
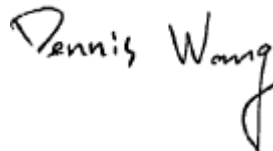


昱奕科技股份有限公司  
MICROLIGHT AUTO PARTS MFG. CO., LTD.  
123-2, PEI TOU VILLAGE, KWAN MIAO TOWN,  
TAINAN HSIEN, TAIWAN, R.O.C.  
TEL: 886-6-595-2441 FAX: 886-6-595-4663

APPLICATION FOR APPROVAL OF A TYPE OF LAMP  
ACCORDING TO ECE REGULATION NO. 03-02 SERIES OF AMENDMENTS

1. Trade name or mark of the device : 
2. Manufacturer's name of the device : M036E
3. Manufacturer's name and address : MICROLIGHT AUTO PARTS MFG. CO., LTD.  
123-2, Pei Tou Village, Kwan Miao Town,  
Tainan Hsien, Taiwan, R.O.C.
4. If applicable, name and address of manufacturer's representative : Not applicable
5. Category as described by the relevant markings : IA
6. Submitted for approval on(date) : August 27, 2007



Dennis Wang

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  
(N E D E R L A N D)**



**COMMUNICATION**

Concerning <sup>(1)</sup>

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- ~~- approval withdrawn~~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


of a type of retro reflecting device pursuant to Regulation number 3.

**Approval number: E4-3R-023302**

**Extension number: 00**

*Approval mark:*



1. Trade name or mark of the device : 
2. Manufacturer's name for the type of device : M036E
3. Manufacturer's name and address : MICROLIGHT AUTO PARTS MFG. CO., LTD.  
123-2, Pei Tou Village, Kwan Miao Town,  
Tainan Hsien, Taiwan, R.O.C.
4. If applicable, name and address of the manufacturer's representative : Not applicable
5. Submitted for approval on : August 27 to October 18, 2007
6. Technical service responsible for conducting approval tests : TÜV Rheinland Kraftfahrt GmbH  
Technologiezentrum Verkehrssicherheit  
Typprüfstelle Fahrzeuge/Fahrzeugteile  
Postfach 91 09 51  
D-51101 Köln / Germany
7. Date of test report : November 13, 2007



8. Number of test report : 84-R3-00201/07
9. Concise description :
- In isolation/part of an assembly of devices <sup>(1)</sup> : ~~Isolation/part of an assembly of devices~~
- Colour of light emitted : White/red/~~amber~~ <sup>(1)</sup>
- Installation as an integral part of a lamp which is integrated into the body of a vehicle : ~~Yes~~/no <sup>(1)</sup>
- Geometric conditions of installation and relating variations, if any : Refer to the drawing of the information folder
10. Position of the approval mark : On the outer lens of the lamp
11. Reason(s) for extension (if applicable) : Not applicable
12. Approval : Granted /~~extended~~ /~~refused~~ /~~withdrawn~~ <sup>(1)</sup>
13. Place : Zoetermeer
14. Date : 14-Nov-2007
15. Signature :



The image shows a handwritten signature in blue ink that reads "P. Berger". To the right of the signature is the official logo of the RDW (Rijksdienst voor het Verkeer en Waterweg). The logo consists of a circular emblem with a crown at the top, a shield in the center containing two lions, and the text "JE WAINTEENDRAT" and "RDW" below it.

**P. Berger**

16. The following documents, bearing the approval number shown above, are available on request: Application letter, test report, information folder and drawings.

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<sup>(1)</sup> Strike out what does not apply.

Type : M036E  
Manufacturer : MICROLIGHT AUTO PARTS MFG.  
CO., LTD.

## TEST REPORT

according to ECE-Regulation

### Uniform provisions concerning the approval of retro reflecting devices for power-driven vehicles and their trailers

No.: **ECE-R3**

including all amendments until

No.: **02 series of amendments, suppl. 10**

Previously granted	
ECE - approval	: --

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.

Type : M036E  
Manufacturer : MICROLIGHT AUTO PARTS MFG.  
CO., LTD.

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## 0. General information

- 0.1. Trade mark or trade name of the lamp : 
- 0.2. Manufacturer's name for the type of the lamp : M036E
- 0.3. Name and address of the manufacturer : MICROLIGHT AUTO PARTS MFG. CO., LTD.  
123-2, Pei Tou Village, Kwan Miao Town,  
Tainan Hsien, Taiwan, R.O.C.
- 0.4. Name and address of the manufacturer's authorised representative : Not applicable
- 0.5. No. of information document : M036E  
date of issue : August 27, 2007  
date of last amendment : --

Type : M036E  
Manufacturer : MICROLIGHT AUTO PARTS MFG.  
CO., LTD.

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## 1. Test object(s) and general test information

### 1.1. Test object(s)

- Identification no. : Not applicable
- Model : M036E
- Remark : - Front and Rear retro reflector class IA.  
- This lamp has four versions which differ in the colour of the outer lens and reflex:  
Version A: Red outer lens and red reflex  
Version B: Red outer lens and colour less reflex  
Version C: Colourless outer lens and red reflex  
Version D: Colourless outer lens and colourless reflex  
- Version A is selected as representative version for the type approval tests. The colourimetric tests of versions B, C and D are performed.

### 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 : August 27 to October 18, 2007
- 1.2.4 Test site : Tao-Yuan and Lu-Kang / Taiwan
- 1.2.5 Remark : The results of the test refer exclusively to the objects mentioned under point 1.1. of this report.

Type : M036E  
Manufacturer : MICROLIGHT AUTO PARTS MFG.  
CO., LTD.

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## 2. Test minutes

**2.1. Test facilities** : The measurement equipment used was in compliance with the test requirements.

**2.2. Test results** : ~~The retro reflector has been tested according to the amendments mentioned in Appendix 0. The photometric values were carried over from the basic report.~~

Markings : The trade mark is marked clearly legible and indelible on the outer lens and on the housing of the lamp.

Space for the approval mark and for the additional symbols is provided on the outer lens of the lamp.

**2.3. General specifications** : The retro reflector is designed and made that under normal use their satisfactory operation is ensured and they retain the required characteristics.

The components are not capable of being easily dismantled and the optical unit is not replaceable.

The test samples have been tested in the chronological order indicated in Annex 12 of the Regulation, and in accordance with the test procedure stated in Annex 4 of the Regulation. In case of differences in the test procedure or requirements stated in the Regulation, the evaluations are based on the most unfavourable conditions specified by either of the Annexes.

Type : M036E  
 Manufacturer : MICROLIGHT AUTO PARTS MFG. CO., LTD.

#### 2.4. Special tests

number of Annex	test	test samples	result of examination	remark
5	shape and dimensions	all	complying	
6	colorimetry	all	complying	
10	heat	all	complying	
7	photometry	all	complying	20', V=H=0°
7	photometry	c and f	see 2.5	complete
8	water penetr. motor fuels oils	d and h d and h d and h	complying complying complying	
4	colorimetry photometry	d and h d and h	complying complying	20', V=H=0°
8	corrosion abrasive - strength	-- --	-- --	not applicable*
9	stability of optical proper- ties with ageing	--	--	not examined
11	colour- fastness	--	--	not examined

\*Remark: The device does not incorporate any metal component and the rear face of the device is ~~not~~ watertight.



Type : M036E  
 Manufacturer : MICROLIGHT AUTO PARTS MFG.  
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## 2.5. Photometric tests

Coefficients of luminous intensity (CIL) in accordance with Annex 7 of the Regulation  
 Version A

distribution of the intensity of the retro reflector in [mcd/lux]								
		sample 1			sample 2			min.*
horizontal angle		L20°	V°	R20°	L20°	V°	R20°	
vertical angle $\alpha=20'$	U10°		717.0			738.0		200
	U5°	411.0		392.0	402.0		411.0	100
	H		866.0			925.0		300
	D5°	407.0		375.0	400.0		401.0	100
	D10°		689.0			720.0		200
vertical angle $\alpha=1^{\circ}30'$	U10°		11.1			10.3		2.8
	U5°	8.9		7.5	8.0		7.2	2.5
	H		20.3			20.2		5.0
	D5°	9.4		8.4	7.9		8.2	2.5
	D10°		13.3			12.4		2.8

\*Remark: Minimum requirements for red / ~~white~~ / ~~amber~~ retro reflector of class  
 IA / IIIA / IVA / IB / IIB.

2.6. Illuminating surface : Not applicable

2.7. Explanatory note : ~~This report describes the examination of the retro reflector 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.

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2.8. Variants and components : Versions A, B, C and D

Type : M036E  
Manufacturer : MICROLIGHT AUTO PARTS MFG.  
CO., LTD.

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### 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

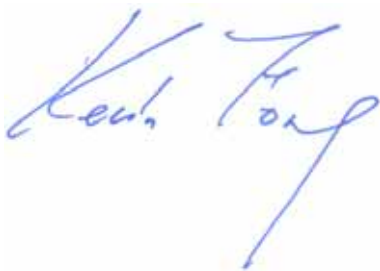
**0 List of modifications**

**1 Information folder No. : M036E (1 page)**  
**(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.

Cologne, November 13, 2007  
BL/KFO

A handwritten signature in blue ink, appearing to read 'Keh Fong'.

M.S.M.E. K. Fong



Type : M036E  
Manufacturer : MICROLIGHT AUTO PARTS MFG.  
CO., LTD.

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**List of modifications**

**Appendix 0**

**Correction of** : --

**Modification of** : --

**Addition of** : --

**Deletion of** : --

**Application Type: M036E****First Application Date: August 27, 2007**

<b>Application regulation:</b>	ECE-R3-02 (class IA)
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**1. Light Sources**

Function	Light Color	Rated Voltage	Rated Wattage	Category (ECE-R37)
Rear retro reflector (Versions A, B, C)	Red	N/A	N/A	N/A
Front retro reflector (Version D)	White	N/A	N/A	N/A

**2. Construction and Material**

Construction	Material	Remark
Outer lens	PC	Red (for Versions A, B) Colourless (for Versions C, D)
Reflex	PC	Red (for Versions A, C) Colourless (for Versions B, D)
Reflector 1	Plastic	Aluminum vacuum coating
Reflector 2	Plastic	Aluminum vacuum coating
Housing 1	Plastic	
Housing 2	Plastic	Aluminum vacuum coating
Bezel	Plastic	Optional part

**3. 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:**

M036E-1 ,M036E-2

**4. Name and address of manufacturer:**

MICROLIGHT AUTO PARTS MFG CO., LTD.

123-2, Pei Tou Village, Kwan Miao, Town, Tainan Hsien, Taiwan, R.O.C.

**5. Name and address of representative of manufacturer:**

Not applicable

**6. Remarks**

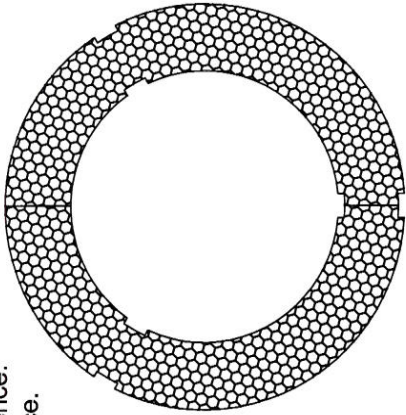
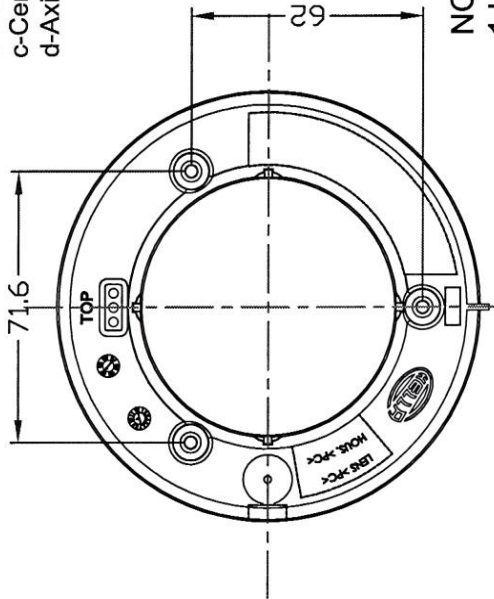
Date: August 27, 2007

Place: Tainan

Person in charge: Dennis Wang



This DRAWING shall be applied for left and right hand.  
 a-Longitudinal plane of Vehicle.  
 b-Horizontal plane of Vehicle.  
 c-Center of reference.  
 d-Axis of reference.

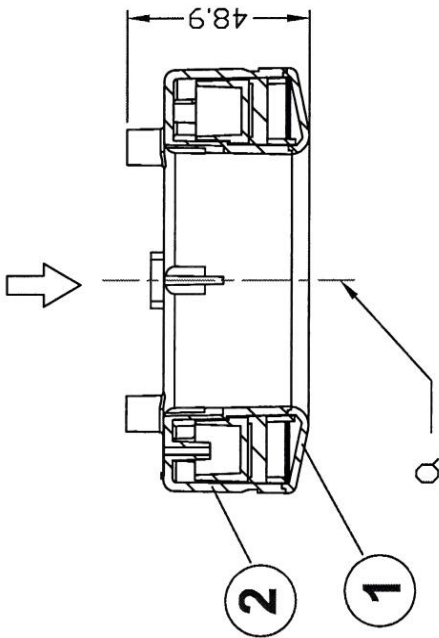


**REFLEX DESIGN**

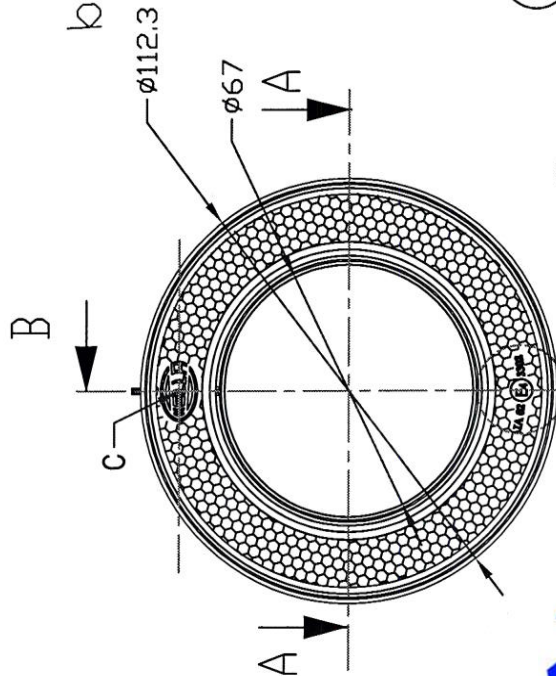
**NOTE:**

1. Lens is sonic welded to housing
2. This drawing is applicable to version A (red outer lens and red reflex), version B (red outer lens and colourless reflex) and version C (colourless outer lens and red reflex).

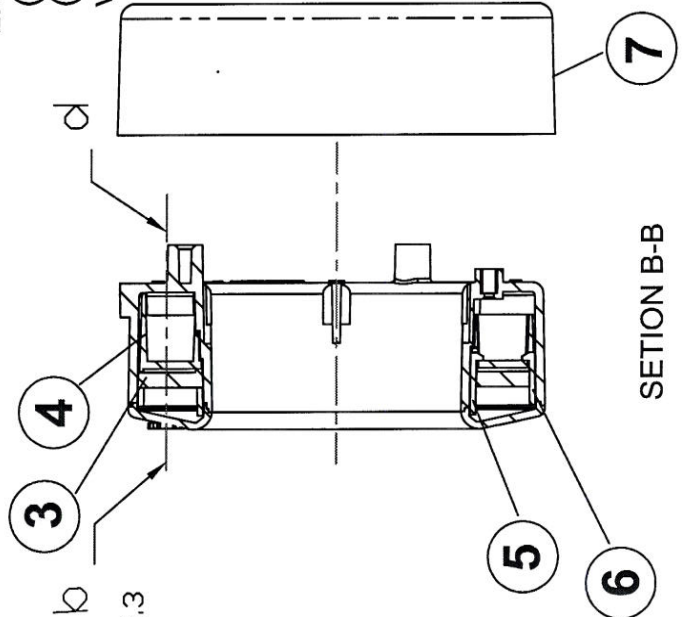
REAR OF VEHICLE



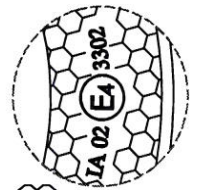
**SECTION A-A**



**BACK SIDE**



**SECTION B-B**

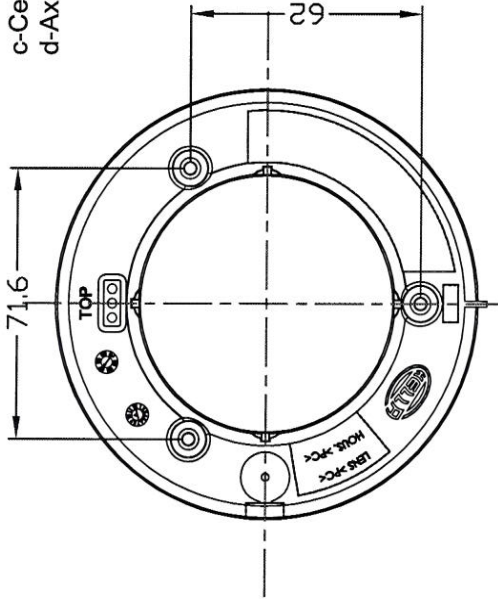


7	BEZEL(optional)
6	REFLECTOR 2
5	REFLECTOR 1
4	HOUSING 2
3	REVERSE REFLEX
2	HOUSING 1
1	LENS
NO	CONSTRUCTION
	MICROLIGHT
DWG	Dennis
DR	
APPR	
	TOL UNLESS SPECIED X=0.5 X'=0.02 X''=0.01
	SCALE 1:1
	UNIT ,MM
	DWG NO M036E-1

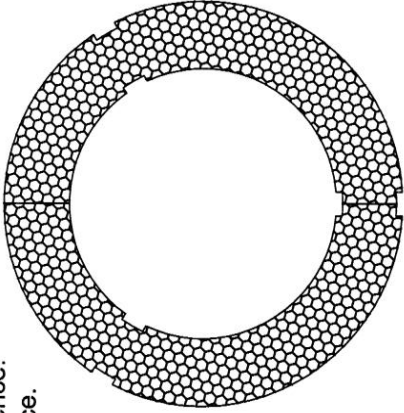




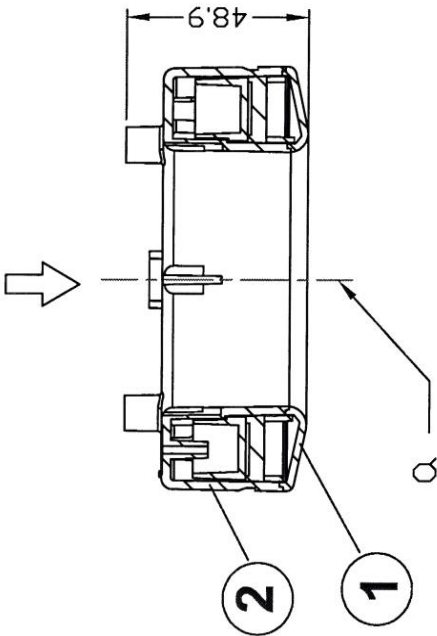
This DRAWING shall be applied for left and right hand.  
 a-Longitudinal plane of Vehicle.  
 b-Horizontal plane of Vehicle.  
 c-Center of reference.  
 d-Axis of reference.



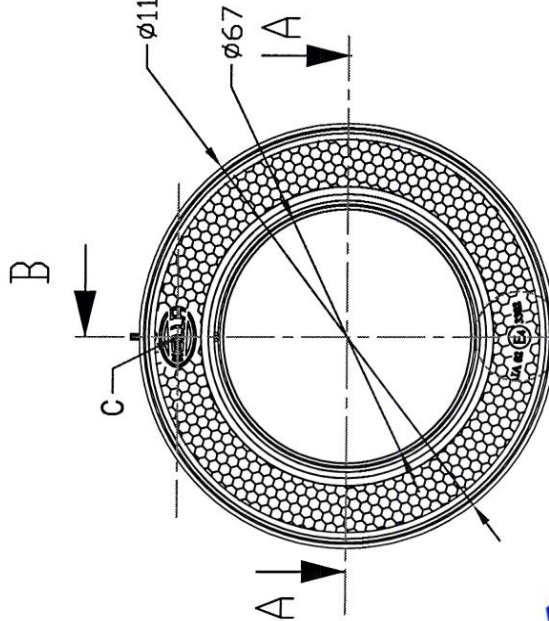
**REFLEX DESIGN**



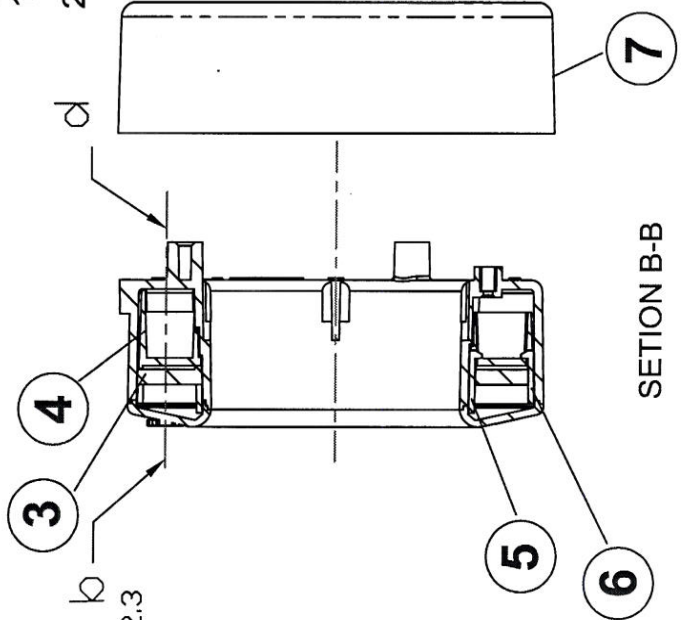
FRONT OF VEHICLE



SECTION A-A



BACK SIDE



NOTE:

1. Lens is sonic welded to housing
2. This drawing is applicable to version D (colourless outer lens and colourless reflex).

7	BEZEL(optional)
6	REFLECTOR 2
5	REFLECTOR 1
4	HOUSING 2
3	REVERSE REFLEX
2	HOUSING 1
1	LENS
NO	CONSTRUCTION
MICROLIGHT	TOL UNLESS SPECIED X=+0.5 XX=+0.2 XXX=+0.1
DWG	Dennis SCALE 1:1
DR	UNIT:MM
APPR	DWG NO M036E-2

