



No:SCC(15)-50108A-27-10-RoHS

TEST REPORT

NAME OF SAMPLE: LED WORK LIGHT

APPLICANT: Foshan Sunway Auto Electrical Co., Ltd.

ADDRESS: No.8 South Junye Road, Zone C, Shishan Scientific &
Technological Park, Nanhai District, Foshan City,
Guangdong Province, 528225,China


MANUFACTURER: Foshan Sunway Auto Electrical Co., Ltd.

ADDRESS: No.8 South Junye Road, Zone C, Shishan Scientific &
Technological Park, Nanhai District, Foshan City,
Guangdong Province, 528225,China

CLASSIFICATION OF TEST: Commission test

China Ceprei (Sichuan) Laboratory

Foshan Sunway Auto Electrical Co., Ltd.

INFORMATION OF SAMPLE	Name of sample	:LED WORK LIGHT	Produce date : Aug., 2015
	Trade mark	: SAE	
	Type/model	: LED WORK LIGHT	
	Name of factory	: Foshan Sunway Auto Electrical Co., Ltd.	
	Address of factory	:No.8 South Junye Road, Zone C, Shishan Scientific & Technological Park,Nanhai District, Foshan City, Guangdong Province,528225,China	
	Sampling at (place)	: /	
INFORMATION OF CLIENT	Commissioned by	: Foshan Sunway Auto Electrical Co., Ltd.	Coding of post : /
	Address of Commissioned	: No.8 South Junye Road, Zone C, Shishan Scientific & Technological Park,Nanhai District, Foshan City, Guangdong Province,528225,China	
	Sample Description	Whole Sample	
INFORMATION OF TEST	Classification of test	: Commissioned test	Number of application : SCC(15)-50108A-27-10-RoHS
	Attain sample	: Send by client	Sampling date: Aug. 12, 2015
	Test item	: European Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)	
RESULTS OF TEST	Results of test reference following pages.	 <p>Seal of china ceprei (si chuan) laboratory Date of issue: Aug. 18, 2015 It's invalidation without seal of china ceprei (si chuan) laboratory to copy test report</p>	
REMARK	<p>1. Sample status and characteristic before test: QC pass 2. Condition of test: (20~30) °C (40~60) %RH 3. Type/model: TPK series, TPB series</p>		

Approved by: *He Jins*

Tested by: *Jing Xingcan*

Reviewed by: *Guo Zhongming*

Test Purpose:	Testing of the Cadmium, Lead, Mercury, Chromium VI, Polybrominated biphenyls (PBBs) and Polybrominated diphenyl ethers (PBDEs) content according to Directive 2011/65/EU.
Test Method:	XRF Screening and (or) Wet Chemistry Test – Reference to IEC 62321:2008, “Electrotechnical Products – Determination of Levels of Six Regulated Substances” <ul style="list-style-type: none">● Cadmium, Lead and Mercury with reference to USEPA 3052/3050B, by acid digestion and determined by ICP-AES/AAS. 铅、汞、镉参考 USEPA 3052/3050B● Chromium(VI) with reference to USEPA 3060a/7196A, determined by UV-VIS.● Polybrominated biphenyls and Polybrominated diphenyl ethers with reference to USEPA 3540C/EPA8260B, by solvent extraction and determined by GC/MS.

Wet Chemical Test Procedure: (for Cd/Pb content)	A. <ul style="list-style-type: none">● Weighted sample was put into a microwave digestion vessel.● Add concentrated nitric acid.● Sample was digested in microwave digestion oven. The digested solution was transferred into a volumetric flask.● Made up with deionized water.● Analyzed by ICP-OES or AAS. B. <ul style="list-style-type: none">● Weighted sample was put into round flask with reflux.● Add concentrated nitric acid, heat on hotplate and reflux, repeat until digestion is complete.● Add 30% H₂O₂ until the tested sample was totally dissolved.● The digested solution was transferred into a volumetric flask.● Made up with deionized water.● Analyzed by ICP-OES or AAS.
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Notes:

- Total chromium and bromine are determined by XRF, positive results are confirmed by wet chemical tests.
- Positive indicates the presence of Hexavalent Chromium on the tested areas and result be regarded as no comply with RoHS requirement. Negative indicates the absence of CrVI on the tested areas and result be regarded as comply with RoHS requirement.
- By Judgment of the European court exemption on DecaBDE (2005/717/EC) will be annulled by July 1st 2008.
- For Chromium VI of a metal composite sample by wetchemistry, each individual metal component was tested.
- RoHS' limits reference to EU directive (2005/618/EC)
- The verification testing applies on the full product as final check or verification. The purpose is to quickly verify the RoHS status of the sample. When detecting failures, it is advised to go back to the technical file and communicate with the suppliers and production for potential problem.
- Only selected example(s) is/are indicated on the following photograph(s)
- Refer to Annex for List of Exempted Specific Applications in RoHS Directive

i) The testing approach reference to

“RoHS Enforcement Guidance Document version 1” by EU RoHS Enforcement Authorities Informal Network (May 2006).

“RoHS substance (Hg, Pb, Cr(VI), Cd, PBB and PBDE) in electrical and electronic equipment in Belgium” by Belgium Federal Public Service, Health, Food Chain Safety and environment, Belgium (Nov 2005)

Limits of Restriction of Hazardous Substances Directive (RoHS), 2011/65/EU:

Elements	RoHS' Limits (mg/kg)
Pb	1000
Hg	1000
Cd	100
CrVI	1000
PBBs	1000
PBDEs	1000

1. SUMMARY OF TEST RESULT/检测结果:

TEST REQUESTED	PASS	FAIL
European Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) 有关欧盟委员会针对电子产品的指令（电子电器禁用某些有害物质指令）， 2011/65/EU	<input checked="" type="checkbox"/>	

2. Picture of Testing Model(s)/测试材料照片:



3. TEST RESULT

Restriction of Hazardous Substances Directive (RoHS), 2011/65/EU, Verification Tests

Test Item	Description	Part No.	Test Parameter [mg/kg]					Result
			Pb	Hg	Cd/	Cr	Br	
1	SW12266 面罩硬化 Lens hardening	/	<100	<100	<50	<100	<100	Pass
2	SW12266 灯杯镀膜 Reflector coating	/	<100	<100	<50	<100	<100	Pass
3	SW12266 灯杯镀膜 Reflector coating	/	<100	<100	<50	<100	<100	Pass
4	SW12266 灯杯盖 housing	/	<100	<100	<50	<100	<100	Pass
5	SW12266-B 后壳喷粉 housing powder injection/M10 线孔 thread hole	/	<100	<100	<50	<100	<100	Pass
6	SW12266 灯珠定位块 bulb positioning block injection	/	<100	<100	<50	<100	<100	Pass
7	SW12266 侧盖右喷粉 Right side housing powder injection	/	<100	<100	<50	<100	<100	Pass
8	SW12266 侧盖左喷粉 left side housing powder injection	/	<100	<100	<50	<100	<100	Pass
9	SW12266-EMC 电路板组件 Circuit board components	/	<100	<100	<50	<100	<100	Pass
10	0.75mm ² 红色硅胶线 Red silicone line 20CM	/	<100	<100	<50	<100	<100	Pass
11	0.75mm ² 黑色硅胶线 Black silicone line 20CM	/	<100	<100	<50	<100	<100	Pass
12	0.75mm ² 双心黑红硅胶线 black and red silicone line 500MM 36# 黑皮 black skin	/	<100	<100	<50	<100	<100	Pass
13	SW12266-1 框架喷粉 Framework powder injection	/	<100	<100	<50	<100	<100	Pass
14	SW12217 防水接头 Waterproof connectors	/	<100	<100	<50	<100	<100	Pass
15	德国连接器胶塞 German connector rubber plug	/	<100	<100	<50	<100	<100	Pass

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16	M3X22 元机白锌 machine white zinc	/	<100	<100	<50	<100	<100	Pass
17	M4X12 内六角 inner hexagonal	/	<100	<100	<50	<100	<100	Pass
18	M4 平垫 Flat mat	/	<100	<100	<50	<100	<100	Pass
19	M4 弹垫 Spring washer	/	<100	<100	<50	<100	<100	Pass
20	M3X12 内六角 inner hexagonal	/	<100	<100	<50	<100	<100	Pass
21	M3 平垫 Flat mat	/	<100	<100	<50	<100	<100	Pass
22	M4*8 内六角 inner hexagonal	/	<100	<100	<50	<100	<100	Pass
23	SW12266-EMC 电路板 Circuit board	/	<100	<100	<50	<100	<100	Pass
24	二极管 diode	/	<100	<100	<50	<100	<100	Pass
25	IC	/	<100	<100	<50	<100	<100	Pass
26	场效应管 field-effect tube	/	<100	<100	<50	<100	<100	Pass
27	贴片三极管 SMD TRANSISTOR	/	<100	<100	<50	<100	<100	Pass
28	功率贴片电感 power SMD inductance	/	<100	<100	<50	<100	<100	Pass
29	功率贴片电感 power SMD inductance	/	<100	<100	<50	<100	<100	Pass
30	共模电感 common mode choke	/	<100	<100	<50	<100	<100	Pass
31	瞬间抑制二极管 Instant suppression diode	/	<100	<100	<50	<100	<100	Pass
32	贴片电阻 SMD resistor 0Ω 1206 1% (风华)	/	<100	<100	<50	<100	<100	Pass
33	贴片电阻 SMD resistor 0.04Ω 1% 2512 (旺诠)	/	<100	<100	<50	<100	<100	Pass
34	贴片电阻 SMD resistor 0.15Ω 1% 1206 (旺诠)	/	<100	<100	<50	<100	<100	Pass

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35	贴片电阻 SMD resistor 10K Ω 1% 0603 (旺诠)	/	<100	<100	<50	<100	<100	Pass
36	贴片电阻 SMD resistor 73.2K Ω 1% 0603 (旺诠)	/	<100	<100	<50	<100	<100	Pass
37	贴片电阻 SMD resistor 374K Ω 1% 1206 (旺诠)	/	<100	<100	<50	<100	<100	Pass
38	贴片电阻 SMD resistor 35.7K Ω 1% 0603 (旺诠)	/	<100	<100	<50	<100	<100	Pass
39	贴片电阻 SMD resistor 1K Ω 1% 0603 (旺诠)	/	<100	<100	<50	<100	<100	Pass
40	贴片电阻 SMD resistor 10 Ω 1% 0603 (旺诠)	/	<100	<100	<50	<100	<100	Pass
41	贴片电阻 SMD resistor 12.4K Ω 1% 0603 (旺诠)	/	<100	<100	<50	<100	<100	Pass
42	'贴片电容 chip capacitor 4.7UF/50V 1206 (风华)	/	<100	<100	<50	<100	<100	Pass
43	'贴片电容 chip capacitor 100P/50V NOP 10% 0603 (TDK)	/	<100	<100	<50	<100	<100	Pass
44	'贴片电容 chip capacitor 47P/50V NOP 10% 0603 (TDK)	/	<100	<100	<50	<100	<100	Pass
45	贴片电容 chip capacitor 102/50V NOP 10% 0603 (TDK)	/	<100	<100	<50	<100	<100	Pass
46	贴片陶瓷电容 chip ceramic capacitor 6.8 μ F/16V(-40 $^{\circ}$ C~125 $^{\circ}$ C) 0603 (TDK)	/	<100	<100	<50	<100	<100	Pass
47	贴片陶瓷电容 chip ceramic capacitor 104/25V 10% -40 $^{\circ}$ C~-125 $^{\circ}$ C) 0603 (TDK)	/	<100	<100	<50	<100	<100	Pass
48	贴片陶瓷电容 chip ceramic capacitor 104/200V 1206 (TDK)	/	<100	<100	<50	<100	<100	Pass
49	贴片陶瓷电容 chip ceramic capacitor 103/200V 1206 (TDK)	/	<100	<100	<50	<100	<100	Pass
50	贴片电容 chip capacitor 102/200V 1206 TDK 10% (TDK)	/	<100	<100	<50	<100	<100	Pass
51	贴片电容 chip capacitor 10UF/50V 1210 TDK (TDK)	/	<100	<100	<50	<100	<100	Pass

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52	贴片铝电解电容 SMD aluminum electrolytic capacitor 22uF/50V φ6.3mm*5.3mm (三洋)	/	<100	<100	<50	<100	<100	Pass
53	SW12266-EMC 铝基板 aluminum substrate 105mmX40mmX1.6mm 黑油, 白丝印 black oil, white silk screen	/	<100	<100	<50	<100	<100	Pass
54	贴片连接端子 connection terminals 立式 vertical type PH2.0-SMT-WV 2P00 8X7.7X5.5MM(2A 电流, 过回流 265 度 2A current, circulation reflux 265 degrees)	/	<100	<100	<50	<100	<100	Pass
55	SW12266-C 铝基板 aluminum substrate 19mmX15mmX1.6mm 白油, 黑丝印 White oil, black silk screen	/	<100	<100	<50	<100	<100	Pass
56	CREE-3W-LED bulb 白光 white light XQEAWT-0-1A0-R2	/	<100	<100	<50	<100	<100	Pass

ANNEX

List of Exempted Specific Applications in RoHS Directive (The list will be updated accordingly if EC updates it.)

1. Mercury in compact fluorescent lamps not exceeding 5 mg per lamp.
2. Mercury in straight fluorescent lamps for general purposes not exceeding:
 - Halophosphate 10 mg
 - Triphosphate with long lifetime 8 mg
 - Triphosphate with long lifetime 8 mg
3. Mercury in straight fluorescent lamps for special purposes.
4. Mercury in other lamps not specifically mentioned in this Annex
5. Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.
6. Lead as an alloying element in steel containing up to 0,35% lead by weight, aluminium containing up to 0,4% lead by weight and as a copper alloy containing up to 4% lead by weight.
7. Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead)
 - Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signaling, transmission as well as network management for telecommunications.
 - Lead in electronic ceramic parts (e.g. piezoelectronic devices). ◀ [R3]
8. Cadmium and its compounds in electrical contacts and cadmium plating except for applications banned under Directive 91/338/EEC amending Directive 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations. ◀ [R3]
9. Hexavalent chromium as an anti-corrosion of the carbon steel cooling system in absorption refrigerators. 9b. lead in lead-bronze bearing shells and bushes. ◀ [A2]
10. Within the procedure referred to in article 7(2), the commission shall evaluate the applications for:
 - Deca BDE
 - Mercury in straight fluorescent lamps for special purposes
 - Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signaling, transmission as well as network management for telecommunications (with a view to setting a specific time limit for this exemption), and
 - Light bulbs, as a matter of priority in order to establish as soon as possible whether these items are to be amended accordingly.
11. Lead used in compliant pin connector systems. ◀ [A3]
12. Lead as a coating material for the thermal conduction module c-ring. ◀ [A3]
13. Lead and cadmium in optical and filter glass. ◀ [A3]
14. Lead in solders consisting of more than two elements for the connection between the pins and the package of microprocessors with the lead content of more than 80% and less than 85% by weight. ◀ [A3]
15. Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip Packages. ◀ [A3]
16. Lead in linear incandescent lamps with silicate coated tubes. ◀ [A4]
17. Lead halide as radiant agent in High Intensity Discharge (HID) lamps used for professional reprography applications. ◀ [A4]
18. Lead as activator in the fluorescent powder (1% lead by weight or less of discharge lamps when used as sun tanning lamps containing phosphors such as BSP(BaSi2O5:Pb) as well as when used as specialty lamps for diazo-printing reprography, lithography, insect traps, photochemical and curing processes containing phosphors such as SMS (Sr,Ba) 2Mgsi2O7:Pb). ◀ [A4]
19. Lead with PbBiSn-Hg and PbInSn-Hg in specific compositions as main amalgam and with PbSn-Hg as auxiliary amalgam in very compact energy saving lamps (ESL)
20. Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCDs). ◀ [A4]

21. Lead and Cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses. ◀ [A6]
22. Lead as impurity RIG (rare earth iron granet) Faraday rotators used for fiber optic communication systems until 31 December 2009. ◀ [A9]
23. Lead in finishes of fine pitch components other than connectors with a pitch of 0,65 mm and less. ◀ [A6]
24. Lead in solders for the soldering to machined through whole discoidal and planar array ceramic multilayer capacitors. ◀ [A6]
25. discoidal and planar array ceramic multilayer capacitors (SED) used in structural elements, notably in the seal frit and frit ring. ◀ [A6]
26. Lead oxide in the glass envelope of black light blue lamps. ◀ [A6]
27. Lead alloys as solder for transducers used in high-powered (designated to operate for several hours at acoustic power levels of 125 dB SPL and above) loudspeakers. ◀ [A6]
28. Hexavalent chromium in corrosion preventive coatings of unpainted metal sheetings and fastener used used for corrosion protection and Electromagnetic Interference shielding in equipment falling under category three of Directive 2002/96/EC (IT and telecommunications equipment). Exemption granted until 1 July, 2007. ◀ [A7] Over now
29. Lead bound in crystal glass as defined in Annex I (Categories 1,2,3 and 4) of Council Directive 69/493/EEC. ◀ [A5]
30. Cadmium alloys as electrical/mechanical solder joints to electrical conductors located directly on the voice coil in transducers used in high-powered loudspeakers with sound pressure levels of 100 dB (A) and more. ◀ [A8]
31. Lead in soldering materials in mercury free flat fluorescent lamps (which e.g. are used for liquid crystal displays, design or industrial lighting). ◀ [A8]
32. Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes. ◀ [A8]
33. Lead in solders for the soldering of thin copper wires of 100µm diameter and less in power transformers. ◀ [A10]
34. Lead in cermet-based trimmer potentiometer elements. ◀ [A10]
35. Cadmium in photoresistors for optocouplers applied in professional audio equipment until 31 December, 2009. ◀ [A10]
36. Mercury used as a cathode sputtering inhibitor in DC plasma displays with a content up to 30 mg per display. ◀ [A10]
37. Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body. ◀ [A10]
38. Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide. ◀ [A10]
39. Cadmium in colour converting II-VI LEDs (< 10 µg Cd per mm² of light- emitting area) for use in solid state illumination or display systems. ◀ [A10]

Note:

Sentences with ◀ are the amendments

A = Added by R = Replacement specified in

1 = 2005/618/EC

2 = 2005/717/EC

3 = 2005/747/EC

4 = 2006/310/EC

5 = 2006/690/EC

6 = 2006/691/EC

7 = 2008/692/EC

8 = 2008/385/EC

9 = 2009/428/EC

10 = 2009/443/EC

11 = 2008/35/EC

12 = 2010/122/EU

Remark:

1. N.D. = Not detected
2. N.A. = Not applicable
3. Ex = Exempted
4. < = denotes More than
5. > = denotes less than
6. * Negative
7. ppm = mg/kg,
8. Pb = Lead
9. Hg = Mercury
10. Cd = Cadmium
11. Cr = Chromium
12. Br =Bromine
13. PBBs=Polybrominated Biphenyls
14. PBDEs = Polybrominated Diphenyl Ethers

The result relates only to the tested item. The report shall not be reproduced except full without the written approval of the testing laboratory.

If there are question or concerns on this report, please contact us:

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** End of Report **