



JBM CAMPLLONG, S.L.
PRODUCTES D'AUTOMOCIÓ

CERTIFICADO R10

CONCEPTO: Certificado R10 para Equipación Eléctrica
Acción: FARO DE TRABAJO DE 16 LEDS 48W CUADRADO LUZ DISPERSA
Artículo nombrado por el fabricante: SW12272

Importado por: JBM CAMPLLONG, S.L.
Distribuido por: JBM CAMPLLONG, S.L.
Dirección: CIM La Selva – Ctra. Aeropuerto Km 1.6 Nave 2.2, 17185 Vilobí d'Onyar
CIF: B17419292

Referencia del distribuidor: 53045
Conformidad con la Regulación número 10.



JBM CAMPLLONG, S.L.
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THE NETHERLANDS
(N E D E R L A N D)

COMMUNICATION

Concerning ⁽¹⁾:

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- ~~approval withdrawn~~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

of a type of ~~electrical~~/electronic sub-assembly ⁽¹⁾ with regard to Regulation number 10.

Approval number: E4-10R-053626

Extension number: 00

1. Make (trade name of manufacturer) : SAE CNSAE SAEC
2. Type and general commercial description(s) : SW12272
LED work light
3. Means of identification of type, if marked on the ~~vehicle~~/component/
~~separate technical unit~~ ⁽¹⁾ : Letters and digits
- 3.1. Location of that marking : Moulded on the lens
4. Category of vehicle : All categories of vehicle
5. Name and address of manufacturer :

6. In the case of components and separate technical units, location and method of affixing of the approval mark : Moulded on the lens

7. Address(es) of assembly plant(s) :
8. Additional information (where applicable) : See Appendix
9. Technical service responsible for carrying out the tests : TÜV SÜD Auto Service GmbH
Westendstraße 199
D-80686 München
10. Date of test report : 2016-08-24
11. Number of test report : 16-00960-CX-SHA-00
12. Remarks (if any) : See Appendix
13. Place : Zoetermeer
14. Date : 01-SEP-2016
15. Signature :
16. The index to the information package lodged with the approval authority, which may be obtained on request, is attached.
17. Reasons for extension : N/A

⁽¹⁾ Strike out what does not apply.

APPENDIX

to type-approval communication form number: E4-10R-053626, Extension number: 00

concerning the type-approval of an ~~electrical~~/electronic sub-assembly⁽¹⁾ under Regulation number 10.

1. Additional information
 - 1.1. Electrical system rated voltage : DC 12V ... ~~pos~~/neg. ground⁽¹⁾
 - 1.2. This ESA can be used on any vehicle type with the following restrictions : No restrictions
 - 1.2.1. Installation conditions, if any : N/A
 - 1.3. This ESA can be used only on the following vehicle types : All categories of vehicle
 - 1.3.1. Installation conditions, if any : N/A
 - 1.4. The specific test method(s) used and the frequency ranges covered to determine immunity were : Measured by bulk current injection (20 MHz - 400 MHz) and in the anechoic chamber (400 MHz – 2 GHz) as described in annex 9 of ECE-Regulation No. 10 respectively annex IX of Directive 2009/19/EC
 - 1.5. Laboratory accredited to ISO 17025 and recognized by the Approval Authority responsible for carrying out the tests : EMC lab. Shanghai Inspection and Testing Institute of Instruments and Automatic Systems. Shanghai City, P.R. China
2. Remarks : N/A

⁽¹⁾ Strike out what does not apply.



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Manufacturer:

Type: SW12272

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TECHNICAL REPORT

No.: 16-00960-CX-SHA-00

Test of a type of a component

According to the Regulation of the Economic Commission for Europe relating to

Electromagnetic Compatibility

No.: ECE R10

Including all amendments up to

05 series

Approval status	
<input checked="" type="checkbox"/>	Granting of a type approval
<input type="checkbox"/>	Extension/correction to type approval no.: --



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Manufacturer:

Type: SW12272

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1. General

1.1. Make : SAE CNSAE SAEC

1.2. Type : SW12272

1.3. Variants : N/A

1.4. Commercial description(s) : LED work light

1.5. Category of vehicle : All categories of vehicle

1.6. Name and address of manufacturer :

1.7. Name and address of representative : N/A

1.8. Information document

No. : SW12272-00

Date of issue : 2016-07-30(YYYY-MM-DD)

Last date of amendment : N/A

1.9. Technical description of the component : See manufacturer's information document



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2. **Test record** : Refer to Annex 2

3. **Enclosure(s)**

Annex 1 List of modification

Annex 2 Test record

Annex 2a Measurement diagrams of the radio interference 30 MHz - 1 GHz

Annex 2b Immunity of ESA to conducted transient interferences

Annex 2c Conducted transients from ESAs to the vehicle power supply

Annex 2d Immunity of ESA to electromagnetic radiation-BCI

Annex 2e Immunity of ESA to electromagnetic radiation-Absorber chamber test

Annex 3 Information document

Technical Report No.: 16-00960-CX-SHA-00

Manufacturer:

Type: SW12272

4. Statement of conformity

The information folder as mentioned under No. 1.8. and the type described therein are in compliance with the test specification mentioned above. The worst-case was selected in accordance with document "Preparation of Test Reports".

The test report may be reproduced and published in full and by the client only. It can be reproduced partially with the written permission of the test laboratory only.

München, 2016-08-24
 (YYYY-MM-DD)



Joe Zhou
 Test Laboratory / DIN EN ISO 17025

Genehmigungsbehörde/ Approval authority	Land/Country	Registriernummer/ Registration-number	Aktueller Benennungsumfang/ Actual scope list
Kraftfahrt-Bundesamt (KBA)	Deutschland/ Germany	KBA-P 00100-10	www.kba.de
Vehicle Certification Agency (VCA)	Vereintes Königreich/ United Kingdom	VCA-TS-006	http://ec.europa.eu/enterprise/sectors/automotive/approval-authorities-technical-services/technical-services/index_en.htm
Approval Authority of the Netherlands (RDW)	Niederlande/ The Netherlands	RDWT-082-01	
National Standards Author- ity of Ireland (NSAI)	Irland/ Ireland	Technical Service Number: 49	
Vehicle Safety Certification Center (VSCC)	Taiwan/ Taiwan	DE04-06-2	http://www.vsc.org.tw/English/Default.aspx



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Annex 1

List of modification

Correction of : N/A

Modification of : N/A

Addition of : N/A

Deletion of : N/A

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Manufacturer:

Type: SW12272

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Annex 2

Test record

1. Technical data of the test component

Representative ESA : SW12272

Tested variant (if any) : N/A

2. Test conditions

2.1. Instrument : In accordance to the standard above

2.2. Ambient condition : In accordance to the standard above

2.3. Carrying out of the test

2.3.1. Broadband electromagnetic interference generated by ESA

2.3.1.1. Method of measurement : Measured by the method described in Annex 7 of ECE Regulation No. 10. respectively Measured by the method described in Annex VII of Directive 2009/19/EC.

2.3.1.2. Results : The measured values, expressed in dB μ V/m, are below the reference limits.

The test was passed.

2.3.2. Narrowband electromagnetic interference generated by ESA

2.3.2.1. Method of measurement : Measured by the method described in Annex 8 of ECE Regulation No. 10. respectively Measured by the method described in Annex VII of Directive 2009/19/EC.

2.3.2.2. Results : The measured values, expressed in dB μ V/m, are below the reference limits. The test was passed.

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2.3.3. Immunity of ESA to electromagnetic radiation

2.3.3.1. Method of measurement : Measured by bulk current injection (20 MHz - 400 MHz) and in the anechoic chamber (400 MHz – 2 GHz) as described in annex 9 of ECE-Regulation No. 10 respectively annex IX of Directive 2009/19/EC

2.3.3.2. Performance criteria : No degradation of function by testing with 60 mA (bulk current injection) and 30 V/m (anechoic chamber).

2.3.3.3. Results : The ESA has not exhibited any malfunction. The claimed functional state was fulfilled during the test. The test was passed

2.3.4. Immunity of ESA to conducted transient interferences

2.3.4.1. Method of measurement : Measured as described in Annex 10 of ECE Regulation No. 10. respectively
Measured as described in Annex X of Directive 2009/19/EC.

2.3.4.2. Results : The ESA has not exhibited any unacceptable malfunction. The claimed functional state was fulfilled during the test. The test was passed.

2.3.5. Conducted transient interferences generated by ESA

2.3.5.1. Method of measurement : Measured as described in Annex 10 of ECE Regulation No. 10. respectively
Measured as described in Annex X of Directive 2009/19/EC.

2.3.5.2. Results : The measured values are below the reference limits. The test was passed.

3. Test result

The results of the tests are attached in the diagrams of the enclosure.

4. Place and date of test

Place : EMC lab. Shanghai Inspection and Testing Institute of Instruments and Automatic Systems. Shanghai City, P.R. China

Date : 2016-08-03 to 2016-08-08 (YYYY-MM-DD)

Technical Report No.: 16-00960-CX-SHA-00

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Annex 2a Measurement diagrams of the radio interference 30 MHz - 1 GHz

Model(s): SW12272

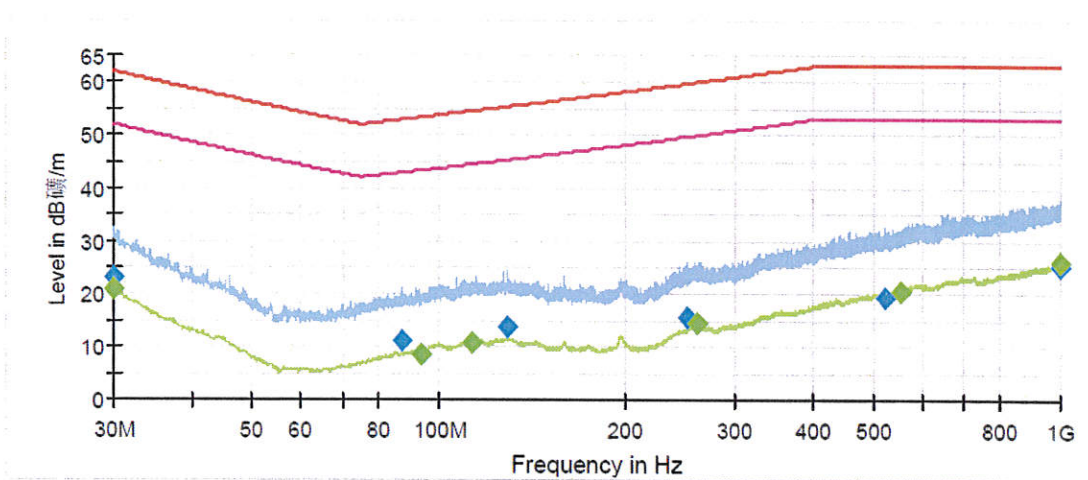
Date of test: 2016-08-03

Test Voltage: 12V DC

Test Mode: On

Test Result: Pass

Horizontal Polarity Test Result Diagram (Broadband and Narrow band)



Frequency (MHz)	QuasiPeak (dB/m)	Height (cm)	Polarization	Margin (dB)	Limit (dB/m)
30.180000	23.1	100.0	H	38.80	61.90
89.220000	14.1	100.0	H	39.00	53.00
116.700000	18.7	100.0	H	36.00	54.70
137.220000	29.8	100.0	H	25.90	55.70
549.540000	20.1	100.0	H	42.90	63.00
975.180000	25.3	100.0	H	37.70	63.00

Frequency (MHz)	Average (dB/m)	Height (cm)	Polarization	Margin (dB)	Limit (dB/m)
30.000000	21.0	100.0	H	31.00	52.00
90.840000	11.1	100.0	H	32.10	43.10
137.280000	22.8	100.0	H	22.80	45.70
259.980000	13.8	100.0	H	36.20	49.90
554.160000	21.0	100.0	H	32.00	53.00
999.960000	25.5	100.0	H	27.50	53.00

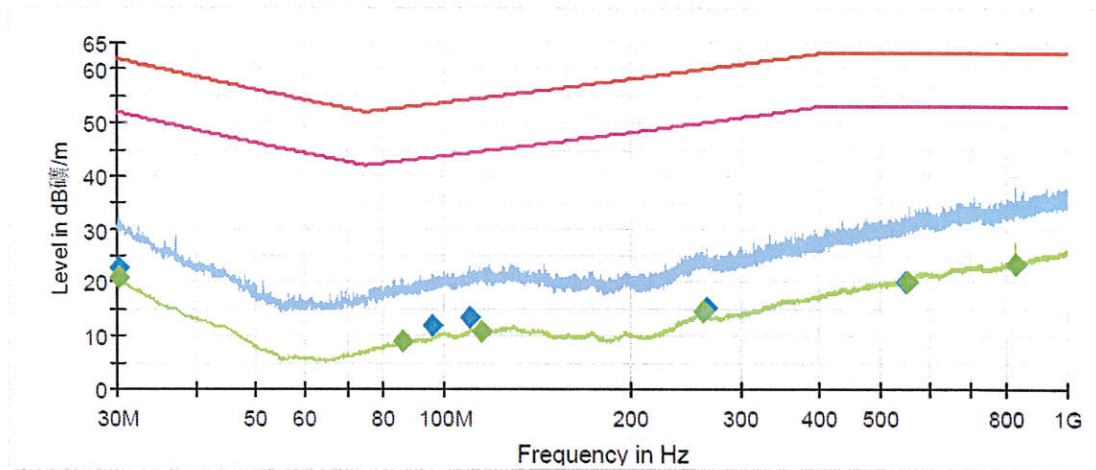
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Vertical Polarity Test Result Diagram (Broadband and Narrow band)



Frequency (MHz)	QuasiPeak (dB/m)	Height (cm)	Polarization	Margin (dB)	Limit (dB/m)
30.060000	23.3	100.0	V	38.70	62.00
85.920000	19.6	100.0	V	33.30	52.80
137.280000	24.1	100.0	V	31.60	55.70
291.780000	14.1	100.0	V	46.70	60.80
543.000000	19.7	100.0	V	43.30	63.00
993.840000	25.3	100.0	V	37.70	63.00

Frequency (MHz)	Average (dB/m)	Height (cm)	Polarization	Margin (dB)	Limit (dB/m)
30.120000	20.4	100.0	V	31.60	52.00
85.800000	14.7	100.0	V	28.10	42.80
137.460000	17.7	100.0	V	28.00	45.70
260.220000	14.9	100.0	V	35.10	49.90
555.420000	20.7	100.0	V	32.30	53.00
993.420000	25.8	100.0	V	27.20	53.00



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Annex 2b Immunity of ESA to conducted transient interferences

Model(s): SW12272

Date of test: 2016-08-08

Test Voltage: 12V DC

Test Mode: On

Test Result: Pass

Measurement result:

Test pulse	Test level	Number of pulse / test time	Burst cycle / pulse repetition time	Required minimum functional status (clause 2.5)	Status of function true value
1	-75V	5000 pulses	0.5 s	C	C
2a	+37V	5000 pulses	0.2 s	B	A
2b	+10V	10 pulses	0.5 s	C	C
3a	-112V	1 h	90 ms	A	A
3b	+75V	1 h	90 ms	A	A
4	-6V	1 pulse	/	B	B

Remark:

"A": all functions of EUT perform as designed during and after exposure to disturbance.

"B": all functions of EUT perform as designed during exposure. However, one or more of them can go beyond specified tolerance. All functions return automatically to within normal limits after exposure is removed. Memory functions shall remain class A.

"C": EUT power off during exposure but return automatically to normal operation after exposure is removed.



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Manufacturer:

Type: SW12272

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Annex 2c Conducted transients from ESAs to the vehicle power supply

Model(s): SW12272

Date of test: 2016-08-04

Test Voltage: 12V DC

Test Mode: On

Test Result: Pass

Measurement result:

Polarity of pulse amplitude	Maximum allowed value for vehicles with 12V systems (V)	Measured Pulse amplitude True value (V)
Positive	+75	+16.6
Negative	-100	-15.7



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Manufacturer:

Type: SW12272

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Annex 2d Immunity of ESA to electromagnetic radiation – BCI

Model(s): SW12272

Date of test: 2016-08-07

Test Voltage: 12V DC

Test Mode: On

Test Result: Pass

Measurement result: Power Level: 60mA

1 kHz sinusoidal signal with 80% AM modulation

Frequency range (MHz)	Functional status required	Functional status reached
> 20 to ≤ 80	A	A
> 80 to ≤ 200	A	A
> 200 to ≤ 400	A	A

Remark:

“A”: all functions of EUT perform as designed during and after exposure to disturbance.

“B”: all functions of EUT perform as designed during exposure. However, one or more of them can go beyond specified tolerance. All functions return automatically to within normal limits after exposure is removed. Memory functions shall remain class A.

“C”: EUT power off during exposure but return automatically to normal operation after exposure is removed



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Manufacturer:

Type: SW12272

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Annex 2e Immunity of ESA to electromagnetic radiation – Absorber chamber test

Model(s): SW12272

Date of test: 2016-08-07

Test Voltage: 12V DC

Test Mode: On

Test Result: Pass

Measurement result: Power Level 30V/m

400MHz-800MHz: 1kHz sinusoidal signal with 80% AM modulation

800MHz-2000MHz: 1kHz sinusoidal signal with PM modulation
t on: 577µs; Period: 4600µs

Frequency range (MHz)	Functional status required	Functional status reached
> 400 to ≤ 800	A	A
> 800 to ≤ 1000	A	A
> 1000 to ≤ 2000	A	A

Remark:

“A”: all functions of EUT perform as designed during and after exposure to disturbance.

“B”: all functions of EUT perform as designed during exposure. However, one or more of them can go beyond specified tolerance. All functions return automatically to within normal limits after exposure is removed. Memory functions shall remain class A.

“C”: EUT power off during exposure but return automatically to normal operation after exposure is removed

	Type: SW12272
	Information Document No. : SW12272-00
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APPLICATION FOR APPROVAL
PURSUANT TO THE ECE REGULATION No. 10.05
UNIFORM PROVISIONS CONCERNING THE APPROVAL
OF MOTOR VEHICLES WITH REGARD
TO ELECTROMAGNETIC COMPATIBILITY

Company name:

Type: SW12272

Foshan, 30 July, 2016

Name of responsible person



	Type: SW12272
	Information Document No. : SW12272-00
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List of documentation

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Information document	Page 4
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Drawings	Page 6-10
Bill of material	Page 11

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Confirmation

We hereby declare that the product of !
submitted for the type approval

type SW12272

1. is compatible with the enclosed documentation

and

2. has been manufactured under condition of mass production.

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	Information Document No. : SW12272-00
	Date: July.30.2016
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INFORMATION DOCUMENT FOR TYPE-APPROVAL OF AN ELECTRIC/ELECTRONIC SUB-
ASSEMBLY WITH RESPECT TO
ELECTROMAGNETIC COMPATIBILITY ACCORDING ANNEX 2B

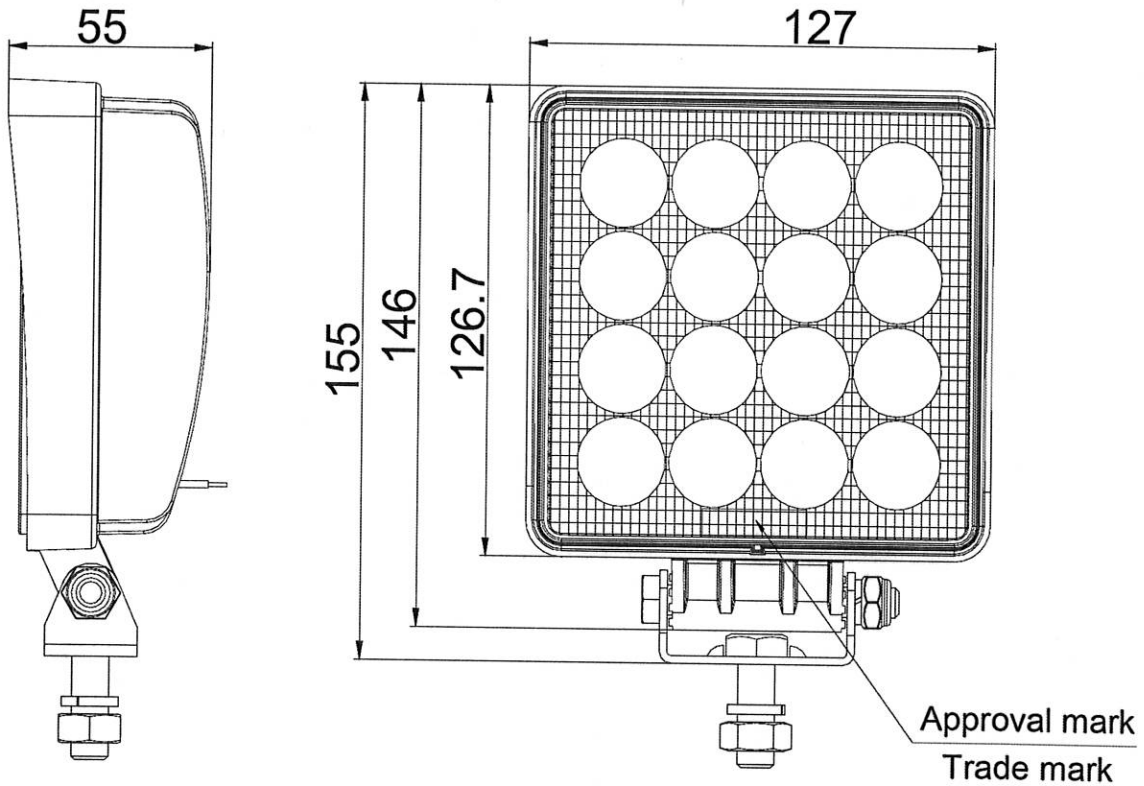
- | | | | |
|-----|--|---|---|
| 1 | Make (trade name of the manufacturer) | : | SAE CNSAE SAEC |
| 2 | Type | : | SW12272 |
| 2.1 | Variants (if applicable) | : | N/A |
| 2.2 | General commercial description(s) | : | LED work light |
| 2.3 | Category of vehicle | : | All categories of vehicle |
| 3 | Means of identification of type if marked on the vehicle/component/STU | : | Letters and digits |
| 3.1 | Location of that marking | : | Moulded on the lens |
| 4 | Name and address of the manufacturer | : | |
| 5 | In the case of components and separate technical units, location and method of affixing of the approval mark | : | Moulded on the lens |
| 6 | Address(es) of assembly plant(s) | : | |
| 7 | This ESA shall be approved as a | : | Component |
| 8 | Any restrictions of use and conditions for fitting | : | No restrictions |
| 9 | Electrical system rated voltage | : | DC 12V ... pos./ neg. ground (1) |
| 10 | Charger: on board/external | : | N/A |
| 11 | Charging current: DC /AC
(number of phases/frequency) | : | N/A |
| 12 | Maximal nominal current (in each mode if necessary) | : | N/A |
| 13 | Nominal charging voltage | : | N/A |
| 14 | Basic ESA interface functions: ex.
L1/L2/L3/N/PE/control pilot | : | N/A |
| 15 | Minimum Rsce value (see paragraph 7.11. of this Regulation) | : | N/A |
| 16 | Statement for model difference (if applicable) | : | N/A |

	Type: SW12272
	Information Document No. : SW12272-00
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List of attachments:

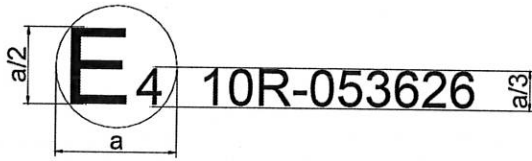
<i>Label Drawing</i>	<i>Drawing No.1</i>
<i>Assembly Drawing</i>	<i>Drawing No.2</i>
<i>Circuit Diagram</i>	<i>Drawing No.3-4</i>
<i>PCB Layout</i>	<i>Drawing No.5</i>
<i>Bill of materials</i>	<i>Consists of 1 pages</i>

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Approval mark

Trade mark



SAE CNSAE SAEC

a=6mm min

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DRW.2

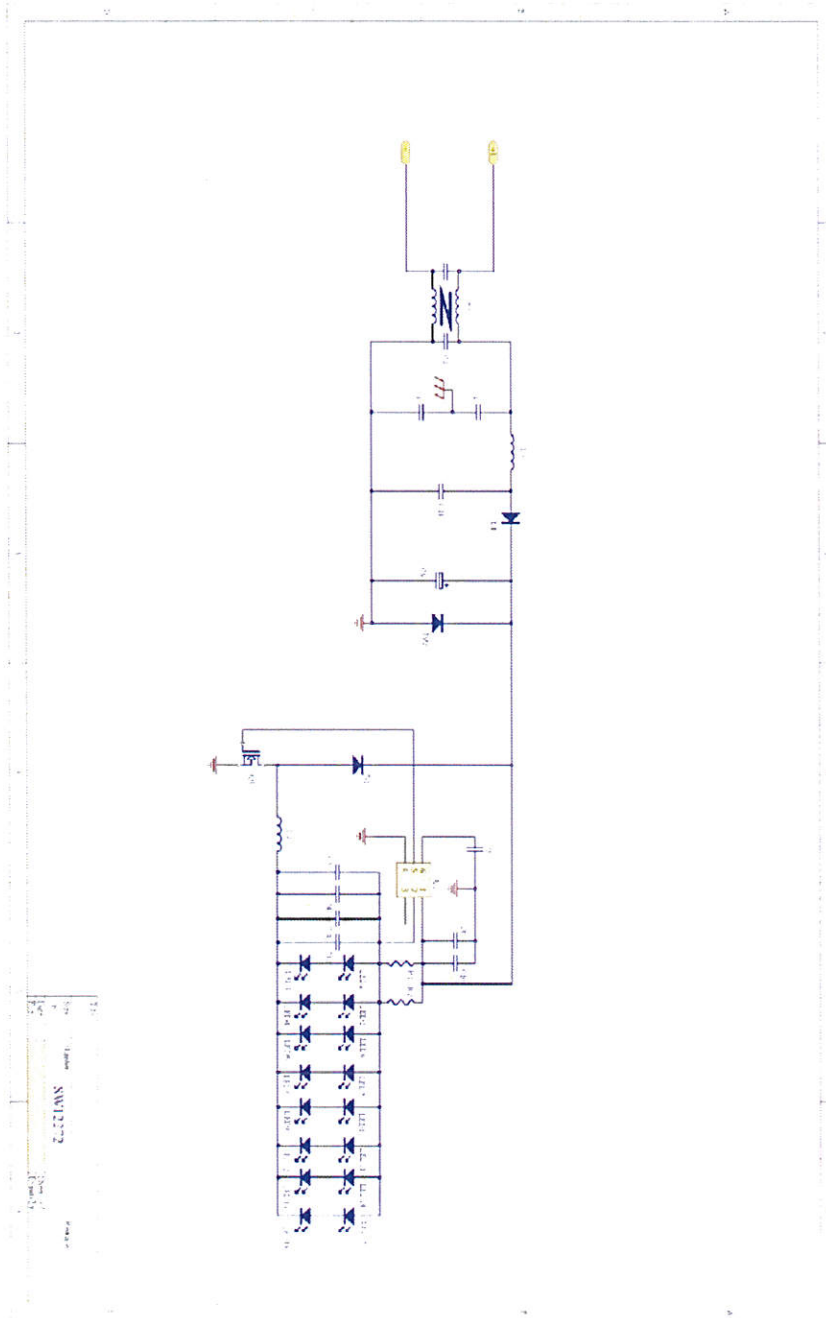
Assembly Drawing

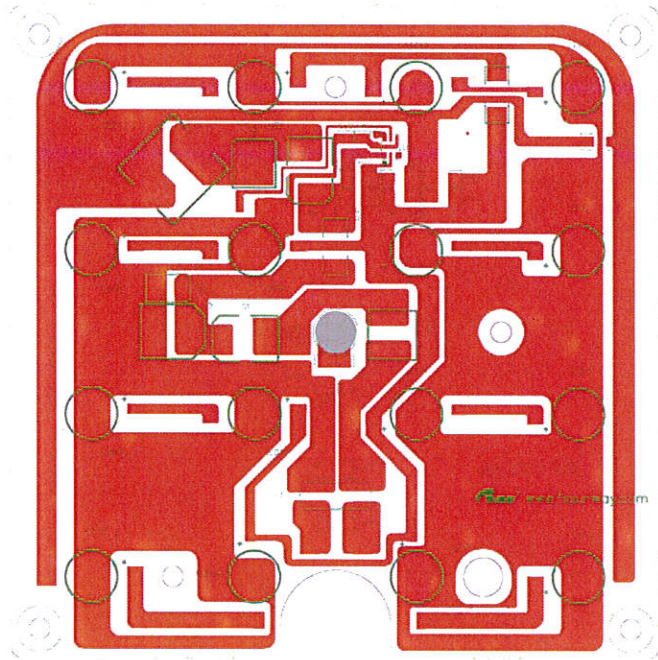
Type: SW12272

Information Document No. : SW12272-00

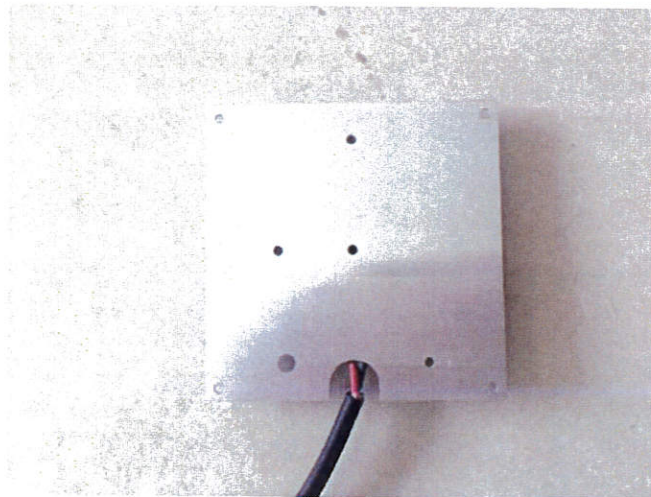
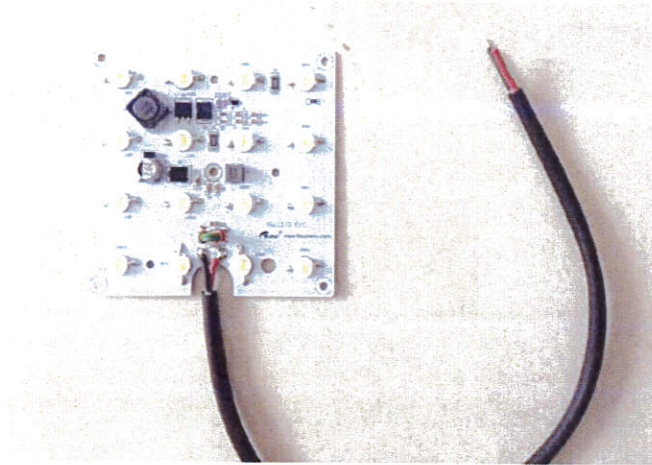
Date: July.30.2016

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DRW. 5

PCB Layout

Type: SW12272
Information Document No. : SW12272-00
Date: July.30.2016
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Bill of Material				
Item No.	Name	Position	QTY(PC)	Specification
1	Schottky diode	D1,D2	2	SS56 SMC
2	Integrated circuit	U1	1	PT4121 SOT--23-6
3	SMT power inductors	L1	1	22uH±20% molding choke 6.8mm×6.8mm×5mm(BWSL0603-220M)
4	SMT power inductors	L2	1	22uH 20% wire diameter:0.45mm×2 12mm×12mm×10mm
5	Common mode choke	L1	1	T9×5×3 upright 150uH 20% wire diameter:0.7mm
6	Field-effect tube	Q1	1	AOD482 TO-252
7	TVS	TVS	1	SMAJ36A SMA
8	Chip resistor	J3	1	0Ω 1% 1206
9	Chip resistor	J1,J2	2	0Ω 1% 2512
10	Chip resistor	R1	1	0.091Ω 1% 1206
11	Chip resistor	R2	1	0.1Ω 1% 1206
12	Chip ceramic capacitor	C7	1	6.8uF/16V(-40℃~125℃) 0603
13	Chip ceramic capacitor	C6	1	104/50V 10% 0805
14	Chip capacitor	C8,C9	2	103/200V 1206
15	Chip capacitor	C1-C4,C10-C13	8	10UF/50V 1206
16	SMD aluminum electrolytic capacitor	C5	1	100uF/50V 20% Φ8mm×10mm
17	Circuit board	SW12272	1	SW12272 aluminum substrate 100mm×100mm,thickness:1.0mm white oil, black silk-screen
18	LED guide plate (B)	LED1-LED16	16	Epistar 3Wwhite 5500-6500K
DRW.6			Bill of Material	

⁽¹⁾ Strike out what does not apply.