帝寶工業股份有限公司

DEPO AUTO PARTS INDUSTRIAL CO., LTD.

No. 20-3, Nanshi Ln., Tounan Vil., 505 – Lugang Township, Changhua County, Taiwan, R.O.C. TEL: 886-4-771-1578 FAX: 886-4-771-3891

APPLICATION FOR APPROVAL OF A TYPE OF HEADLAMP

ACCORDING TO ECE REGULATION NO. 112-00 SERIES OF AMENDMENTS

07-02 SERIES OF AMENDMENTS 06-01 SERIES OF AMENDMENTS 87-00 SERIES OF AMENDMENTS

1. Trade name or mark of the device : DEPO

2. Manufacturer's name of the device : 444-1183 R/L PMLDEM2

3. Manufacturer's name and address : DEPO AUTO PARTS INDUSTRIAL CO., LTD.

No. 20-3, Nanshi Ln., Tounan Vil.,

505 – Lugang Township, Changhua County,

Taiwan, R.O.C.

4. If applicable, name and address of

manufacturer's representative

: Not applicable

5. Category as described by the

relevant markings

HC/R PL, A_{\downarrow} , $1b_{\downarrow}$, RL

6. Submitted for approval on(date) : October 27, 2015

SIGNATURE:

Name: Chung-Neng Yang Homologation Team Leader

We herewith confirm that above mentioned application has not been submitted to any other EC/ECE-Member State nor has Member State granted a corresponding type approval.

This application is accompanied by:

The test report







THE NETHERLANDS







COMMUNICATION

Concerning (1)

- approval granted
- -approval extended
- -approval refused
- approval withdrawn
- production definitely discontinued

of a type of headlamp pursuant to Regulation number 112.

RDW

Approval number: E4-112R-0024528 Extension number: 00

1. Trade name or mark of the device : DEPO

2. Manufacturer's name for the type of : 444-1183 R/L PMLDEM2

device

3. : DEPO AUTO PARTS INDUSTRIAL CO., LTD. Manufacturer's name and address

No. 20-3, Nanshi Ln., Tounan Vil.,

505 - Lugang Township, Changhua County,

Taiwan, R.O.C.

4. If applicable, name and address of the : Not applicable

manufacturer's representative

5. Submitted for approval on : October 16 to 28, 2015

6. Technical service responsible for

conducting approval tests

: TÜV Rheinland Kraftfahrt GmbH

Technologiezentrum Verkehrssicherheit Typprüfstelle Fahrzeuge/Fahrzeugteile

Postfach 91 09 51

D-51105 Köln / Germany

7. Date of report issued by that service : November 10, 2015

8. Number of report issued by that : 84-R112-01316/15-00

service

9. Brief description:

> Category as described by the relevant : HC/R PL

marking (2)

P.O. Box 777 2700 AT Zoetermeer Tel. + 31 (0)79 345 83 02 E-mail ttv@rdw.nl www.rdw.nl

Vehicle Admission & Surveillance



The Netherlands

Approval number: E4-112R-0024528

Extension number: 00

Number and category(s) of filament lamp(s)

: Passing and Driving lamp: One H7 Driving lamp: One H7 (supplementary)

Measures according to paragraph 5.8 of this Regulation

: Not required

Number and specific identification

: Not applicable

code(s) of LED module(s)

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

: Not applicable

Total objective luminous flux as described in paragraph 5.9. exceeds : Yes/no/does not apply⁽¹⁾

2.000 lumen

The adjustment of the cut-off has been : 10m/25m/does not apply⁽¹⁾

determined at

The determination of the minimum sharpness of the "cut-off" has been

: 10m/25m/does not apply (1)

carried out at

10. Approval mark position : On the housing of the lamp

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

: Granted/extended/refused/withdrawn⁽¹⁾ 12. Approval

13. Place : Zoetermeer

: 17-NOV-2015 14. Date

15. Signature

Uwe Löbig

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

⁽¹⁾ Strike out what does not apply.

⁽²⁾ Indicate the appropriate marking selected from the list below:

C, R, R PL, CR, CR, CR, C/R, C/R, C/, C/, C PL, C PL, CR PL, CR PL, C/R PL, C/R PL, C/R PL, C PL, CR PL, C/PL, C/PL, C/PL, HC. HC. HC, HR. HR PL. HCR. HCR. HCR. HC/R. HC/R HC/R



Test Report No.: 84-R112-01316/15-00

Type 444-1183 R/L PMLDEM2

Manufacturer DEPO AUTO PARTS INDUSTRIAL CO., LTD.



TEST REPORT

according to ECE-Regulation

Uniform provisions concerning the approval of motor vehicle headlamps emitting an asymmetrical passing beam or a driving beam or both and equipped with filament lamps and/or light-emitting diode (LED) modules

No.: **ECE-R112**

including all amendments until

No.: 00 series of amendments, suppl. 12

Approval Status

ECE - approval E4-112R-0024528 Ext.00

Structure of report: 0. General information

1. Test object(s) and general test information

2. Test minutes

3. Remark concerning tested object(s)

4. Appendices

5. Statement of conformity

The Test Report shall be reproduced and published in full by the client only. It shall however be

reproduced partially with the written permission of the Testing Laboratory only.

Test Report No.: 84-R112-01316/15-00

Type : 444-1183 R/L PMLDEM2

Manufacturer : DEPO AUTO PARTS INDUSTRIAL CO., LTD.



0. General information

0.1. Trade mark or trade name of

the lamp

: DEPO

0.2. Manufacturer's name for the

type of the lamp

: 444-1183 R/L PMLDEM2

0.3. Name and address of the

manufacturer

: DEPO AUTO PARTS INDUSTRIAL CO., LTD.

No. 20-3, Nanshi Ln., Tounan Vil.,

505 - Lugang Township, Changhua County,

Taiwan, R.O.C.

0.4. Name and address of the

manufacturer's authorised

representative

: Not applicable

0.5. No. of information document

date of issue

date of last amendment

: 444-1183 R/L PMLDEM2-00

: October 27, 2015

: --



Test Report No.: 84-R112-01316/15-00

Type : 444-1183 R/L PMLDEM2





1. Test object(s) and general test information

1.1. Test object(s)

- Identification no. : Not applicable

- Model : 444-1183 R/L PMLDEM2

- Remark : Class B headlamp with/without principal passing lamp

for right hand side traffic only, incorporating a lens

made of plastic.

1.2. General test information

1.2.1 Order issued by : --

(if different from manufacturer)

1.2.2 Test object received on : --

1.2.3 Test date : October 16 to 28, 2015

1.2.4 Test site : Depo Auto Parts Ind. Co., Ltd., Hsin-Ying, Taiwan and

Zhifu Science Technologies Co., Ltd., He-Mei, Taiwan

1.2.5 Remark : The results of the test refer exclusively to the object(s)

mentioned under point 1.1. of this report.



Test Report No.: 84-R112-01316/15-00

Type : 444-1183 R/L PMLDEM2

Manufacturer : DEPO AUTO PARTS INDUSTRIAL CO., LTD.



2. Test minutes

2.1. Test facilities : The measurement equipment used was in compliance

with the test requirements.

2.2. Test results : The lamp type has been tested according to the

amendments mentioned in appendix 0.

2.2.1 Temperature : 25 °C

2.2.2 Markings : The trade mark is marked clearly legible and indelible

on housing of the lamp

Space for the approval mark and for the additional symbols is provided on the housing of the lamp. The

outer lens can not be separated from the housing.

2.3. General specifications : The headlamp is designed and made that, under normal

use, their satisfactory operation is ensured and they

retain the required characteristics.

The filament lamp(s) of the headlamp complies with the

requirements as described in paragraph 5.3.1.

The filament lamp(s) can be fixed in no position but the correct one. The filament lamp holder(s) conform to the characteristics given in IEC publication No. 60061.

The headlamp is not fitted with a device enabling the correct adjustment on the lamp as to comply with the requirements applicable to them. The adjustment system is provided by a device the lamp is fitted to.

The headlamp is designed to provide alternately a driving beam and a passing beam. The construction of the electromechanical device for switching one beam to the other complies with the requirements as described in paragraph 5.7.



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The headlamp is designed to meet the requirements of traffic moving on right side of the road only. The appropriate measures (refer to the information folder) are taken to prevent discomfort to users in a country where traffic moves on the side of the road opposite to that of the country for which the headlamp was designed.

Under the application of the measures, the following illuminations were measured and fulfilled.

| designed for right-hand side traffic | designed for left-hand side traffie | sample No. 1 (left) | sample No. 2 (right) | illumination required |
|--|---|------------------------|-------------------------|--------------------------|
| 0.86D-1.72L | 0.86D-1.72R | 18.2 | 23.4 | ≥ 3.0 |
| 0.57U-3.43R | 0.57U-3.43L | 0.97 | 0.27 | ≤ 1.0 |

2.4. Photometric tests

2.4.1 Passing beam

: Prior to the measurement, the headlamp has been adjusted according to paragraph 6.2.2. of the Regulation.

: The instrumental method of Annex 9, paragraphs 2. and 3. of the Regulation was not applied.

The passing beam produces an adequate illumination without dazzle.

No lateral variations detrimental to good visibility in any of the zones I, II, III and IV have been observed.

Illumination measured on the screen (refer to Annex 3 of the Regulation) by the passing beam by means of an uncoloured standard lamp producing the required light flux.



Test Report No.: 84-R112-01316/15-00







Results of photometric tests of the passing beam, class B

| illumination produced on the screen in lux | | | | |
|--|---------------------------|------------|------------|----------------------|
| right-hand side | left-hand side | sample No. | sample No. | illumination |
| traffic | traffic | 1 (left) | 2 (right) | required |
| B50L | B50R | 0.10 | 0.20 | ≤ 0.4 |
| 75R | 75L | 22.6 | 18.6 | ≥ 12.0 |
| 75L | 75R | 3.2 | 1.7 | ≤ 12.0 |
| 50L | 50R | 14.2 | 13.5 | $15.0 \ge x \ge 3.0$ |
| 50R | 50L | 17.5 | 16.8 | ≥ 12.0 |
| 50V | 50V | 22.4 | 20.2 | ≥ 6.0 |
| 25L | 25R | 5.9 | 6.5 | ≥ 2.0 |
| 25R | 25L | 5.2 | 4.8 | ≥ 2.0 |
| P-8 (H-4L) | P-8 (H-4R) | 0.21 | 0.31 | $0.7 \ge x \ge 0.2$ |
| P-7 (H-8L) | P-7 (H-8R) | 0.20 | 0.28 | $0.7 \ge x \ge 0.1$ |
| P-6 (2U-4R) | P-6 (2U-4R) | 0.24 | 0.23 | $0.7 \ge x_6$ |
| P-5 (2U-V) | P-5 (2U-V) | 0.22 | 0.26 | $0.7 \ge x_5$ |
| P-4 (2U-4L) | P-4 (2U-4L) | 0.20 | 0.21 | $0.7 \ge x_4$ |
| P-3 (4U-8R) | P-3 (4U-8R) | 0.11 | 0.12 | $0.7 \ge x_3$ |
| P-2 (4U-V) | P-2 (4U-V) | 0.14 | 0.11 | $0.7 \ge x_2$ |
| P-1 (4U-8L) | P-1 (4U-8L) | 0.10 | 0.13 | $0.7 \ge x_1$ |
| any point in zone III | | 0.69 | 0.68 | ≤ 0.7 |
| any point | any point in zone IV | | 7.1 | ≥ 3 |
| any point | in zone I | 12.2 | 18.3 | ≤ 2 E50R |

The photometric values of the points in zones A and B $(x_1 + x_2 + x_3 \ge 0.3 \text{ lux}) (x_4 + x_5 + x_6 \ge 0.6 \text{ lux})$ are within the required limits of paragraph 6.2.6. of the Regulation.



Test Report No.: 84-R112-01316/15-00

Type : 444-1183 R/L PMLDEM2

Manufacturer : DEPO AUTO PARTS INDUSTRIAL CO., LTD.



2.4.2 Driving beam

: The driving beam is provided by one/two light source(s) (filament).

The illumination measurements have been taken with the same alignment as for the passing beam. The driving beam is adjusted that the area of maximum illumination is centred on the point HV. Point HV was situated within the isolux 80% of E_M .

Illumination (in lux) obtained on the screen (refer to Annex 3 of the Regulation) by the driving beam by means of an uncoloured standard lamp producing the required light flux:

Results of photometric tests of the driving beam, class B

| illumination produced on the screen in lux | | | |
|---|------------|------------|-------------------------|
| | sample No. | sample No. | illumination |
| | 1 (left) | 2 (right) | required |
| maximum illumination $E_{\mathbf{M}}$ | 75.3 | 100.7 | $48 \le E_{M} \le 240$ |
| illumination at point of intersection (HV) of lines hh and vv | 62.5 | 92.3 | $\geq 0.8 \times E_{M}$ |
| $I'_{\mathbf{M}} = 0.208 \times E_{\mathbf{M}}$ | 15.7 | 20.9 | |
| rounded off to the reference mark of 17.5 | | | |
| minimum illumination of any point on hh at a distance from HV | | | |
| 1.125m | 27.7 | 43.4 | ≥ 24 |
| 2.250m | 16.1 | 10.6 | ≥ 6 |



Test Report No.: 84-R112-01316/15-00

Type : 444-1183 R/L PMLDEM2

Manufacturer : DEPO AUTO PARTS INDUSTRIAL CO., LTD.



2.5. Stability of photometric performance of headlamps in operation

2.5.1. Stability of photometric performance

2.5.1.1 Clean headlamp

: The lamp was operated 12 hours according to the applicable cycle as described in Annex 4 paragraph 1.1.1. of the Regulation.

The visual inspection after this test did not show any distortion, deformation, cracking or change in color of the headlamp lens.

| photometric test results (in lux) | | | | |
|-----------------------------------|---------|-------------|-----------------|---------------------------|
| points on screen | initial | end of test | difference in % | allowable difference in % |
| driving beam E _M | 99.4389 | 97.8643 | -1.58 | 10 |
| passing beam 50R | 16.67 | 16.37 | -1.80 | 10 |
| passing beam B50L | 0.183 | 0.180 | -1.64 | 10 |
| passing beam HV | 0.67 | 0.658 | -1.79 | 10 |

2.5.1.2 Dirty headlamp

: After preparation as prescribed in Annex 4 paragraph 1.2.1. of the Regulation, and confirmation that the illumination values have dropped to 15% to 20 % of the prior values, the headlamp was operated for 1 hour according to the applicable cycle as described in Annex 4 paragraph 1.1.1.

The visual inspection after this test did not show any distortion, deformation, cracking or change in color of the headlamp lens.

| Photometric test results (in lux) | | | | | |
|-----------------------------------|---------|-------------|-----------------|---------------------------|--|
| points on screen | initial | end of test | difference in % | allowable difference in % | |
| driving beam E _M | 99.4389 | 98.6457 | -0.80 | 10 | |
| passing beam 50R | 16.67 | 16.53 | -0.84 | 40 | |
| passing beam B50L | 0.183 | 0.182 | -0.55 | | |
| passing beam HV | 0.67 | 0.669 | -0.15 | TOE MAINTIENDRAI | |
| RDW | | | | | |

Test Report No.: 84-R112-01316/15-00







2.5.2 Change in vertical position of the cut-off line under the influence of heat

: Test result in accordance with paragraph 2 of Annex 4 of the Regulation in milliradians (mrad) (maximum deviation measurement):

| points on screen | sample no. | sample no. | maximum permissible |
|---------------------------------|------------|------------|------------------------|
| r ₃ | -10.12 | | |
| r ₆₀ | -9.95 | | |
| $\Delta r_1 = r_3 - r_{60} $ | 0.17 | | 1.0 |

2.6. Colour of light emitted

: The CIE trichromatic coordinates of the light emitted are within the limits in the paragraph 2.29. of the Regulation No. 48:

Passing lamp

50V: x = 0.394, y = 0.392

Driving lamp

H-V: x = 0.4358, y = 0.4064

2.7. Explanatory note

: This report describes the examination of the headlamp as

a part of a lamp device.

For the examination of the other lamp of the device,

refer to the following report:

Type of lamp Test Report No.

Front direction indicator
Front position lamp

B4-R6-01317/15-00

84-R7-01318/15-00

Daytime running lamp

84-R87-01319/15-00

2.8. Variants and components : Not applicable



Test Report No.: 84-R112-01316/15-00







2.9. Additional tests for adjustable : Not applicable reflectors

| photometric test results (in lux) | | | | |
|---------------------------------------|--------------------|--------------------|-------------------------|--|
| points on screen | vertically + 2° | vertically - 2° | required value | |
| driving beam E _M | 97.1 | 100.0 | $48 \le E_{M} \le 240$ | |
| driving beam HV | 88.6 | 95.8 | $\geq 0.8 \times E_{M}$ | |
| passing beam 75R / -75L | 19.3 | 20.7 | ≥ 12 | |
| passing beam HV | 0.67 | 0.69 | ≤ 0.7 | |

2.10. Lamps incorporating lenses of : plastic material

The lamp manufacturer proved that the product had already passed the tests prescribed in paragraphs 2.1.-2.5 of Annex 6 to this ECE-Regulation, or the equivalent tests pursuant to another Regulation.

With references to:

Approval No. : E4-112R-0011317 Test report No. : 84-R112-01779/07

Those tests need not to be repeated. Only the tests prescribed in appendix 1, table B were conducted.

2.10.1 Tests according to paragraph 2.6 of: The lens of sample No. 1 was conditioned in the complete lamp incorporating a accordance with the test described in paragraph 2.4.1. lens of plastic material

| photometric test results after conditioning (in lux) | | | | |
|--|-----------------------|-----------------------|--|--|
| point | illumination measured | illumination required | | |
| B50L | 0.20 | ≤ 0.52 | | |
| HV | 0.87 | ≤ 0.91 | | |
| 75R | 23.6 | ≥ 10.8 | | |

Test of adherence of coatings

: The sample No. 2 complies with the requirements mentioned paragraph 2.5.



Engineering Centre Shanghai Mas TÜV Rheinland (Shanghai) Co., Ltd. 112-No. 177, 179, 189, Lane 777, West Guangzhong Road, Shanghai, P.R. China

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Test Report No.: 84-R112-01316/15-00

Type 444-1183 R/L PMLDEM2

Manufacturer DEPO AUTO PARTS INDUSTRIAL CO., LTD.



3. Remark concerning tested object(s)

All versions of the lamp type as stated in the information document are covered with the tested lamp version(s) and test object(s) respectively.

4. Appendices

List of modifications 0

1 Information folder No. : 444-1183 R/L PMLDEM2-00 (2 pages) (excluding drawings)

5. Statement of conformity

The above mentioned information folder and the type described in that comply with the requirements mentioned on page 1.

Shanghai, 2015/11/10

KWU/JYW

Expert Technical Service

Join Wu



112-1316e15-00.rdw

Test Report No.: 84-R112-01316/15-00

444-1183 R/L PMLDEM2 **Type**

Manufacturer DEPO AUTO PARTS INDUSTRIAL CO., LTD.



List of modifications Appendix 0

> **Correction of** : --

> **Modification of**

Addition of

Deletion of



Application Type: 444-1183 R/L PMLDEM2 First Application Date: October 27, 2015

| Application regulation: | ECE-R112-00 (for right hand side traffic), ECE-R7-02, ECE-R6-01 (category | | |
|--------------------------------|---|--|--|
| | 1b), ECE-R87-00 | | |

1. Light Sources

| Function | Light Color | Rated Voltage | Rated Wattage | Category (ECE-R37) |
|------------------------------|-------------|---------------|---------------|----------------------------|
| Driving and Passing lamp | White | 12V | 55W | Н7 |
| Driving lamp (supplementary) | White | 12V | 55W | H7 |
| Front direction indicator | Amber | 12V | 21W | PY21W |
| Function | Light Color | Rated Voltage | Rated Wattage | Light Source Module |
| Front position lamp | White | 13.5V | 3.9 W | 3 LEDs x 2 |
| | | | | MD E4 0218997 |
| | | | | Non-Replaceable Light |
| | | | | Source |
| | | | | 1 LED |
| Function | Light Color | Rated Voltage | Rated Wattage | Light Source Module |
| Daytime running lamp | White | 13.5V | 13.8 W | 3 LEDs x 2 |
| | | | | MD E4 0018997 |

2. Construction and Material

| Construction | Material | Remark |
|---|----------------|---------------------------------|
| Outer lens | PC: GE LS2-111 | Coating: UV HC-3000, colourless |
| Inner lens (Driving and Passing lamp) | Glass | Colourless |
| Inner lens (Front direction indicator) | PC | Colourless |
| Light guide volume A (Front position lamp and Daytime running lamp) | PC | Colourless |
| Light guide volume B (Front position lamp and Daytime running lamp) | PC | Colourlss |
| Light guide volume E (Front position lamp) | PC | Colourless |
| Housing | Plastic | |
| Reflector (Driving and Passing lamp) | Metal | Aluminum vacuum coated |
| Reflector (supplementary Driving lamp) | Plastic | Aluminum vacuum coated |
| Reflector (Front direction indicator) | Plastic | Aluminum vacuum coated |
| Frame | Plastic | |

- 2.1. The front position lamp and daytime running lamp use an electronic light source control gear / variable intensity control
- 2.2. The application of an electronic light source control gear / variable intensity control: being part of the lamp / being not part of the lamp
- 2.3. Specification of the electronic light source control gear:
 - input voltage to the electronic light source control gear: 13.5V
 - input voltage supplied by the electronic light source control gear: 0.15A (fixed current for front position lamp), 0.68A (fixed current for daytime running lamp)

- 3. The front direction indicator and front position lamp are intended to be installed at a mounting height of equal to or less than 750 mm above the ground.
- 4. Measures according to paragraph 5.8.1. of R112: the principal passing lamp fulfills the requirements of the paragraph 5.8.2. of the Regulation without taking any measure.
- 5. The locations of the trade mark(s), the lamp designation mark(s) and the approval mark(s) are indicated in the following drawing(s) attached:

00\444-1183L1, 00\444-1183L2, 00\444-1183L3

- 6. The drawing number of the electrical related information: 00\444-1183L4
- 7. Name and address of manufacturer:

DEPO AUTO PARTS INDUSTRIAL CO., LTD.

No. 20-3, Nanshi Ln., Tounan Vil.,

505 – Lugang Township, Changhua County, Taiwan, R.O.C.

8. Name and address of representative of manufacturer:

Not applicable

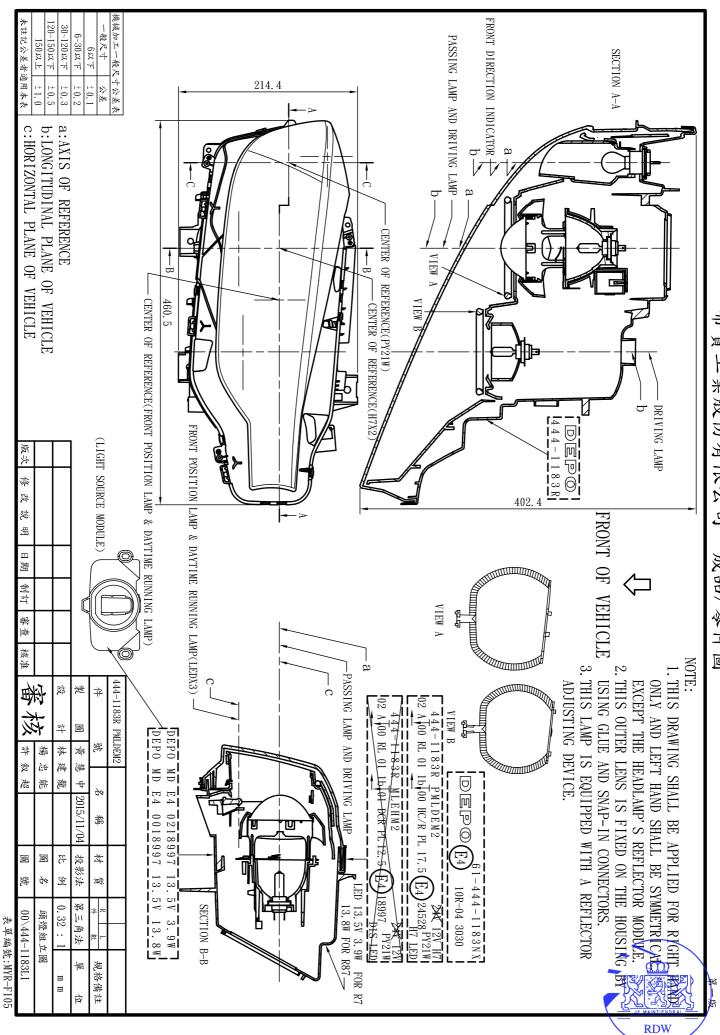
9. Remarks

Date: October 27, 2015 Place: Chang Hua

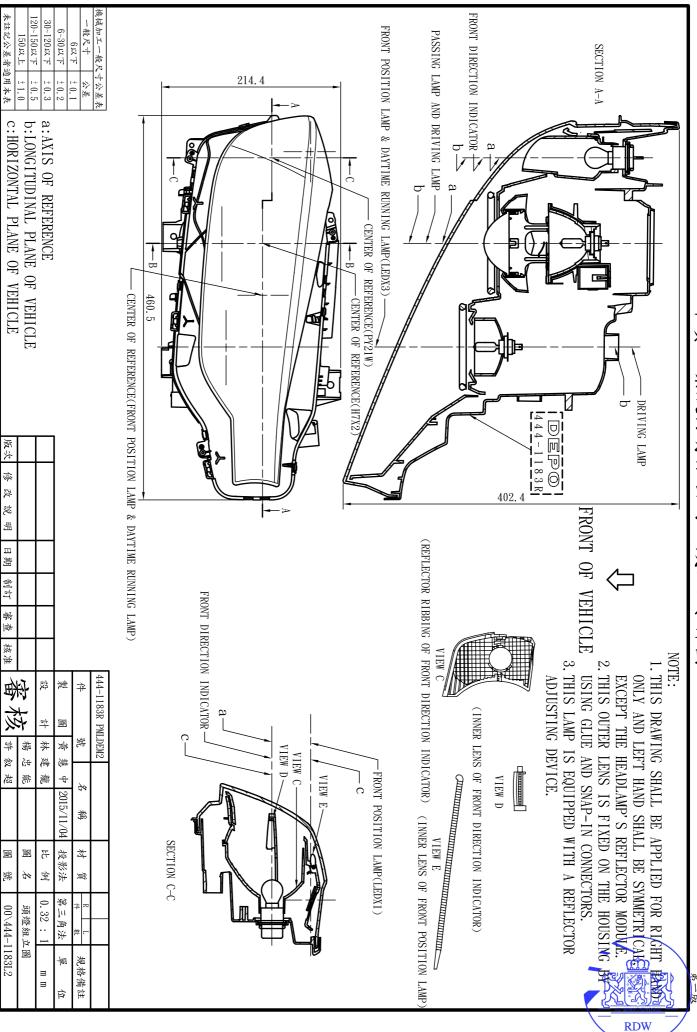
Person in charge: Chung-Neng Yang



工業股份有限公司 成品/ /零件圖

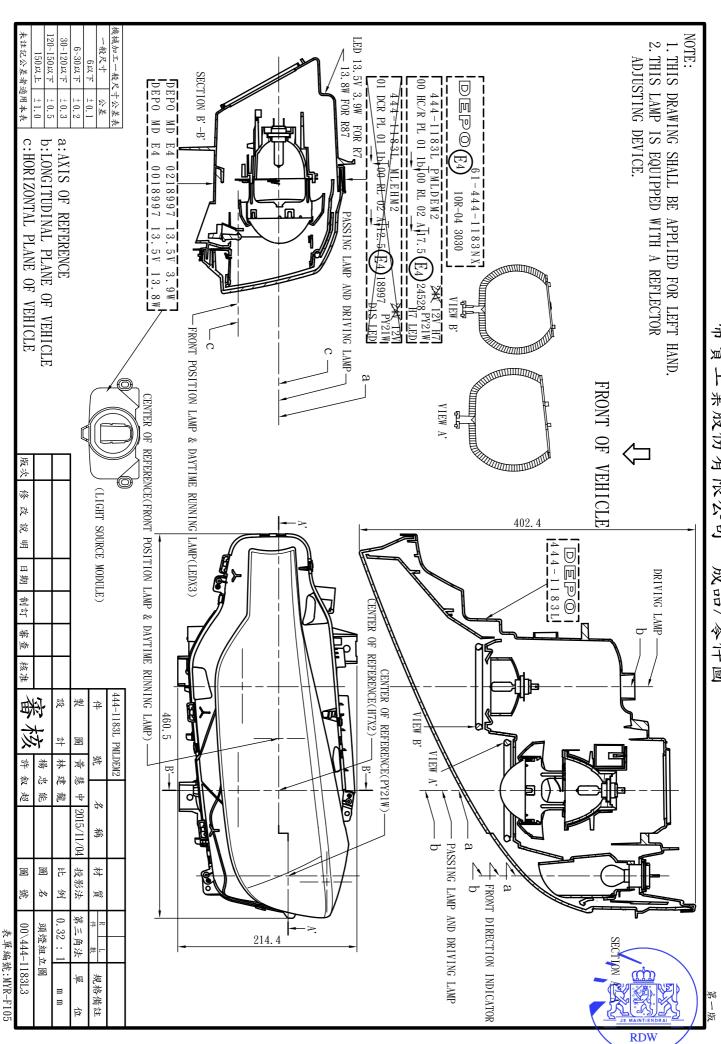


帝寶工業股份有限公司 成品/零件圖



表單編號:MYR-F105

强具 工業股份有限公司 成品/零件 回回



帝寶工業股份有限公司 成品/零件圖

RDW

