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THE UNITED KINGDOM VEHICLE APPROVAL AUTHORITY

Rev 10/02



COMMUNICATION CONCERNING THE APPROVAL GRANTED OF A TYPE
OF DEVICE PURSUANT TO REGULATION NO 50
(*Motorcycle Lamps and Illuminating Devices*)

Approval No: 50R-001210

1. Trade name or mark of the device:

Trade Mark:

Trade Name: ST



2. Manufacturer's name for the type of device: ST-181LED

3. Manufacturer's name and address:

Yuan Jeou Industrial Company Limited
199, Alley 125
Lane 318
Sec. 2 An-Ho Road
Tainan City
Republic Of China

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

5. Submitted for approval on: 16 November 2005

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

7. Date of report issued by that service: 21 November 2005

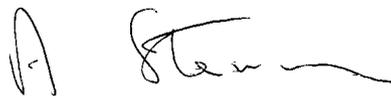
8. Number of report issued by that service: EAF071694



9. Concise description:
By category of lamp: 11 and 12

Colour of light emitted: Amber

Number and category of filament lamp(s): 14 x 12V LED, 2W for front and rear direction indicator

Geometrical conditions of installation and relating variations, if any: Not applicable
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: 10 JANUARY 2006
15. Signature:  A.W. STENNING
Head of Product Certification
16. The list of documents deposited with the Administrative Service which has granted approval is annexed to this communication and may be obtained on request.

EAF071694



**VCA REFERENCES**

Test Report Number **EAF071694**
 Number of Pages **3**
 Number of Annexes **3**

TEST DETAILS

Subject **Direction Indicator, details listed as Category**
 Specific Requirements **ECE Reg. 50.00**
 Duration **2005/11/16~17**
 Technical Service **Integrated Service of Quality Assessment
for Vehicle Certification Agency**
 VCA Representative **ARTHUR C H CHANG**
 Manufacturer's Representative **HAI-HIS CHAO**
 Reason for Test **Type of Approval**

MANUFACTURER DETAILS

Manufacturer's Name **YUAN JEOU INDUSTRIAL CO.,LTD.**
 Manufacturer's Address **199, Alley 125, Lane 318, Sec. 2 An-Ho Road, Tainan City,
Republic Of China**
 Premise of Manufacturing **Same As Above**
 Model Type & description **ST-181LED**
 Category **11 for Front Direction Indicator and
12 for Rear Direction Indicator.**

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: **21 November 2005****LIST OF ANNEXES**

| Annex | Total page | Subject | Reference |
|-------|------------|----------------------|-----------|
| 1 | 1 | Information document | |
| 2 | 3 | Drawing & PHOTO | ST-181LED |
| 3 | 2 | Test Record | 05- 0364 |
| | | | |



ECE REGULATION NO.50

| Item | Parameter | RESULTS | YES/NO |
|-----------|---|---------|------------|
| 6. | GENERAL SPECIFICATIONS | | |
| 6.1. | Each device shall conform to the specifications of the Regulation. | | YES |
| 6.2. | The devices must be so designed and constructed that in normal use, and despite the vibrations to which they may be subjected, their satisfactory operation continues to assured and they retain the characteristics prescribed by this Regulation. | | YES |
| 6.3. | Light source module | | |
| 6.3.1. | The design of the light source modules(s) shall be such that even in darkness the light source module(s) can be fitted in no other position, but the correct one. | | N/A |
| 6.3.2. | The light source module(s) shall be tamperproof. | | N/A |

| Item | Parameter | SAMPLE 1 | SAMPLE 2 | YES/NO |
|-----------|---|----------|----------|------------|
| 7. | INTENSITY OF LIGHT EMITTED | | | |
| | In the reference axis, the intensity of the emitted light of each of the two devices shall be at least equal to the minimum values and not exceed the maximum values of the following table. In no direction, the maximum values indicated shall be exceeded. | | | YES |

| | min.(cd) | Max.(cd) | |
|---|-----------|----------------------|---|
| | | Single lamp | a single lamp containing more than one light source |
| 7.1. Rear position lamp | 4 | 12 | 16.8 |
| 7.2. Front position lamp | 4 | 60 | 84 |
| 7.2.1 Front position lamps incorporated in the headlamp | 4 | 100 | 140 |
| 7.3. Stop lamp | 40 | 185 | 259 |
| 7.4. Direction Indicators | | | |
| 7.4.1. of the category 11 (see Annex 1) | 90 | 700 <u>2/</u> | 980 |
| 7.4.1.1. of the category 11a (see Annex 1) | 175 | 700 <u>3/</u> | 980 |
| 7.4.1.2. of the category 11b(see Annex 1) | 250 | 800 <u>3/</u> | 1120 |
| 7.4.1.3. of the category 11c(see Annex 1) | 400 | 860 <u>3/</u> | 1204 |
| 7.4.2. of the category 12 (see Annex 1) | 50 | 350 | 490 |

| | | | | |
|--------|--|--------------|--------------|------------|
| 7.5. | Outside of the reference axis and within the angle fields defined in the diagrams in Annex 1 to this Regulation, the intensity of the light emitted shall, 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 minima specified in Paragraph 5.7.1. to 7.4. above and of the percentage specified in the said table for the direction in question | 98.47 | 93.12 | YES |
| 7.5.1. | In the case of a single lamp containing more than one light source : (i) the lamp shall comply with the minimum intensity required when any one light source has failed, (ii) when all light sources are illuminated, the maximum intensity for an assembly of two lamps is given by multiplying by 1.4 the value prescribed for a single lamp is paragraphs 7.1. to 7.4.; (iii) all light sources which are connected in series are considered to be one light source. | 98.47 | 93.12 | YES |
| 7.6. | As an exception to Paragraph 7.1. above, a luminous intensity of 60 cd maximum shall be permitted for rear position lamps reciprocally incorporated with stop lamps, below a plane performing an angle of 5° with and downward from a horizontal plane. | | | N/A |
| 7.7. | Moreover, | | | |
| 7.7.1. | throughout the fields defined in Annex 1, the intensity of the light emitted shall be not less than 0.05 cd for position lamps And not less than 0.3 cd for stop lamps and direction indicators; | 0.52 | 0.35 | YES |
| 7.7.2. | If a position lamp is grouped or reciprocally incorporated with a stop lamp, the ratio between the luminous intensities actually measured of the two lamps when turned on simultaneously and the intensity of the rear position lamp when turned on alone shall be at least 5:1 to the eleven measuring points defined in Annex 4 and suited in the filed delimited by straight vertical lines passing through 0°V/±10°H and the straight horizontal lines passing through ±5°V/0°H of the light distribution table; If the rear position lamp or the stop lamp or both contain more than one light source and are considered as single lamps, as defined in paragraph 7.5.2. above, the values | | | |

Please See Record No.05-0364 Attached.





| | | | |
|-----------|--|---|------------|
| 7.7.3. | to be considered are those obtained with all light sources in operation. the provisions of Paragraph 2.2. of Annex 4 to this Regulation on local variations of intensity shall be observed. | | <u>N/A</u> |
| 7.8. | In general the intensities shall be measured with the light source(s) continuously alight. In the case of lamps intended to work intermittently, precaution shall be taken to avoid overheating of the device. 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 0.3 s, 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 8.1. shall be switched with a rise time and fall time shorter than 0.01 s; no overshoot is allowed. In the case of measurements taken in flashing mode the reported luminous intensity shall be represented by the maximum intensity. | | <u>N/A</u> |
| 7.9. | Annex 4, to which reference is made in Paragraph 7.5. above, gives particulars of the methods of measurement to be used. | | <u>YES</u> |
| 7.10. | The rear-registration-plate illuminating device shall comply with the specifications indicated in Annex 6 to this Regulation. | | <u>N/A</u> |
| 8. | TEST PROCEDURE | | |
| 8.1. | All measurements shall be carried out with an uncolored standard filament lamp of the category prescribed for the device, adjusted to produced the reference luminous flux prescribed for the filament lamp involved (See Regulation No. 37). All measurements on lamps with non-replaceable light sources shall be made at 6.75 V and 13.5 V respectively. | <u>LED made at 13.5V</u> | <u>YES</u> |
| 8.2. | The limits of the apparent surface in the direction of the reference axis of a light-signalling device shall be determined. | | <u>YES</u> |
| 9. | COLOUR OF LIGHT EMITTED | | |
| | Stop lamps and rear position lamps shall emit red light, front position lamps shall emit white light, direction indicators shall emit amber light. | <u>Please See Record No.05-0364 Attached.</u> | <u>YES</u> |
| | The colour of the light emitted inside the field of the light distribution grid defined at paragraph 2 of annex 4, measured using a light source having a colour temperature of 2856 K, <u>3/</u> shall be within the limits of the co-ordinates prescribed for the colour in question in annex 5 to this Regulation. Outside this field no sharp variation of colour shall be observed. However, for lamps equipped. However, for lamps equipped with non-replaceable light sources, the colorimetric characteristics should be verified with the light sources present in the lamps at a voltage of 6.75 V, 13.5 V or 28.0 V. | | <u>YES</u> |
| Footnotes | | | |
| <u>2/</u> | Applies only to the zone between the vertical lines through $V=0^\circ/H=\pm 5^\circ$ and two horizontal lines through $V=\pm 10^\circ/H=0^\circ$. For all other directions, a maximum of 400 cd is applicable. | | |
| <u>3/</u> | Corresponding to illuminant A of the Commission internationale de l'eclairage(CIE) | | |



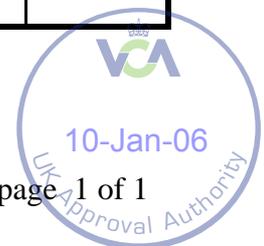
Yuan Jeou Industrial Co., Ltd.

沅久實業股份有限公司

Information Document

for Initial application to ECE Homologation
of Model Number ST-181LED

| items | Details | Initial | Extension- | 00 | Remark |
|-------|--|--|------------|----|--------|
| 1. | VCA | | | | |
| 1.1 | Job Number | EAF071694 | | | |
| 1.2 | Approval Number | 00 1210 | | | |
| 2. | Manufacturer | | | | |
| 2.1 | Name | Yuan Jeou Industrial Co., Ltd. | | | |
| 2.2 | Address | 199, Alley 125, lane 318, Sec. 2, An-Ho Road, Tainan City, Taiwan, Republic of China | | | |
| 2.3 | Trade name or mark | ST | | | |
| 3. | Product | | | | |
| 3.1 | Model Number | ST-181LED | | | |
| 3.2 | Intended functions | Charteristic | | | |
| 3.2.1 | Front & Rear Direction Indicator (R50) | Category | 11 & 12 | | |
| | | Bulb | LED 12V 2W | | |
| | | Color of light | Amber | | |
| | | Color of lens | Clear | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| 4. | Drawings | ST-181LED | | | |
| | | | | | |
| | | | | | |
| | | | | | |



Note: This drawing is applicable to the right hand side and the left hand side is symmetrical.

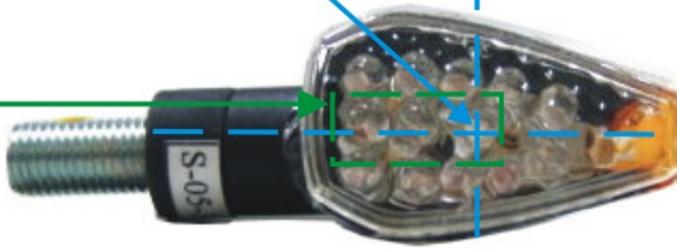
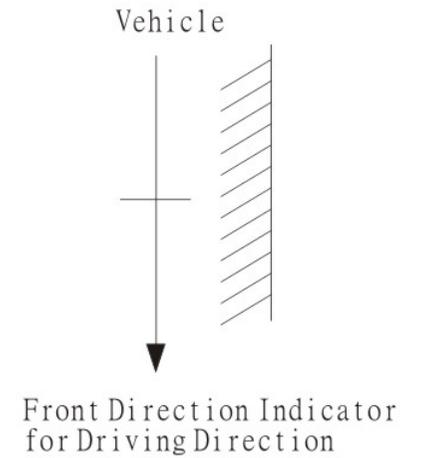
Axis of Reference
Front and Rear
Direction Indicator
Longitudinal Plane of Vehicle

Center of reference(LED)

12V 2W
11 12
E11
50R-001210
ST-181LED

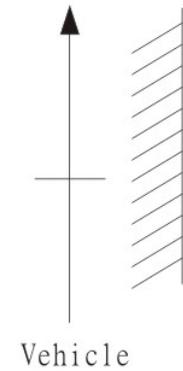


26 mm



26 mm

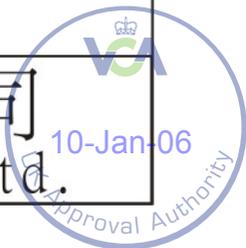
Rear Direction Indicator
for Driving Direction



88 mm

| | | | |
|-----------|----------------------------------|-------------|-----------|
| Model No. | ST-181LED | Drawing No. | ST-181LED |
| Function | Front & Rear Direction Indicator | | |

沅久實業股份有限公司
Yuan Jeou Industrial Co., Ltd.



YUAN JEOU INDUSTRIAL CO.,LTD.

ST-181LED Front & Rear Direction Indicator

Front View



Top View



Rear View



Side View



YUAN JEOU INDUSTRIAL CO.,LTD.

ST-181LED Front & Rear Direction Indicator

Shell View



Shell View



colors of lights test record

| | | | |
|-------------|-------------------------|-----------|--|
| Record No. | 05- 0364 | Reference | EAF071694 50 00 1210 |
| Requirement | ECE R50 Clause9 Annex 5 | Function | Front & Rear Direction Indicator (R50) |
| Subject | ST-181LED | Date | 16~17/11/2005 |

| Requirement | Measurement | | | Remark |
|---|-------------|------------------|-----------|--------|
| Amber color of light emitted | Test point | ST-181LED | | |
| Trichromatic Co-ordinates | | S1 | S2 | |
| limit toward red $y \geq 0.39$ | x= | 0.5934 | 0.5986 | ← |
| limit toward green $y \leq x-0.12$ | y= | 0.4061 | 0.4009 | ← |
| Limit towards white $y \geq 0.79-0.67x$ | = | T | T | |

Tested by Huijen Lai

Signature

Huijen Lai

Approved by Arthur C. H. Chang

Signature

Arthur Chang

