES</u> |



| | | |
|--|-----|--------|
| Any point in zone I | ≤20 | ≤2E */ |
| */E is the actually measured value in points 50R respectively 50L. | | |

18.8

17.8

YES

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

YES

6.2.7. The illumination values in zones "A" and "B" as shown in figure C in annex 3 shall be checked by the measurement of the photometric values of points 1 to 8 on this figure; these values shall lie within the following limits:

Please see Record No.07-0257 attached

YES

1 + 2 + 3 ≥ 0.3 lux, and

0.4

0.3

YES

4 + 5 + 6 ≥ 0.6 lux, and

0.6

0.6

YES

0.7 lux ≥ 7 ≥ 0.1 lux and

0.2

0.2

YES

0.7 lux ≥ 8 ≥ 0.2 lux

0.3

0.3

YES

12/ Illumination values in any point of zones A and B, which also lies within zone III, shall not exceed 0.7 lux.

YES

6.2.8. Headlamps designed to meet the requirements of both right-hand and left-hand traffic must, in each of the two setting positions of the optical unit or of the filament lamp, meet the requirements set forth above for the corresponding direction of traffic.

N/A

6.2.9. The requirements in paragraph 6.2.5. above shall also apply to headlamps designed to provide bend lighting and/or that include the additional light source referred to in paragraph 6.1.10.2.

N/A

6.2.9.1. If bend lighting is obtained by:

6.2.9.1.1. swiveling the passing beam or moving horizontally the kink of the elbow of the cut-off, the measurements shall be carried out after the complete headlamp assembly has been reaimed horizontally, e.g. by means of a goniometer;

N/A

6.2.9.1.2. moving one or more optical parts of the headlamp without moving horizontally the kink of the elbow of the cut-off, measurements shall be carried out with these parts being in their extreme operating position;

N/A

6.2.9.1.3. means of one additional light source without moving horizontally the kink of the elbow of the cut-off, measurements shall be carried out with this light source activated.

N/A

6.2.10. Only one principal light source is permitted for each passing beam headlamp. However, a maximum of two additional light sources are permitted as follows:

6.2.10.1. One additional light source inside the passing beam headlamp according to Regulation No.37 may be used to contribute to bend lighting.

6.2.10.2. One additional light source according to Regulation No.37, inside the passing beam headlamp, may be used for the purposes of generating infrared radiation. It shall only be activated at the same time as the principal light source. In the event that the principal light source fails, this additional light source shall be automatically switched off.

6.2.10.3. In the event of failure of an additional light source, the headlamp shall continue to fulfil the requirements of the passing beam.

6.3. Provisions concerning driving beams

6.3.1. In the case of a headlamp designed to provide a driving beam and a passing beam, measurements of the illumination produced on the screen by the driving beam shall be taken with the same headlamp alignment as for measurements under paragraphs 6.2.5. to 6.2.7. above; in the case of a headlamp providing a driving beam only, it shall be so adjusted that the area of maximum illumination is centred on the point of intersection of lines hh and vv; such a headlamp need meet only the requirements referred to in paragraph 6.3. where more than one light source is used to provide the driving beam, the combined functions shall be used to determine the maximum values of the illumination (E_M).

YES

6.3.2. The illumination produced on the screen by the driving beam shall meet the following requirements.

YES

6.3.2.1. The point of intersection (HV) of lines hh and vv shall be situated within the isolux 80% of maximum illumination.

YES

The maximum values (E_M) shall not be less than 48 lux. The maximum values shall in no circumstances exceed 240;

YES

in addition, in the case of a combined passing and driving headlamp, this maximum value shall not be more than 16 times the illumination measured for the passing beam at point 75R (or 75L).

N/A

6.3.2.1.1. The maximum intensity (I_M) of the driving beam expressed in thousands of candelas shall be calculated by the formula : I_M = 0.625 E_M

34.8

37.2

YES

6.3.2.1.2. The reference mark (I_M) of this maximum intensity, referred to in paragraph 4.2.2.7. above, shall be obtained by the ratio : I_M = I_M/3 = 0.208 E_M

11.6

12.4

YES

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

10

YES

6.3.2.2. Starting from point HV, horizontally to the right and left, the illumination shall be not less than 16 lux for Class A headlamp and 24 lux for Class B headlamp up to a distance of 1.125 m and not less than 6 lux up to a distance of 2.25 m.

Please see Record No.07-0257 attached

YES



| | | |
|-----------|--|--|
| 6.4. | In the case of headlamp with an adjustable reflector the requirements of paragraphs 6.2. and 6.3 are applicable for each mounting position indicated according to paragraph 2.1.3. For verification the following procedure shall be used: | <u>N/A</u> |
| 6.4.1. | Each applied position is realized on the test goniometer with respect to a line joining the centre of the light source and point HV on the aiming screen. The adjustable reflector is then moved into such a position that the light pattern on the screen corresponds to the aiming prescriptions of paragraphs 6.2.1. to 6.2.2.3. and/or 6.3.1; | <u>N/A</u> |
| 6.4.2. | With the reflector initially fixed according to paragraph 6.4.1., the headlamp must meet the relevant photometric requirements of paragraphs 6.2. and 6.3; | <u>N/A</u> |
| 6.4.3. | Additional tests are made after the reflector has been moved vertically $\pm 2^\circ$ or at least into the maximum position, if less than 2° , from its initial position by means of the headlamps adjusting device. Having re-aimed the headlamp as a whole (by means of the goniometer for example) | <u>YES</u> |
| | In the corresponding opposite direction the light output in the following directions shall be controlled and lie within the require limits : | <u>YES</u> |
| | passing beam : Points HV and 75R (75L respectively) ; | <u>YES</u> |
| | driving beam : E_M and point HV (percentage of E_M). | <u>YES</u> |
| | Driving beam: I_M and point HV (percentage of I_M). | <u>YES</u> |
| 6.4.4. | If the applicant has indicated more than one mounting position, the procedure of paragraphs 6.4.1. to 6.4.3. shall be repeated for all the other positions; | <u>N/A</u> |
| 6.4.5. | If the applicant has not asked for special mounting positions, the headlamp shall be aimed for measurements of paragraphs 6.2. and 6.3. with the headlamps adjusting device in its mean position. The additional tests of paragraph 6.4.3. shall be made with the reflector moved into its extreme positions (instead of $\pm 2^\circ$) by means of the headlamps adjusting device. | <u>YES</u> |
| 6.5. | The screen illumination values mentioned in paragraph 6.2.5. to 6.2.7. and 6.3. above shall be measured by means of a photo-receptor, the effective area of which shall be contained within a square of 65 mm side. | <u>YES</u> |
| 7. | COLOUR | |
| 7.1. | The colour of the emitted shall be white . Expressed in CIE trichromatic coordinates , the light of the beams shall be in the following boundaries : | <u>YES</u> |
| | Limit towards blue $x \geq 0.310$ | <u>White light emitted from clear bulb and clear lens.</u> |
| | Limit towards yellow $x \leq 0.500$ | |
| | Limit towards green $y \leq 0.150 + 0.640 x$ | |
| | Limit towards green $y \leq 0.440$ | |
| | Limit towards purple $y \geq 0.050 + 0.750 x$ | |
| | Limit towards red $y \geq 0.382$ | |
| 8. | GAUGING OF DISCOMFORT | |
| | The discomfort caused by the passing beam of headlamps shall be gauged. <u>13/</u> | <u>OK</u> |
| | <u>13/</u> This requirement will be the subject of a recommendation to administrations . | <u>OK</u> |



JUN YAN INDUSTRIAL Co., Ltd.

窩陽實業股份有限公司

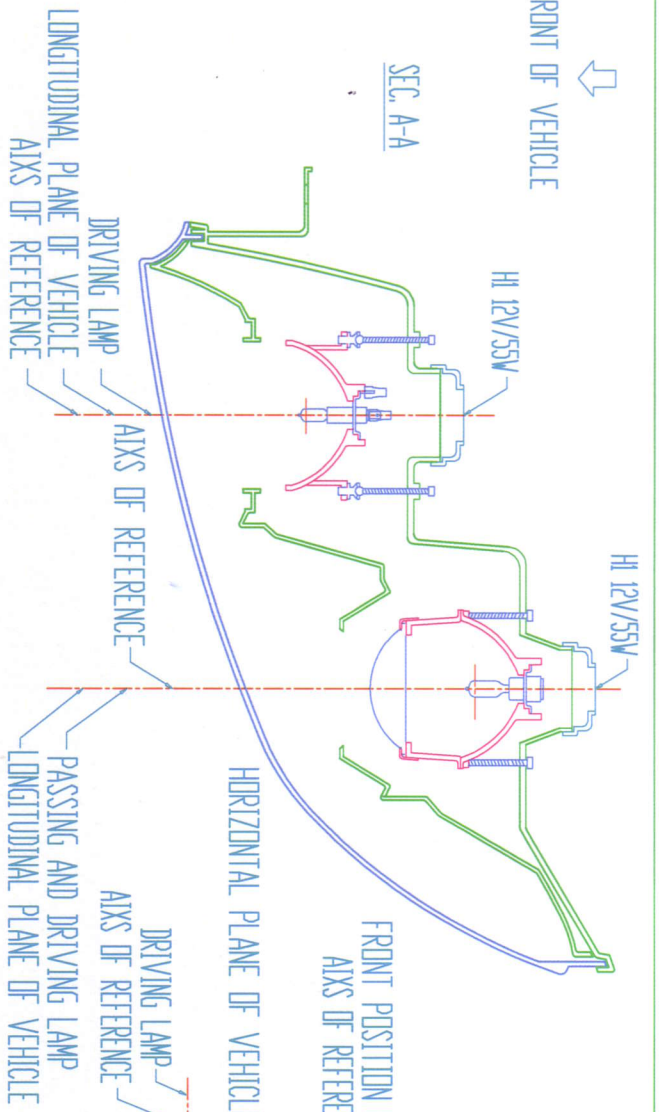
Information Document

for Initial application to ECE Homologation
of Model Number HU205-02-1

| items | Details | | Initial | Extension-00 | Remark |
|-------|------------------------------------|----------------|--|--------------|--------|
| 1. | VCA | | | | |
| 1.1 | Job Number | | EAH182594 | | |
| 1.2 | Approval Number | | 5028 | | |
| 2. | Manufacturer | | | | |
| 2.1 | Name | | JUN YAN INDUSTRIAL Co., Ltd. | | |
| 2.2 | Address | | No.121, Wencheng Road, Tainan Hsien, Taiwan, Republic of China | | |
| 2.3 | Trade name or mark | | JUNYAN | | |
| 3. | Product | | Head lamp | | |
| 3.1 | Model Number | | HU205-02-1 | | |
| 3.2 | Intended functions | Charteristic | | | |
| 3.2.1 | Front Direction Indicator (Reg. 6) | Category | 1 | | |
| | | Bulb | PY21W 12V 21W | | |
| | | Color of light | Amber | | |
| | | Color of lens | Clear | | |
| 3.2.2 | Front Position Lamp (Reg.7) | Category | A | | |
| | | Bulb | LED 12V 0.5W | | |
| | | Color of light | White | | |
| | | Color of lens | Clear | | |
| 3.2.2 | Passing Beam (Reg.112) | Class | B | | |
| | | Category | HC | | |
| | | Bulb | H1 12V 55W | | |
| | | Color of light | Clear | | |
| | | Color of lens | Clear | | |
| 3.2.3 | Driving Beam (Reg.112) | Class | B | | |
| | | Category | HR | | |
| | | Bulb | H1 12V 55W | | |
| | | Color of light | Clear | | |
| | | Color of lens | Clear | | |
| 4. | Drawings | | HU205-02-1 | | |

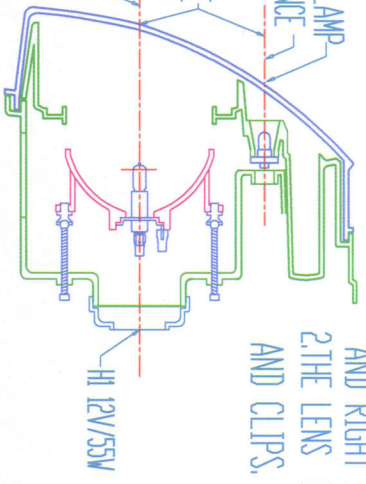


FRONT OF VEHICLE

SEC. A-A

SEC. B-B

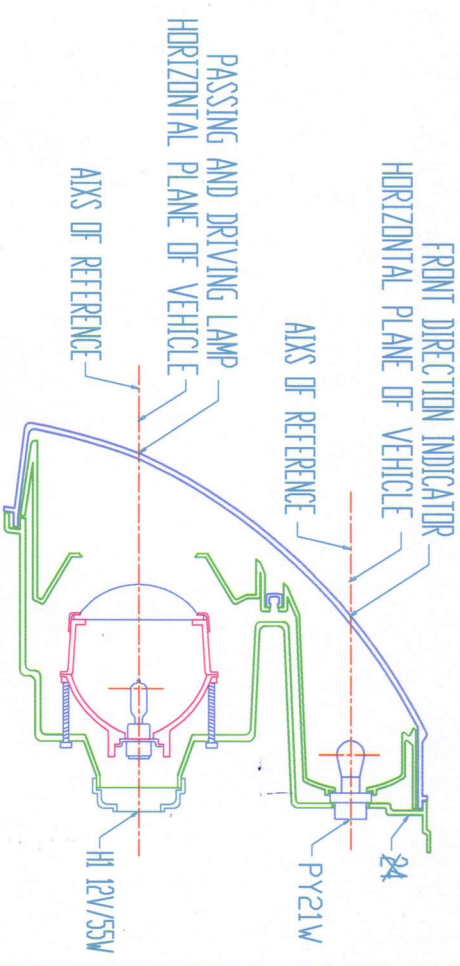
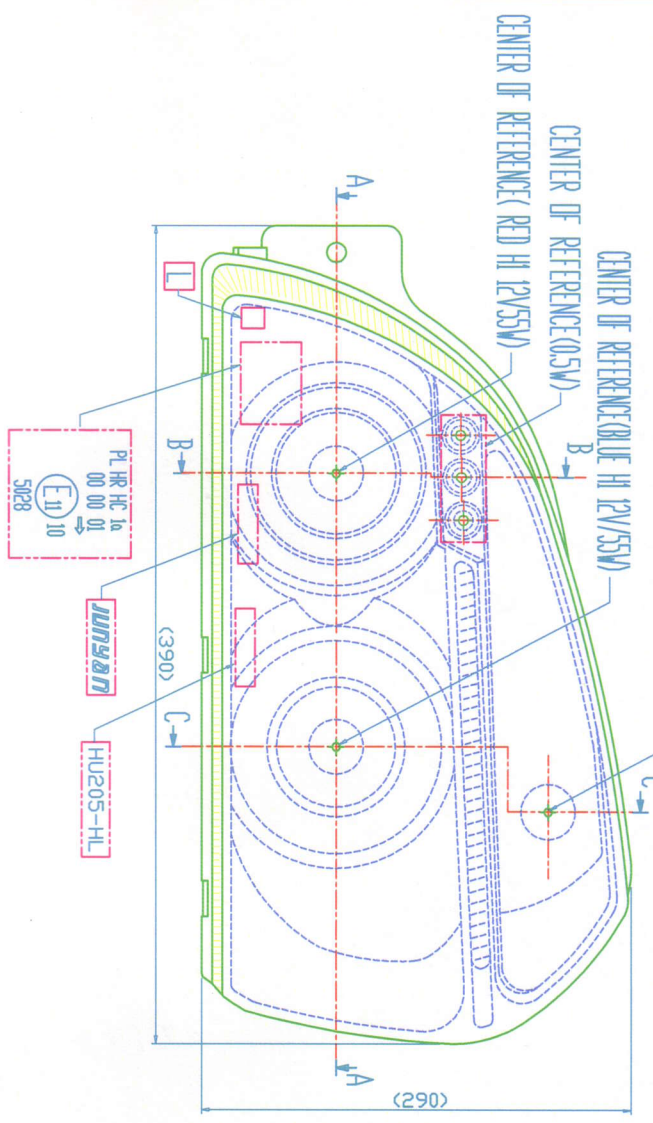


SEC. C-C

NOTE: THIS DRAWING SHALL BE APPLIED FOR LEFT HAND ONLY, AND RIGHT HAND SHALL BE SYMMETRIC. THE LENS IS FIXED TO HOUSING BY USING GLUE AND CLIPS.



| NO | SYM | DATE | REVISIONS | DMN | CHECK | APPR. |
|----|-----|------|-----------|-----|-------|-------|
| | | | | | | |



| NO | FIG. NO. | CUSTOMER PART NO. | PART NO. | PART NAME | MATERIAL | QTY | REMARK |
|----|----------|-------------------|----------|-----------|----------|-----|--------|
| | | | | | | | |

| APPR. | CHECKED | DATE | SC. FREE UNIT | REMARK |
|-------|---------|------|---------------|--------|
| | | | | |

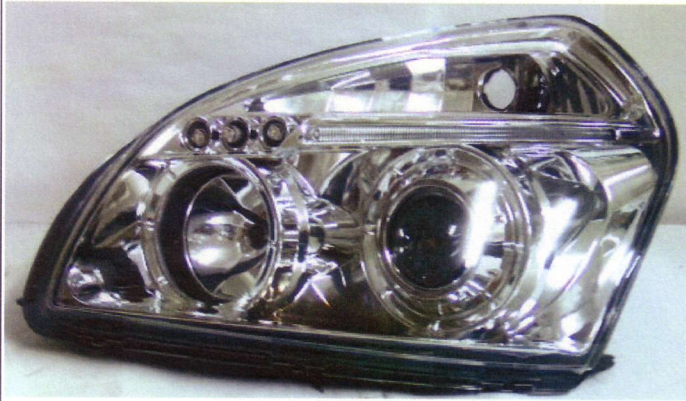
| MARK OF MODIFICATION | REPRESENTS GENERALLY-USED PARTS | NO DRAWINGS (SWAG) DRAWING | APP. DON BY | DWG BY | DATE | DRAW NO. |
|----------------------|---------------------------------|----------------------------|-------------|--------|------|----------|
| | | | | | | |

| 3rd ANGLE PROJECTION | PART NAME | HEAD LAMP | DRAW NO. | HU205(頭燈) |
|----------------------|-----------|-----------|----------|-----------|
| | | | | |

JUNYAN AUTO INDUSTRIAL CO., LTD

JUN YAN INDUSTRIAL Co. Ltd.
窩 陽 實 業 股 份 有 限 公 司

HU205-02-1 LH Front View



HU205-02-1 RH Front View



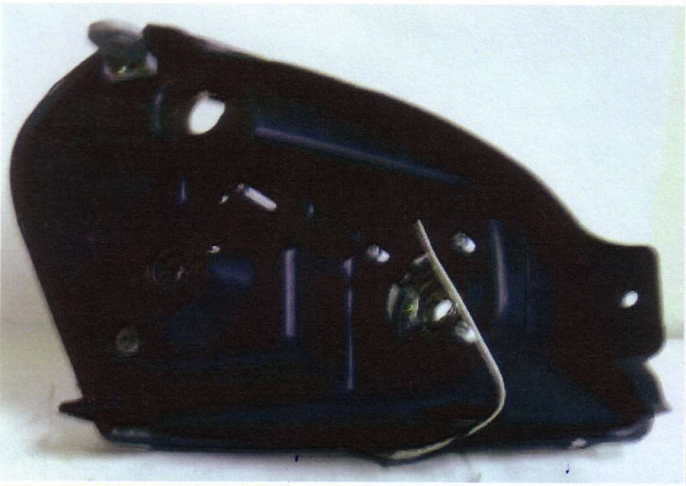
HU205-02-1 LH Side View



HU205-02-1 RH Side View



HU205-02-1 LH Rear View



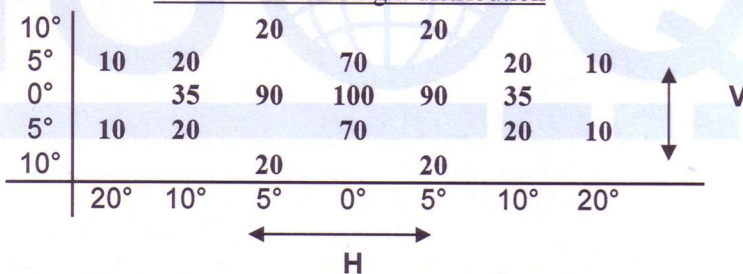
HU205-02-1 RH Rear View



photometric measurements test record

| | | | |
|-------------|--------------------------|-----------|------------------------------------|
| Record No. | 07- 0257 | Reference | EAH182594 6/7/112 5028 |
| Requirement | ECE R6 Clause 6.1 Annex4 | Function | Front Direction Indicator (Reg. 6) |
| Subject | HU205-02-1 | Date | 3/8/2007 |

Table of standard light distribution



HU205-02-1

| Test point | minimum | S. 1 | S. 2 | Result | maximum |
|------------|---------|-------|-------|--------|---------|
| 10U 5L | 35 | 76.3 | 65.5 | T T | 700 |
| 10U 5R | 35 | 71.5 | 75.6 | T T | 700 |
| 5U 20L | 18 | 40.2 | 54.9 | T T | 400 |
| 5U 10L | 35 | 141.5 | 117.8 | T T | 700 |
| 5U V | 123 | 148.8 | 142.3 | T T | 700 |
| 5U 10R | 35 | 115.1 | 143.1 | T T | 700 |
| 5U 20R | 18 | 52.2 | 45.5 | T T | 400 |
| H 10L | 61 | 224.9 | 236.6 | T T | 700 |
| H 5L | 158 | 238.0 | 250.1 | T T | 700 |
| H V | 175 | 234.0 | 259.4 | T T | 700 |
| H 5R | 158 | 225.4 | 249.6 | T T | 700 |
| H 10R | 61 | 217.5 | 226.1 | T T | 700 |
| 5D 20L | 18 | 90.5 | 51.4 | T T | 400 |
| 5D 10L | 35 | 208.0 | 235.3 | T T | 700 |
| 5D V | 123 | 201.9 | 233.7 | T T | 700 |
| 5D 10R | 35 | 219.8 | 197.7 | T T | 700 |
| 5D 20R | 18 | 83.3 | 91.6 | T T | 400 |
| 10D 5L | 35 | 115.7 | 117.4 | T T | 700 |
| 10D 5R | 35 | 126.0 | 122.6 | T T | 400 |
| minmum | 0.30 | 0.6 | 0.4 | T T | 700 |
| Max | | 261.2 | 274.5 | T T | 700 |

Tested by Chen Signature Chen

Approved by Arthur C. H. Chang Signature Arthur Chang



colors of lights test record

| | | | | | |
|-------------|------------------------|-----------|------------------------------------|---------|------|
| Record No. | 07- 0257 | Reference | EAH182594 | 6/7/112 | 5028 |
| Requirement | ECE R6 Clause8 Annex 5 | Function | Front Direction Indicator (Reg. 6) | | |
| Subject | HU205-02-1 | Date | 3/8/2007 | | |

| Requirement | Measurement | | | Remark |
|--|-------------|-------------------|-----------|--------|
| Amber color of light emitted | Test point | HU205-02-1 | | |
| Trichromatic Co-ordinates | | S1 | S2 | |
| | x= | 0.5532 | 0.5486 | ← |
| limit toward red $y \geq 0.39$ | y= | 0.4197 | 0.4245 | ← |
| limit toward green $y \leq x-0.12$ | = | T | T | |
| Limit towards white $y \geq 0.79-0.67$ | = | T | T | |

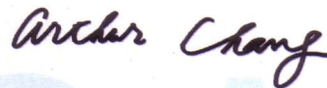
Tested by Chen

Signature



Approved by Arthur C. H. Chang

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photometric measurements test record

| | | | |
|-------------|----------------------------|-----------|-----------------------------|
| Record No. | 07- 0257 | Reference | EAH182594 6/7/112 5028 |
| Requirement | ECE R.7 Clause6.1.1 Annex4 | Function | Front Position Lamp (Reg.7) |
| Subject | HU205-02-1 | Date | 3/8/2007 |

Table of standard light distribution

| | | | | | | | |
|-----|-----|-----|----|-----|----|-----|-----|
| 10° | | 20 | | 20 | | | |
| 5° | 10 | 20 | | 70 | | 20 | 10 |
| 0° | | 35 | 90 | 100 | 90 | 35 | |
| 5° | 10 | 20 | | 70 | | 20 | 10 |
| 10° | | | 20 | | 20 | | |
| | 20° | 10° | 5° | 0° | 5° | 10° | 20° |

HU205-02-1

| Test point | minimum | S. 1 | S. 2 | Result | maximum |
|------------|---------|------|------|--------|---------|
| 10U 5L | 0.8 | 6.74 | 6.21 | T T | 84 |
| 10U 5R | 0.8 | 7.14 | 6.07 | T T | 84 |
| 5U 20L | 0.4 | 5.22 | 5.84 | T T | 84 |
| 5U 10L | 0.8 | 6.39 | 6.17 | T T | 84 |
| 5U V | 2.8 | 6.85 | 6.27 | T T | 84 |
| 5U 10R | 0.8 | 6.69 | 5.78 | T T | 84 |
| 5U 20R | 0.4 | 6.49 | 4.85 | T T | 84 |
| H 10L | 1.4 | 6.27 | 6.25 | T T | 84 |
| H 5L | 3.6 | 6.55 | 6.19 | T T | 84 |
| H V | 4 | 6.69 | 6.22 | T T | 84 |
| H 5R | 3.6 | 6.88 | 5.96 | T T | 84 |
| H 10R | 1.4 | 6.74 | 5.76 | T T | 84 |
| 5D 20L | 0.4 | 5.95 | 4.70 | T T | 84 |
| 5D 10L | 0.8 | 6.57 | 5.54 | T T | 84 |
| 5D V | 2.8 | 6.56 | 5.94 | T T | 84 |
| 5D 10R | 0.8 | 6.09 | 6.13 | T T | 84 |
| 5D 20R | 0.4 | 5.10 | 5.59 | T T | 84 |
| 10D 5L | 0.8 | 6.04 | 5.75 | T T | 84 |
| 10D 5R | 0.8 | 6.21 | 5.49 | T T | 84 |
| minmum | 0.05 | 0.08 | 0.07 | T T | 84 |
| Max | | 7.45 | 6.39 | T T | 84 |

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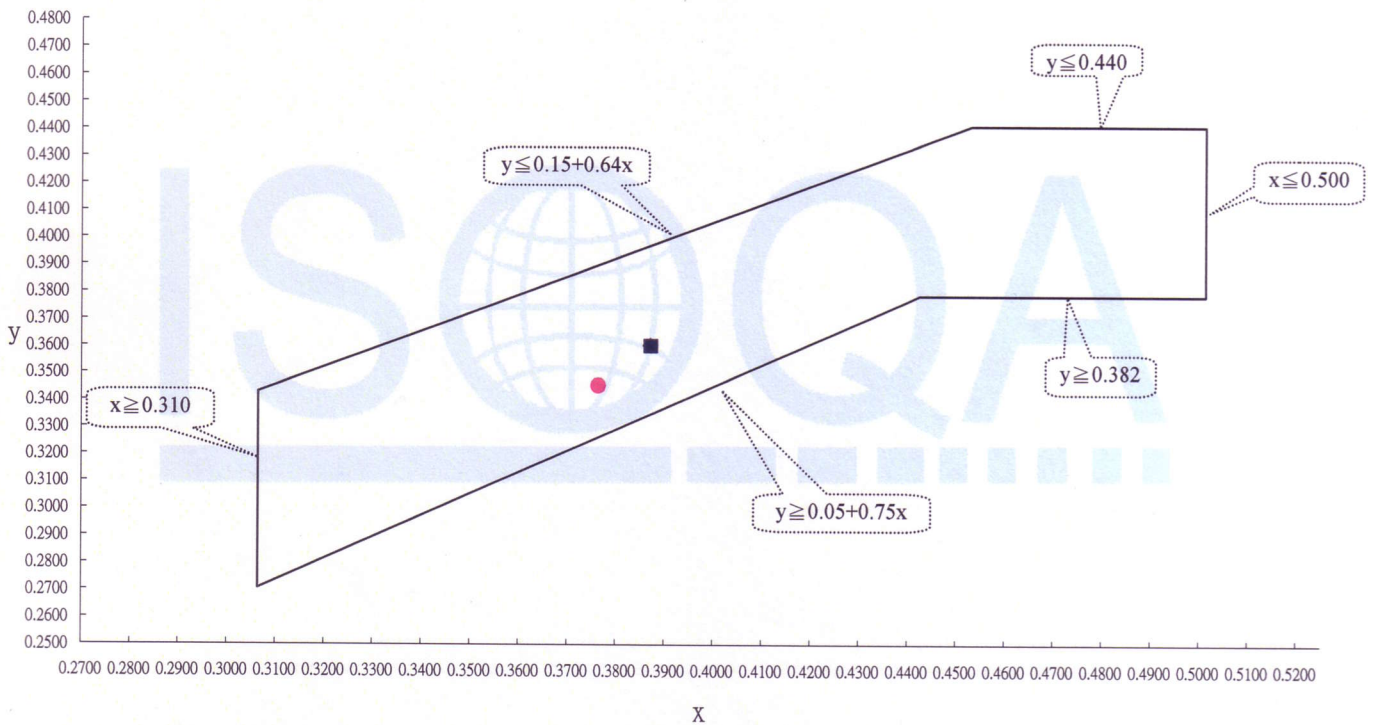
Signature



| colors of lights test record | | | | | |
|------------------------------|------------------------|-----------|-----------------------------|---------|------|
| Record No. | 07- 0257 | Reference | EAH182594 | 6/7/112 | 5028 |
| Requirement | ECE R7 Clause8 Annex 5 | Function | Front Position Lamp (Reg.7) | | |
| Subject | HU205-02-1 | Date | 3/8/2007 | | |

| Test point | Sample 1 | | Sample 2 | |
|------------|----------|--------|----------|--------|
| | x | y | x | y |
| HV | 0.3871 | 0.3604 | 0.3762 | 0.3456 |

■ sample 1 ● sample 2



- Limit towards blue : $x \geq 0.310$
- Limit towards yellow : $x \leq 0.500$
- Limit towards green : $y \leq 0.15 + 0.640x$
- Limit towards green : $y \leq 0.440$
- Limit towards purple : $y \geq 0.05 + 0.750x$
- Limit towards red : $y \geq 0.382$

White limit according to ECE Regulation

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photometric measurements test record

| | | | |
|-------------|---------------------------|-----------|---|
| Record No. | 07- 0257 | Reference | EAH182594 6/7/112 5028 |
| Requirement | ECE R112 Clause 6 Annex 4 | Function | Passing Beam (Reg.112) Driving Beam (Reg.112) |
| Subject | HU205-02-1 | Date | 3/8/2007 |

Right Hand Traffic

| Clause 6.2.5 | Test point | sample 1 | sample 2 | Required illumination in lux |
|--------------|------------|----------|----------|------------------------------|
| | B 50 L | 0.3 | 0.2 | ≤ 0.4 |
| | 75 R | 13.1 | 12.3 | ≥ 12 |
| | 75 L | 1.5 | 0.7 | ≥ 12 |
| | 50 L | 4.7 | 4.8 | ≥ 15 |
| | 50 R | 15.4 | 19.0 | ≥ 12 |
| | 50 V | 13.6 | 12.1 | ≥ 6 |
| | 25 L | 2.7 | 2.7 | ≥ 2 |
| | 25 R | 2.2 | 2.8 | ≥ 2 |
| | Zone III | 0.7 | 0.7 | ≥ 0.7 |
| | Zone IV | 4.1 | 3.9 | ≥ 3 |
| | Zone I | 18.8 | 17.8 | ≥ 30.7 |

| Clause 6.2.7 | Test point | Sample 1 | Sample 2 | Requirement |
|--------------|--------------------|----------|----------|-------------|
| | 4U-8L | 0.1 | 0.1 | |
| | 4U-V | 0.1 | 0.1 | |
| | 4U-8R | 0.1 | 0.1 | |
| | 2U-4L | 0.2 | 0.2 | |
| | 2U-V | 0.2 | 0.3 | |
| | 2U-4R | 0.2 | 0.2 | |
| | 0.1 ≤ H-8L | 0.2 | 0.2 | ≤ 0.7 |
| | 0.2 ≤ H-4L | 0.3 | 0.3 | ≤ 0.7 |
| | 0.3 ≤ point 1+2+3= | 0.4 | 0.3 | |
| | 0.6 ≤ point 4+5+6= | 0.6 | 0.6 | |

| Clause 6.3.2.1 | Sample 1 | Sample 2 | Min | Max |
|------------------|----------|----------|------|-----|
| E _{max} | 55.6 | 59.6 | 48 | 240 |
| H _V | 55.8 | 58.7 | 47.6 | |
| I _{max} | 34.8 | 37.2 | | |
| I _m | 11.6 | 12.4 | | |

| Clause 6.3.2.2 | Sample 1 | Sample 2 | Min | Max |
|-------------------|----------|----------|-----|-----|
| -2.25m ~ -1.125m | 13.8 | 13.5 | 6 | |
| -1.125m ~ +1.125m | 31.7 | 35.8 | 24 | |
| +1.125m ~ +2.25m | 16.1 | 14.7 | 6 | |

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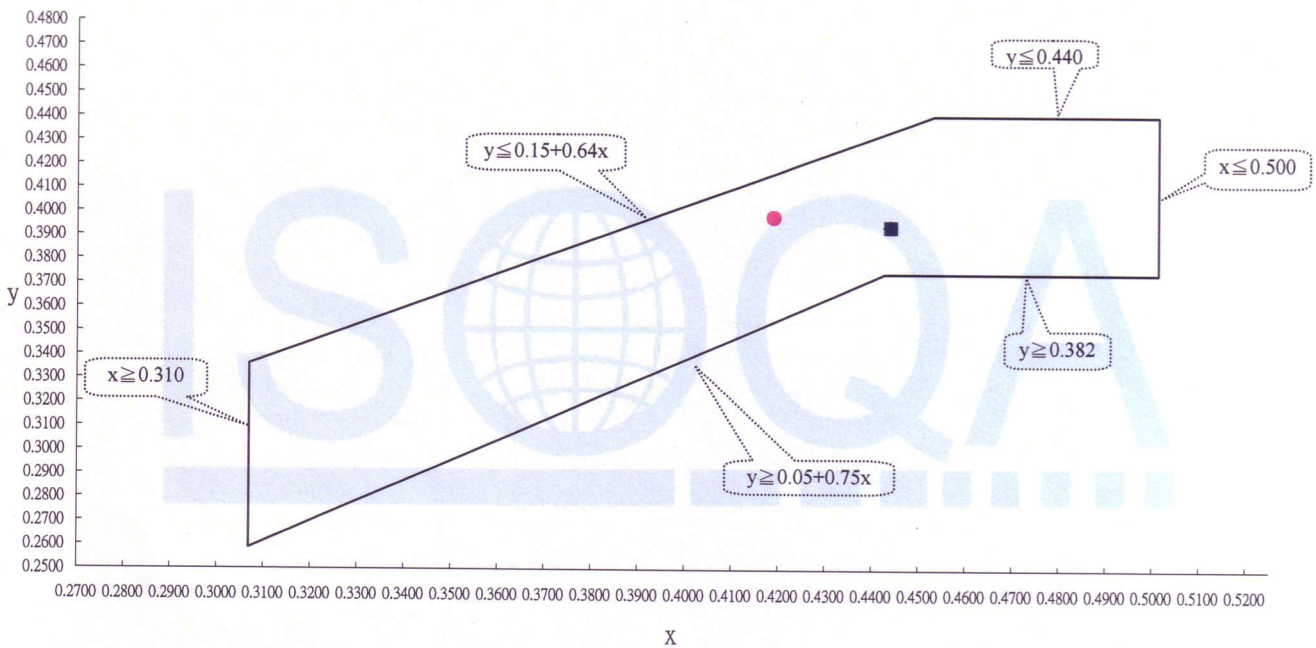
Signature Arthur Chang



| colors of lights test record | | | | |
|------------------------------|--------------------------|-----------|------------------------|------|
| Record No. | 07- 0257 | Reference | EAH182594 6/7/112 | 5028 |
| Requirement | ECE R112 Clause8 Annex 4 | Function | Passing Beam (Reg.112) | |
| Subject | HU205-02-1 | Date | 3/8/2007 | |

| | | | | |
|------------|--------|--------|--------|--------|
| Test point | x | y | x | y |
| HV | 0.4438 | 0.3942 | 0.4187 | 0.3981 |

- sample 1 ● sample 2
- sample 3 ● sample 4



- Limit towards blue : $x \geq 0.310$
- Limit towards yellow : $x \leq 0.500$
- Limit towards green : $y \leq 0.150 + 0.640x$
- Limit towards green : $y \leq 0.440$
- Limit towards purple : $y \geq 0.050 + 0.750x$
- Limit towards red : $y \geq 0.382$

White limit according to ECE Regulation

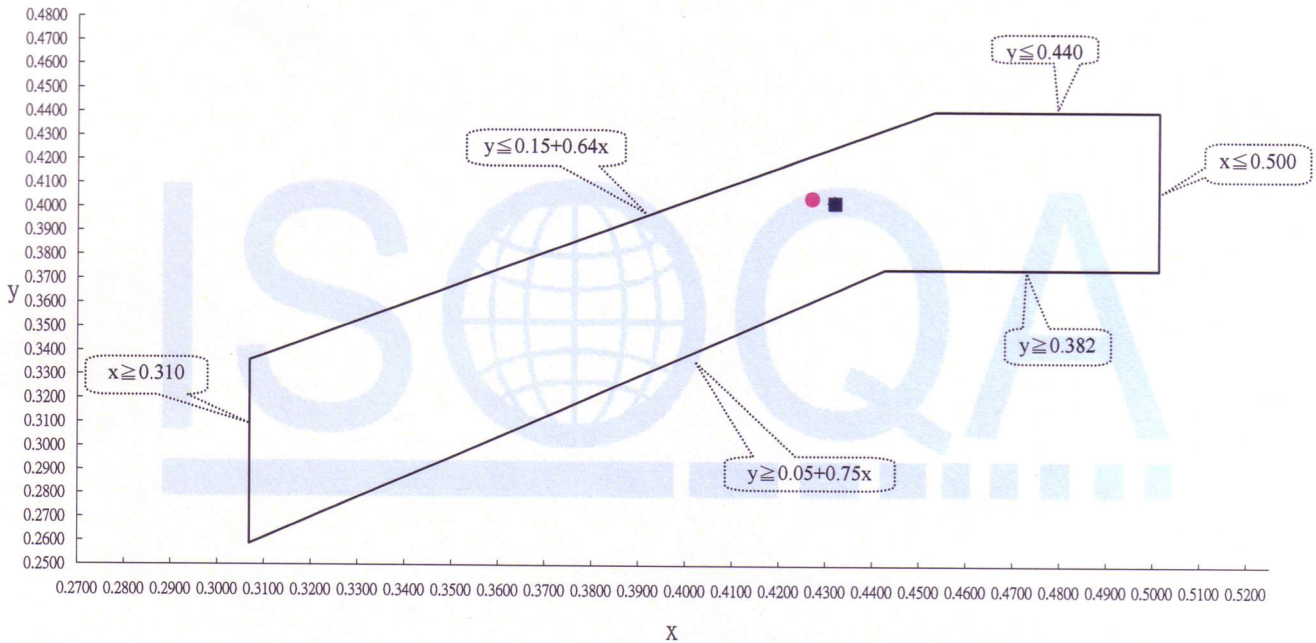


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 Approved by Arthur C. H. Chang Signature Arthur Chang

| colors of lights test record | | | | | |
|------------------------------|--------------------------|-----------|------------------------|---------|------|
| Record No. | 07-0257 | Reference | EAH182594 | 6/7/112 | 5028 |
| Requirement | ECE R112 Clause8 Annex 4 | Function | Driving Beam (Reg.112) | | |
| Subject | HU205-02-1 | Date | 3/8/2007 | | |

Test point x y x y
 HV 0.4318 0.4023 0.4269 0.4043

■ sample 1 ● sample 2
 ■ sample 3 ● sample 4



- Limit towards blue : $x \geq 0.310$
- Limit towards yellow : $x \leq 0.500$
- Limit towards green : $y \leq 0.150 + 0.640x$
- Limit towards green : $y \leq 0.440$
- Limit towards purple : $y \geq 0.050 + 0.750x$
- Limit towards red : $y \geq 0.382$

White limit according to ECE Regulation



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Chen

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Arthur Chang

Additional photometric measurements test record for adjustable reflector

| | | | |
|-------------|-----------------------|-----------|---|
| Record No. | 07- 0257 | Reference | EAH182594 6/7/112 5028 |
| Requirement | ECE R112 Clause 6.4.3 | Function | Passing Beam (Reg.112) Driving Beam (Reg.112) |
| Subject | HU205-02-1 | Date | 3/8/2007 |

Right Hand Traffic

Clause 6.4.3

Passing Beam

| Test point | Vertically +2° | | Test point | Vertically -2° | | Required illumination in lux |
|------------|----------------|----------|------------|----------------|----------|------------------------------|
| | sample 1 | sample 2 | | sample 1 | sample 2 | |
| HV | 0.66 | 0.69 | HV | 0.69 | 0.70 | ≤ 0.7 |
| 75R | 12.5 | 12.0 | 75R | 14.1 | 12.6 | ≥ 12 |

Driving Beam

| Test point | Vertically +2° | | Test point | Vertically -2° | | Required illumination in lux |
|------------------|----------------|----------|------------------|----------------|----------|------------------------------|
| | sample 1 | sample 2 | | sample 1 | sample 2 | |
| E _{max} | 55.5 | 59.1 | E _{max} | 56.0 | 59.1 | ≥ 48 |
| HV | 55.6 | 56.7 | HV | 55.5 | 57.3 | ≥ 44.8 |

Tested by Chnen

Signature Chen

Approved Arthur C. H. Chang

Signature Arthur Chang



Stability of Photometric Performance test record

| | | | |
|-------------|-----------------------------|-----------|---|
| Record No. | 07- 0257 | Reference | EAH182594 6/7/112 5028 |
| Requirement | ECE R112 Clause 5.7 Annex 5 | Function | Passing Beam (Reg.112) Driving Beam (Reg.112) |
| Subject | HU205-02-1 | Date | 21/8/2007 |

Clause 1 Stability Test for Right Hand Traffic

| Test sample | | | | | | | | | | | | |
|------------------|-------------------------------|---|------------------------------|---|-------------|---|------------------------------|---|-------------|---|-------------|-----|
| | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | | |
| Point | clean headlamp before burn in | | clean headlamp after burn in | | discrepancy | | dirty headlamp after burn in | | Discrepancy | | requirement | |
| E _{max} | 56.3 | - | 53.0 | - | 6% | - | 49.8 | - | 6% | - | ≤ | 10% |
| HV | 0.37 | - | 0.35 | - | 5% | - | 0.33 | - | 7% | - | ≤ | 10% |
| 50 R | 20.7 | - | 19.2 | - | 7% | - | 19.1 | - | 0% | - | ≤ | 10% |
| B 50 L | 0.17 | - | 0.16 | - | 7% | - | 0.15 | - | 5% | - | ≤ | 10% |

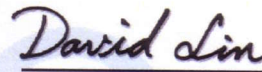
Clause 2 Change in vertical position of the CUT-OFF line under the influence of heat

| Point | Sample 1 | Sample 2 | Requirement |
|--|----------|----------|--|
| the absolute value $\Delta rI = r3-r6 $ is less than 1.0 mrad | OK | | When $1 \text{ mrad} < \Delta rI \leq 1.5 \text{ mrad}$ then the 2nd sample shall be tested. |

Tested by

David Lin

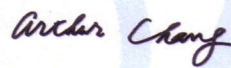
Signature



Approved by

Arthur C. H. Chang

Signature




The complete headlamp incorporating a lens of plastic material test record

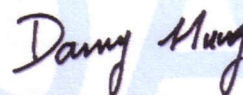
| | | | |
|-------------|-----------------------------|-----------|---|
| Record No. | 07- 0257 | Reference | EAH182594 6/7/112 5028 |
| Requirement | ECE R112 Clause 5.8 Annex 6 | Function | Passing Beam (Reg.112) Driving Beam (Reg.112) |
| Subject | HU205-02-1 | Date | 1/9/2007 |

| B. Tests on complete headlamps | | | |
|--|-------------------|---|--|
| Tests | Complete headlamp | | comments |
| | Sample No. | | |
| | 1 | 2 | |
| 2.1. Deterioration (para. 2.6.1.1.) The mixture shall be sprayed until the variation in the diffusion of light on the sample(s) measured by the method described in appendix 2, is such that: $\Delta d=(T5-T4)/T2=0.0250\pm 0.0025$ | X | | OK |
| 2.2. Photometry (para. 2.6.1.2.) The result shall not exceed by more than 30 per cent the maximum values at points B 50 R and HV and not be more than 10 per cent below the minimum values prescribed at point 75 L. | X | | B 50 L: $0.3075 \leq 0.52$ HV: $0.74 \leq 0.91$ 75R: $24.65 \geq 10.8$ |
| 2.3. Adherence (para. 2.6.2.) force adhesion: $2 \text{ N}/(\text{cm of width}) \pm 20$ per cent tape: at least 25mm wide; pressed for at least five minutes to the surface the tape shall be torn off at a constant speed of $1.5 \text{ m/s} \pm 0.2 \text{ m/s}$ the impaired area doesn't exceed 15 percent of the gridded surface | | X | OK (The impaired area is less than 15 percent of the gridded surface) |

Tested by

Danny Hong

Signature



Approved by

Arthur C. H. Chang

Signature

