Applicant	:	SHENZHEN TRUMP LIGHTING CO.,LTD
Address	:	2/F, BLDG. 3, CHUANGYE ROAD NO.14,SHILONG COMMUNITY, SHIYAN, BAO'AN, SHENZHEN.
Sample Name	:	led strip light/led neon light
Style/Item No.	:	SMD3528, SMD5050, SMD3014, SMD2835, SMD2110, SMD2216, SMD5730, SMD4040
Manufacturer	:	Shenzhen Trump Lighting Co.,Ltd
Sample Received Date	:	June 13, 2019
Testing Completed Date	:	June 27, 2019
Test Requested	:	As requested by the client, to evaluate the compliance of the submitted sample with EU RoHS Directive 2011/65/EU Annex II and its amendment (EU) 2015/863 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.
Test Method	:	1. Review was performed for the sample and the related Bill of Materials submitted by the Applicant. 2. a) Refer to the standard IEC 62321-3-1:2013: Screening by XRF Spectroscopy. b) Wet chemical test 1) refer to IEC 62321-5: 2013, determine the Cadmium, Lead content by ICP-OES. 2) refer to IEC 62321-4: 2013, determine the Mercury content by ICP-OES. 3) refer to IEC 62321-7-1:2015 & IEC 62321-7-2:2017, determine the Hexavalent Chromium content by UV-VIS. 4) refer to IEC 62321-6:2015, determine the Polybrominated Biphenyls and Polybrominated Diphenyl Ethers by GC-MS. 5) refer to IEC 62321-8:2017, determine the Dibutyl phthalate(DBP), Benzylbutyl phthalate(BBP), Di-2-ethylhexyl phthalate(DEHP) and Diisobutyl phthalate(DIBP) by GC-MS.
Test Results	:	Please refer to next page (s).

Conclusion:

Basing on the test results obtained from the homogenous materials, the submitted sample **COMPLIES** with the EU RoHS Directive 2011/65/EU Annex II and its amendment (EU) 2015/863.

Signed for and on behalf of
EMTEK (Dongguan) Co., Ltd.

Prepared by:	Reviewed by:	Approved by:
Kay Li	Carrie Zhang	Lisa Li
Report Engineer	Supervisor	Manager

Test Results:

1. Pb, Cd, Hg, Cr^{6+}, PBBs, PBDEs Test Results:

No.	Sample description	Restricted substances	Analytical element	Results of EDXRF(1)	Results of Chemical Testing(2) (mg/kg)	Conclusion	Remark
1	Silver metal	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	NA			
		PBDEs					
2	Red soft plastic	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
3	Black soft plastic	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
4	Solder-silver metal	Pb	Pb	BL	NA	Pass	See remark (3)
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	NA			
		PBDEs					
5	White PCB	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					

No.	Sample description	Restricted substances	Analytical element	Results of EDXRF(1)	Results of Chemical Testing(2) (mg/kg)	Conclusion	Remark
6	Yellow translucent hard plastic	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
7	SMD resister	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
8	Black hard plastic	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
9	Silver metal	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	NA			
		PBDEs					
10	Red soft plastic with black coating	Pb	Pb	BL	NA	Pass	See remark (3)
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					

No.	Sample description	Restricted substances	Analytical element	Results of EDXRF(1)	Results of Chemical Testing(2) (mg/kg)	Conclusion	Remark
11	Red soft plastic	Pb	Pb	BL	NA	Pass	See remark (3)
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
12	White soft plastic	Pb	Pb	BL	NA	Pass	See remark (3)
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
13	Solder-silver metal	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	NA			
		PBDEs					
14	SMD resister	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
15	White PCB	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					

No.	Sample description	Restricted substances	Analytical element	Results of EDXRF(1)	Results of Chemical Testing(2) (mg/kg)	Conclusion	Remark
16	Yellow translucent hard plastic	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
17	Black hard plastic	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
18	Silver metal	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	NA			
		PBDEs					
19	Black soft plastic	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
20	Red soft plastic	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					

No.	Sample description	Restricted substances	Analytical element	Results of EDXRF(1)	Results of Chemical Testing(2) (mg/kg)	Conclusion	Remark
21	Solder-silver metal	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	NA			
		PBDEs					
22	White PCB	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
23	SMD resister	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
24	Translucent soft plastic	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
25	Translucent glue tape	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					

No.	Sample description	Restricted substances	Analytical element	Results of EDXRF(1)	Results of Chemical Testing(2) (mg/kg)	Conclusion	Remark
26	Yellow translucent hard plastic	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
27	Silver metal	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	NA			
		PBDEs					
28	Red soft plastic	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
29	Black soft plastic	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
30	Solder-silver metal	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	NA			
		PBDEs					

No.	Sample description	Restricted substances	Analytical element	Results of EDXRF(1)	Results of Chemical Testing(2) (mg/kg)	Conclusion	Remark
31	White PCB	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
32	SMD resister	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
33	Yellow translucent hard plastic	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
34	Red soft plastic with black coating	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
35	Red soft plastic	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					

No.	Sample description	Restricted substances	Analytical element	Results of EDXRF(1)	Results of Chemical Testing(2) (mg/kg)	Conclusion	Remark
36	Silver metal	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	NA			
		PBDEs					
37	Solder-silver metal	Pb	Pb	OL	Pb:34339	Fail	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	NA			
		PBDEs					
38	SMD diode	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
39	SMD resister	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
40	White translucent hard plastic	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					

No.	Sample description	Restricted substances	Analytical element	Results of EDXRF(1)	Results of Chemical Testing(2) (mg/kg)	Conclusion	Remark
41	White PCB	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
42	Black hard plastic	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					
43	Black hard plastic	Pb	Pb	BL	NA	Pass	No comment
		Cd	Cd	BL			
		Hg	Hg	BL			
		Cr^{6+}	Cr	BL			
		PBBs	Br	BL			
		PBDEs					

Test Results:

2. Phthalates (DBP, BBP, DEHP, DIBP) Test Results:

Test Item	Test Result (mg/kg)				Reporting Limit (mg/kg)	Requirement limit (mg/kg)
	2/3/5	6/7/8	10	11		
Dibutyl phthalate(DBP)	ND	ND	ND	ND	30	1000
Benzylbutyl phthalate(BBP)	ND	ND	ND	ND	30	1000
Di-2-ethylhexyl phthalate(DEHP)	ND	ND	ND	ND	30	1000
Diisobutyl phthalate(DIBP)	ND	ND	ND	ND	30	1000
Conclusion	Pass	Pass	Pass	Pass	---	---

Test Item	Test Result (mg/kg)				Reporting Limit (mg/kg)	Requirement limit (mg/kg)
	12	14/15/16	17/19/20	22/23/24		
Dibutyl phthalate(DBP)	ND	ND	ND	ND	30	1000
Benzylbutyl phthalate(BBP)	ND	ND	ND	ND	30	1000
Di-2-ethylhexyl phthalate(DEHP)	ND	ND	ND	ND	30	1000
Diisobutyl phthalate(DIBP)	ND	ND	ND	ND	30	1000
Conclusion	Pass	Pass	Pass	Pass	---	---

Test Item	Test Result (mg/kg)				Reporting Limit (mg/kg)	Requirement limit (mg/kg)
	25/26/28	29/31/32	33/34/35	38/39/40		
Dibutyl phthalate(DBP)	ND	ND	ND	ND	30	1000
Benzylbutyl phthalate(BBP)	ND	ND	ND	ND	30	1000
Di-2-ethylhexyl phthalate(DEHP)	ND	ND	ND	ND	30	1000
Diisobutyl phthalate(DIBP)	ND	ND	ND	ND	30	1000
Conclusion	Pass	Pass	Pass	Pass	---	---

Test Item	Test Result (mg/kg)	Reporting Limit (mg/kg)	Requirement limit (mg/kg)
	41/42/43		
Dibutyl phthalate(DBP)	ND	30	1000
Benzylbutyl phthalate(BBP)	ND	30	1000
Di-2-ethylhexyl phthalate(DEHP)	ND	30	1000
Diisobutyl phthalate(DIBP)	ND	30	1000
Conclusion	Pass	---	---

Note: mg/kg = parts per million = ppm ND = Not Detected (less than reporting limit)

Test Material List:

Item No.	Description
2	Red soft plastic
3	Black soft plastic
5	White PCB
6	Yellow translucent hard plastic
7	SMD resister
8	Black hard plastic
10	Red soft plastic with black coating
11	Red soft plastic
12	White soft plastic
14	SMD resister
15	White PCB
16	Yellow translucent hard plastic
17	Black hard plastic
19	Black soft plastic
20	Red soft plastic
22	White PCB
23	SMD resister
24	Translucent soft plastic
25	Translucent glue tape
26	Yellow translucent hard plastic
28	Red soft plastic
29	Black soft plastic
31	White PCB
32	SMD resister
33	Yellow translucent hard plastic
34	Red soft plastic with black coating
35	Red soft plastic
38	SMD diode
39	SMD resister
40	White translucent hard plastic
41	White PCB
42	Black hard plastic
43	Black hard plastic

Note: As specified by the client, the samples were subjected to mixed testing.

Remark: (1) ① Results are obtained by XRF for primary screening, and further wet chemical testing by ICP-OES / AAS (for Cd, Pb, Hg), UV-VIS (for Cr(VI)) and GC/MS (for PBBs, PBDEs) is recommended to be performed, if an inconclusive result was found (as "X" in below table) (unit: mg/kg).

② OL = Over Limit, BL = Below Limit, X = Inconclusive, NA= Not Applicable.

③ XRF screening test for RoHS elements – The test result may be different from the actual content in the non-uniformity composition sample.

Element	Polymer	Metal	Composite Materials
Cd	BL $\leqslant$(70-3σ)< X <(130+3σ) $\leqslant$ OL	BL $\leqslant$(70-3σ)< X <(130+3σ) $\leqslant$ OL	LOD < X <(150+3σ)$\leqslant$ OL
Pb	BL $\leqslant$(700-3σ)< X <(1300+3σ)$\leqslant$ OL	BL $\leqslant$(700-3σ)< X <(1300+3σ)$\leqslant$ OL	BL $\leqslant$(500-3σ)< X <(1500+3σ)$\leqslant$ OL
Hg	BL $\leqslant$(700-3σ)< X <(1300+3σ)$\leqslant$ OL	BL $\leqslant$(700-3σ)< X <(1300+3σ)$\leqslant$ OL	BL $\leqslant$(500-3σ)< X <(1500+3σ)$\leqslant$ OL
Br	BL $\leqslant$ (300-3σ)< X	NA	BL $\leqslant$ (250-3σ)< X
Cr	BL $\leqslant$ (700-3σ)< X	BL $\leqslant$ (700-3σ)< X	BL $\leqslant$ (500-3σ)< X

(2) ① mg/kg = ppm = 0.0001%, ND = Not Detected (Less than reporting limit value.).

② Unit, Reporting Limit (RL) and Requirement limit in wet chemical test.

Test items	Pb	Cd	Hg	Cr^{6+}(Non-metal)	Cr^{6+}(metal)	PBBs(single)	PBDEs(single)
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
RL	2	2	2	2	2	5	5
Requirement Limit	1000	100	1000	1000	Negative	1000	1000

③ According to IEC 62321-7-1:2015 & IEC 62321-7-2:2017, result on Cr^{6+} for metal sample shall be shown as Positive/Negative.

Negative = Absence of Cr^{6+} coating, Positive = Presence of Cr^{6+} coating.

Storage condition and production date of the tested sample are unavailable and thus results of Cr^{6+} represent status of the sample at the time of testing.

④ According to IEC 62321-3-1:2013, this column represents the results of wet chem test. And "NA" means no need to perform wet chem test, when the XRF screening results are acceptable.

(3) No.4, 10-12 the XRF screening results for Pb, Cd, Hg, Cr and Br were obtained for the resubmitted sample on June 26, 2019.

Photo Appendix

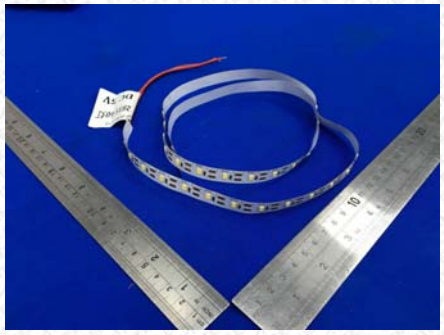
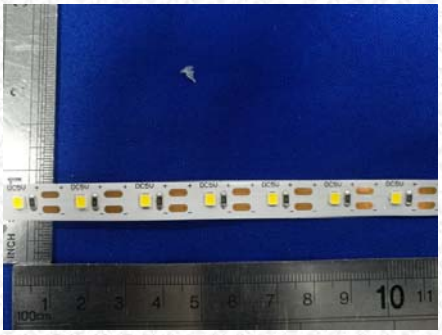
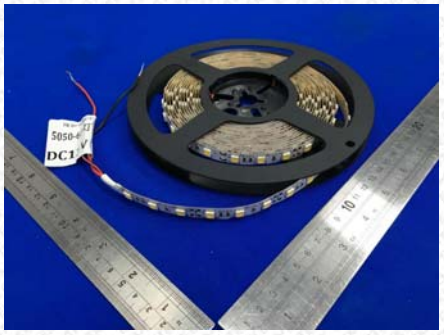
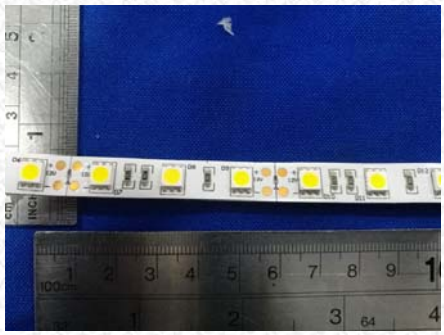
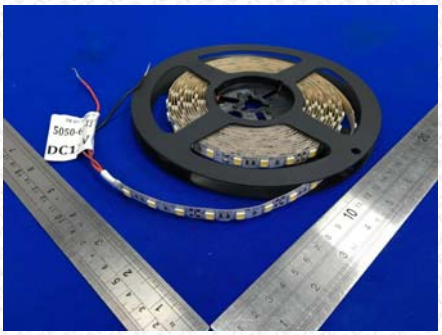
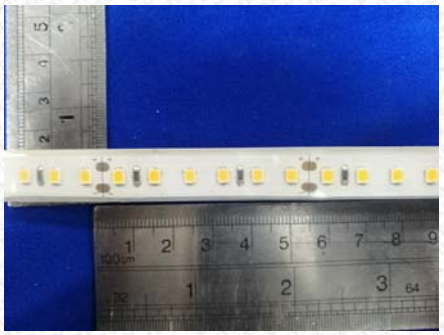
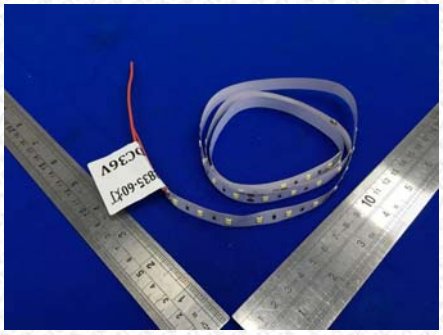
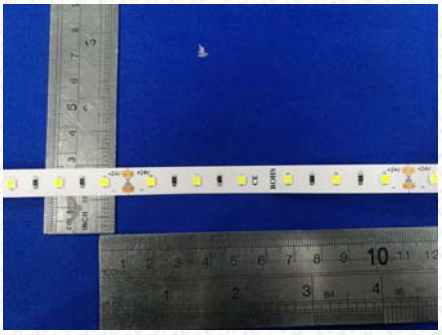
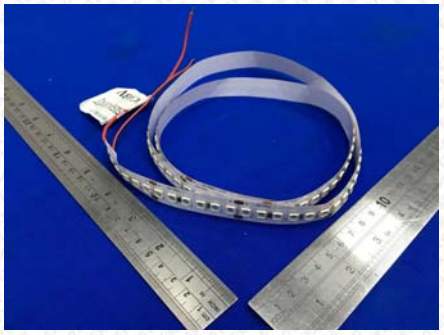
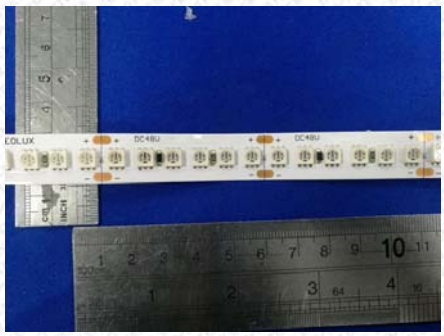
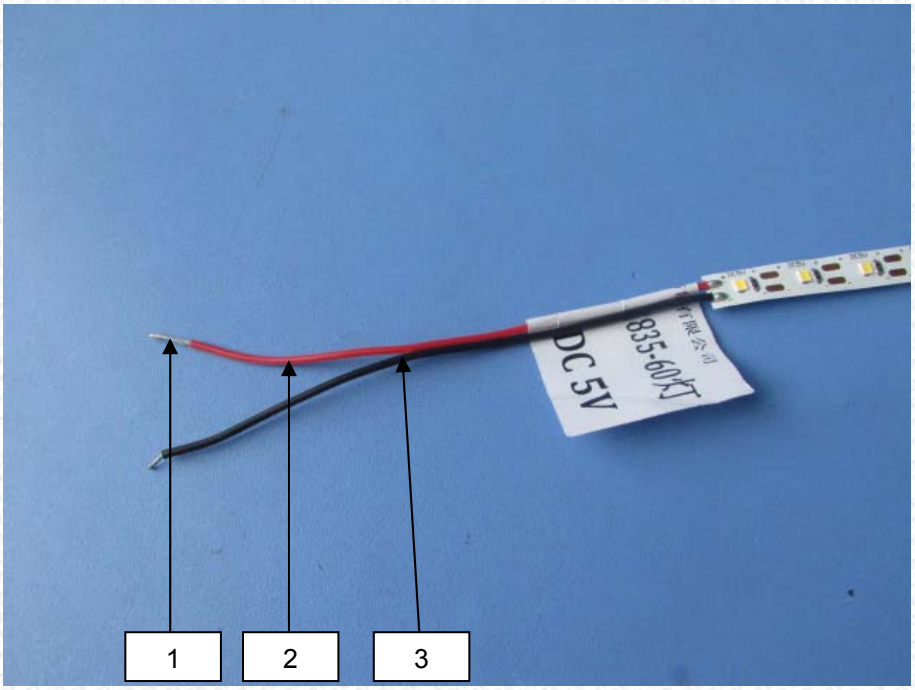











Photo Appendix



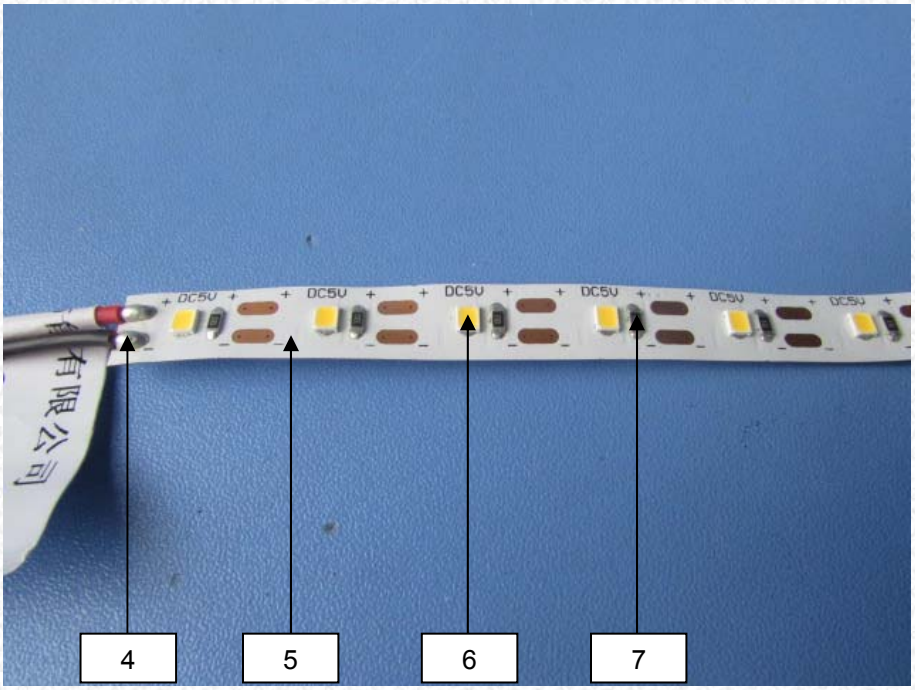
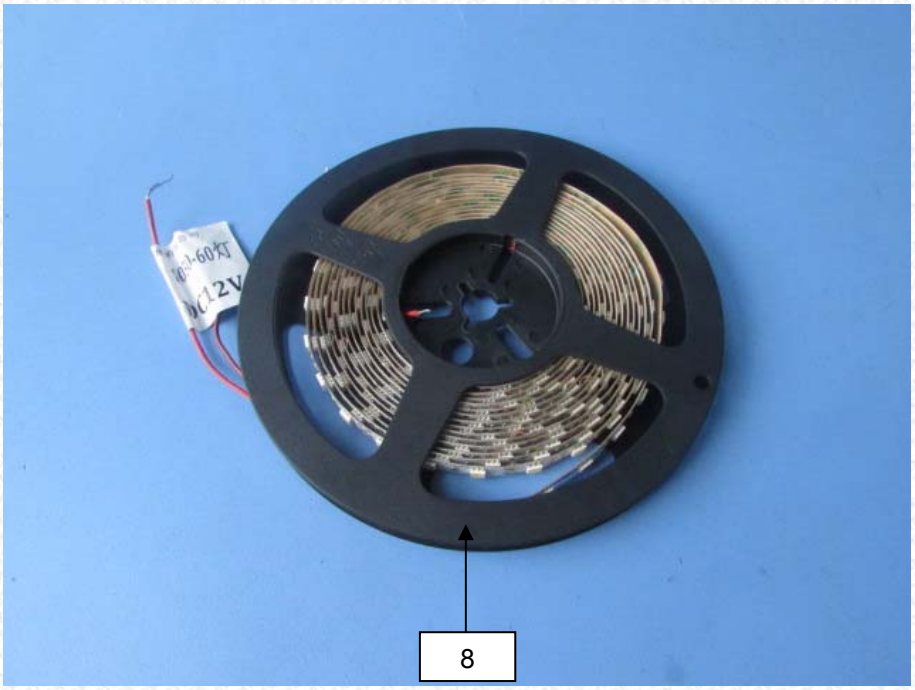


Photo Appendix



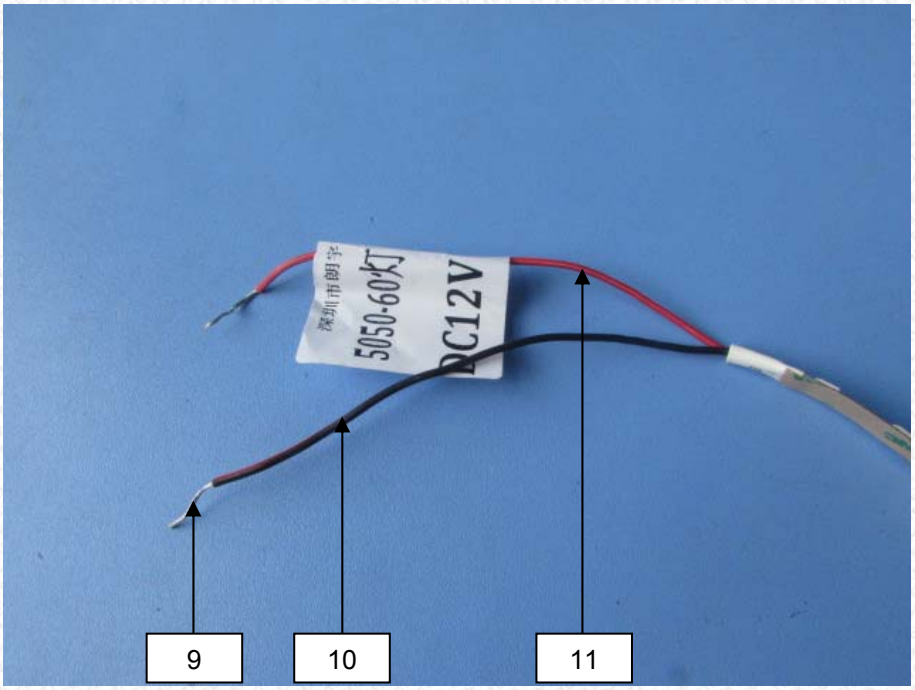
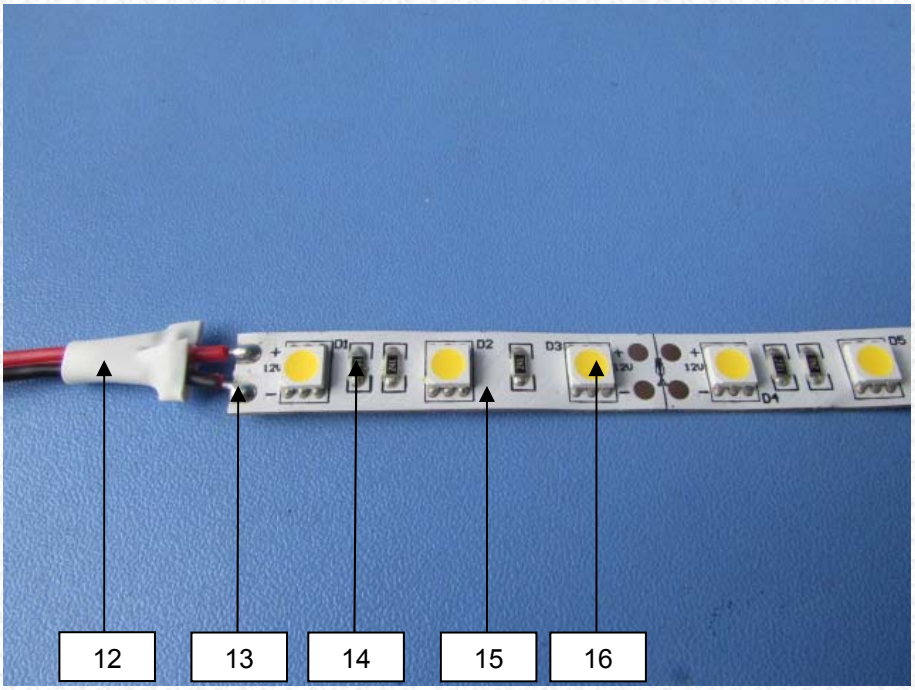


Photo Appendix



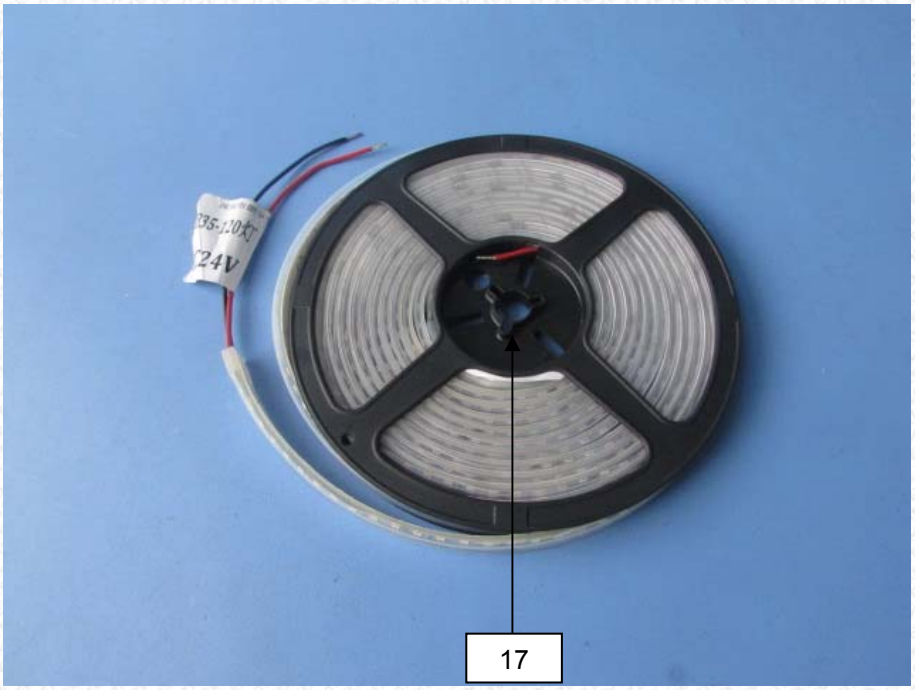
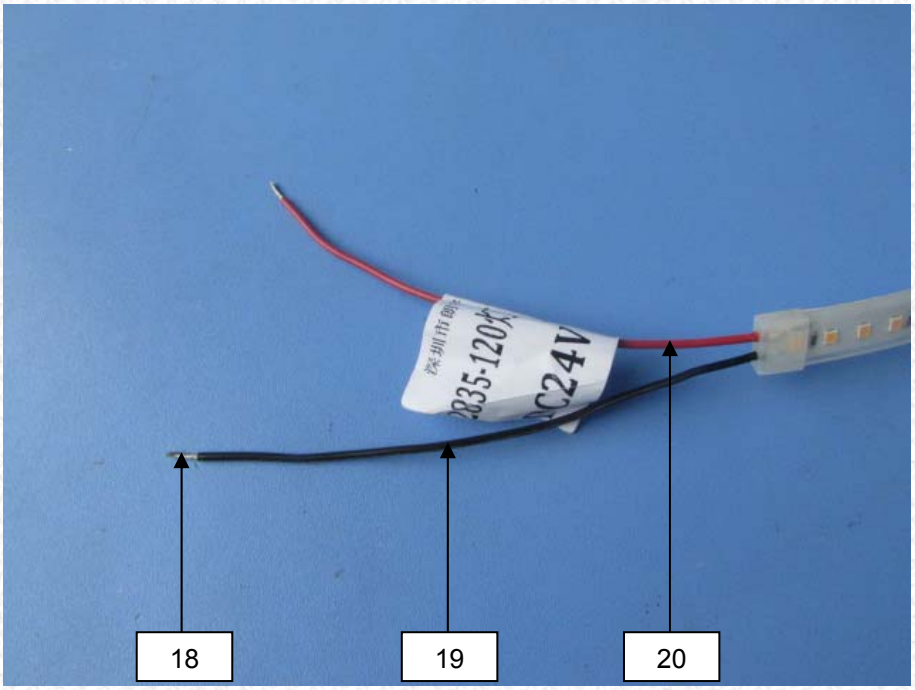


Photo Appendix



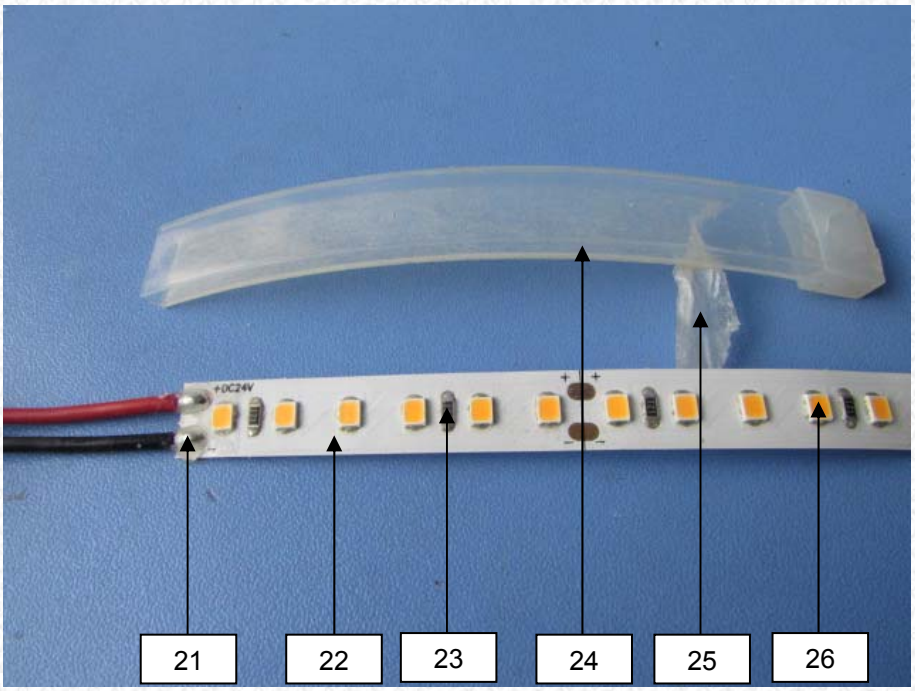
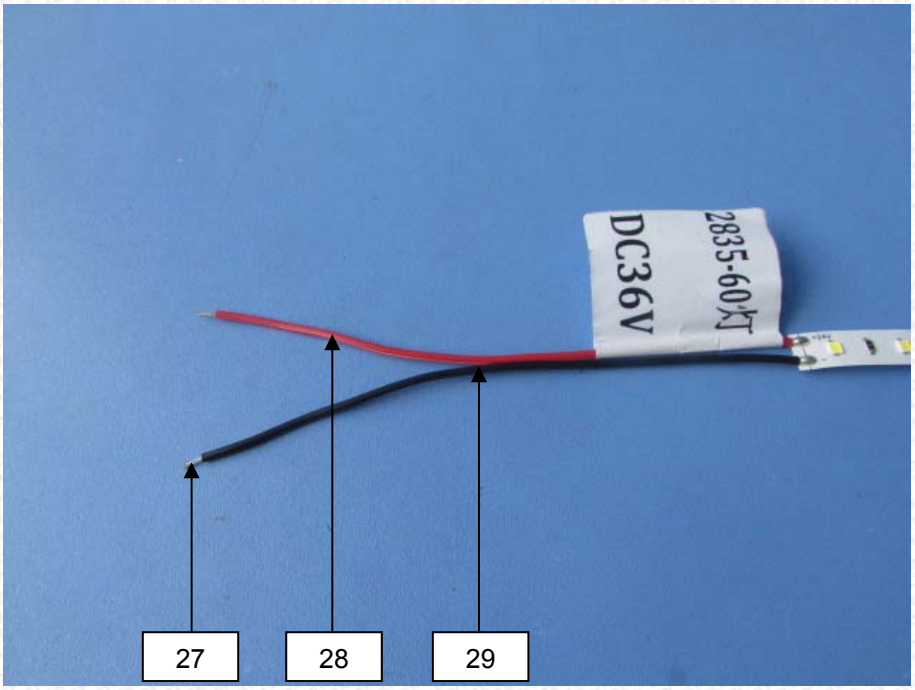


Photo Appendix



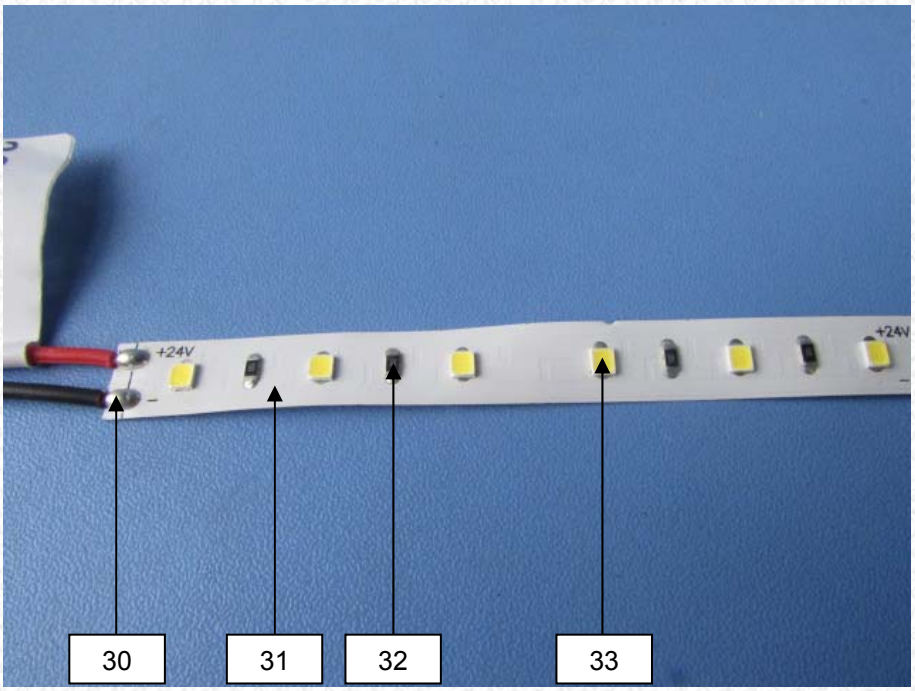
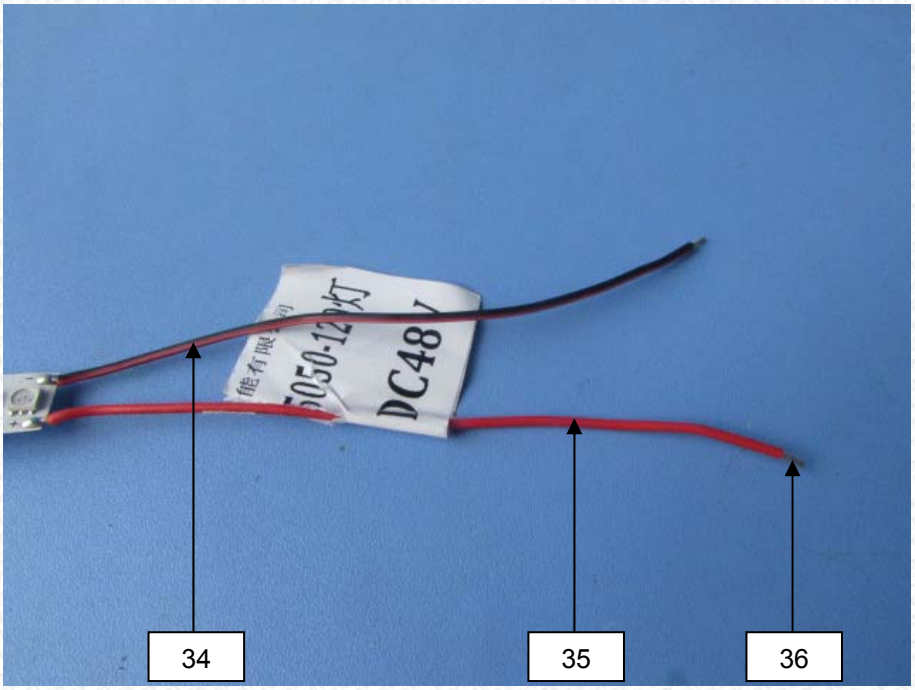


Photo Appendix



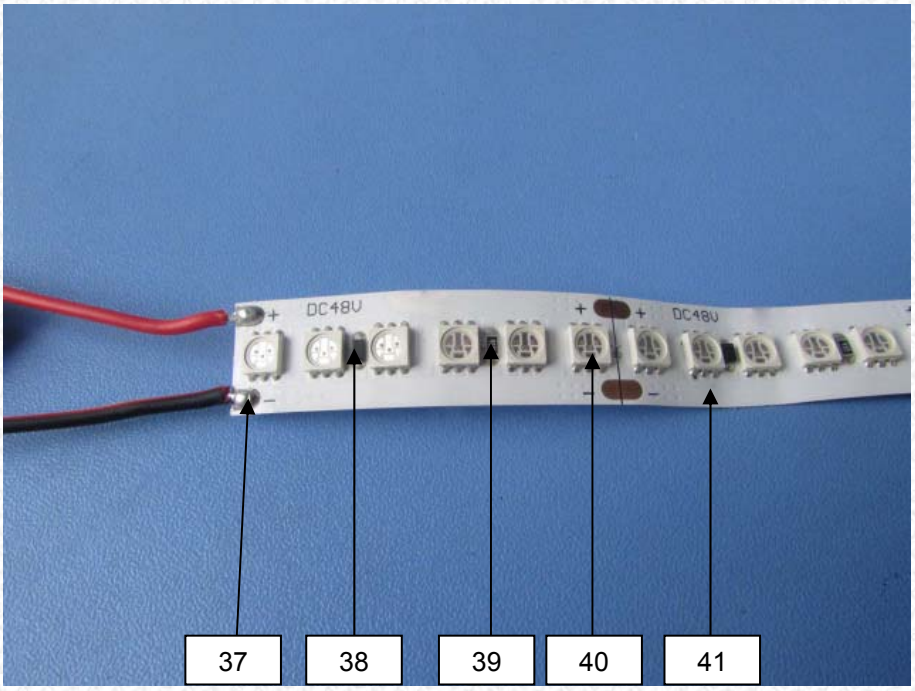
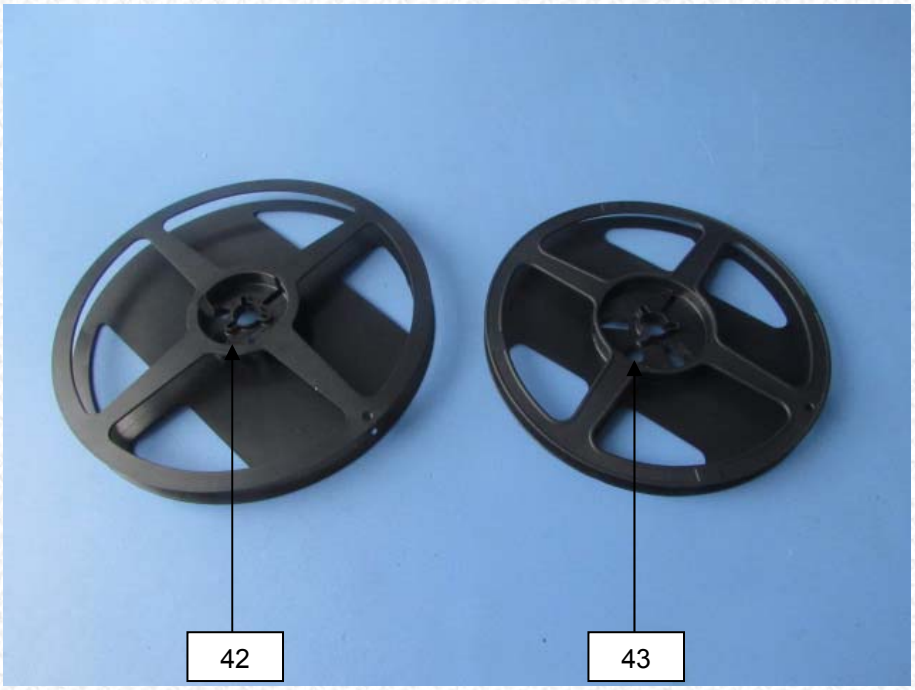


Photo Appendix



* * * * * * **The End** * * * * * *

ANNEX

EXEMPTION LIST

1	Mercury in single capped (compact) fluorescent lamps not exceeding (per burner):
1(a)	For general lighting purposes < 30W: 5mg (expires on 31 December 2011; 3.5mg may be used per burner after 31 December 2011 until 31 December 2012; 2.5mg shall be used per burner after 31 December 2012)
1(b)	For general lighting purposes ≥ 30W and <50W: 5mg (expires on 31 December 2011; 3.5mg may be used per burner after 31 December 2011)
1(c)	For general lighting purposes ≥ 50W and <150W: 5mg
1(d)	For general lighting purposes ≥ 150W: 15mg
1(e)	For general lighting purposes with circular or square structural shape and tube diameter ≤17mm (no limitation of use until 31 December 2011; 7mg may be used per burner after 31 December 2011)
1(f)	For special purposes: 5mg
1(g)	For general lighting purposes < 30 W with a lifetime equal or above 20 000 h: 3,5 mg (Expires on 31 December 2017)
2(a)	Mercury in double-capped linear fluorescent lamps for general lighting purples not exceeding (per lamp):
2(a)(1)	Tri-band phosphor with normal lifetime and a tube diameter < 9mm (e.g. T2): 5mg (expires on 31 December 2011; 4mg may be used per lamp after 31 December 2011)
2(a)(2)	Tri-band phosphor with normal lifetime and a tube diameter ≥ 9mm and ≤ 17mm (e.g. T5): 5mg (expires on 31 December 2011; 3mg may be used per lamp after 31 December 2011)
2(a)(3)	Tri-band phosphor with normal lifetime and a tube diameter > 17mm and ≤ 28mm (e.g. T8): 5mg (expires on 31 December 2011; 3.5mg may be used per lamp after 31 December 2011)
2(a)(4)	Tri-band phosphor with normal lifetime and a tube diameter > 28mm (e.g. T12): 5mg (expires on 31 December 2012; 3.5mg may be used per lamp after 31 December 2012)
2(a)(5)	Tri-band phosphor with long lifetime (≥ 25000h): 8mg (expires on 31 December 2011; 5mg may be used per lamp after 31 December 2011)
2(b)	Mercury in other fluorescent lamps not exceeding (per lamp):
2(b)(2)	Non-linear halophosphate lamps (all diameters): 15mg (expires on 13 April 2016)
2(b)(3)	Non-linear tri-band phosphor lamps with tube diameter > 17mm (e.g. T9) (no limitation of use until 31 December 2011; 15mg may be used per lamp after 31 December 2011)
2(b)(4)	Lamps for other general lighting and special purposes (e.g. induction lamps) (no limitation of use until 31 December 2011; 15mg may be used per lamp after 31 December 2011)
3	Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp):
3(a)	Short length (≤ 500mm) (No limitation of use until 31 December 2011; 3.5mg may be used per lamp after 31 December 2011)
3(b)	Medium length (> 500m and ≤ 1500mm) (No limitation of use until 31 December 2011; 5mg may be used per lamp after 31 December 2011)
3(c)	Long length (> 1500mm) (No limitation of use until 31 December 2011; 13mg may be used per lamp after 31 December 2011)
4(a)	Mercury in other low pressure discharge lamps (per lamp) (no limitation of use until 31 December 2011; 15mg may be used per lamp after 31 December 2011)
4(b)	Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner) in lamps with improved colour rendering index Ra > 60:
4(b)-I	P ≤ 155W (no limitation of use until 31 December 2011; 40mg may be used per burner after 31 December 2011)
4(b)-II	155W < P ≤ 405W (no limitation of use until 31 December 2011; 40mg may be used per burner after 31 December 2011)
4(b)-III	P > 405W (no limitation of use until 31 December 2011; 40mg may be used per burner after 31 December 2011)
4(c)	Mercury in other High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner):
4(c)-I	P≤ 155W (no limitation of use until 31 December 2011; 25mg may be used per burner after 31 December 2011)
4(c)-II	155W < P ≤405W (no limitation of use until 31 December 2011; 30mg may be used per burner after 31 December 2011)
4(c)-III	P > 405W (no limitation of use until 31 December 2011; 40mg may be used per burner after 31 December 2011)
4(d)	Mercury in High Pressure Mercury (vapour) lamps (HPMV) (expires on 13 April 2015)
4(e)	Mercury in metal halide lamps (MH)
4(f)	Mercury in other discharge lamps for special purposes not specifically mentioned in this Annex
4(g)	Mercury in hand crafted luminous discharge tubes used for signs, decorative or architectural and specialist lighting and light-artwork, where the mercury content shall be limited as follows: (Expires on 31 December 2018) (a) 20 mg per electrode pair + 0,3 mg per tube length in cm, but not more than 80 mg, for outdoor applications and indoor applications exposed to temperatures below 20 ° C; (b) 15 mg per electrode pair + 0,24 mg per tube length in cm, but not more than 80 mg, for all other indoor applications.

ANNEX

EXEMPTION LIST

Continued

5(a)	Lead in glass of cathode ray tubes
5(b)	Lead in glass of fluorescent tubes not exceeding 0.2% by weight
6(a)	Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0.35% lead by weight
6(b)	Lead as an alloying element in aluminium containing up to 0.4% lead by weight
6(c)	Copper alloy containing up to 4% lead by weight.
7(a)	Lead in high melting temperature type solders (i.e. lead based alloys containing 85% by weight or more lead)
7(b)	Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission, and network management for telecommunications
7(c)-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound
7(c)-II	Lead in dielectric ceramic in capacitors for a rated voltage of 125V AC or 250V DC or higher
7(c)-III	Lead in dielectric ceramic in capacitors for a rated voltage of less than 125V AC or 250V DC (expires on 1 January 2013 and after that date may be used in spare parts for EEE placed on the market before 1 January 2013).
7(c)-IV	Lead in PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors
8(a)	Cadmium and its compounds in one shot pellet type thermal cut-offs (expires on 1 January 2012 and after that date may be used in spare parts for EEE placed on the market before 1 January 2012)
8(b)	Cadmium and its compounds in electrical contacts
9	Hexavalent chromium as an anti-corrosion agent of the carbon steel cooling system in absorption refrigerators up to 0.75% by weight in the cooling solution
9(b)	Lead in bearing shells and bushes for refrigerant-containing compressors for heating, ventilation, air conditioning and refrigeration (HVACR) applications
11(b)	Lead used in other than C-press compliant pin connector systems (expires on 1 January 2013 and after that date may be used in spare parts for EEE placed on the market before 1 January 2013)
13(a)	Lead in white glasses used for optical applications
13(b)	Cadmium and lead in filter glasses and glasses used for reflectance standards
14	Lead in solders consisting of more than two elements for the connection between the pins and the package of microprocessors with a lead content of more than 80% and less than 85% by weight (expires on 1 January 2011 and after that date may be used in spare parts for EEE placed on the market before 1 January 2011)
15	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages
17	Lead halide as radiant agent in High Intensity Discharge (HID) lamps used for professional reprography applications
18(b)	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 ($BaSi_2O_5$:Pb)
21	Lead and cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glass
24	Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors
25	Lead oxide in surface conduction electron emitter displays (SED) used in structural elements, notably in the seal frit and frit ring
29	Lead bound in crystal glass as defined in Annex 1 (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC
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
31	Lead in soldering materials in mercury free flat fluorescent lamps (which e.g. are used for liquid crystal displays, design or industrial lighting)
32	Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes
33	Lead in solders for the soldering of thin copper wires of 100 µm diameter and less in power transformers
34	Lead in cermet-based trimmer potentiometer elements
37	Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body
38	Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide
39	Cadmium in colour converting II-VI LEDs (< 10 µg Cd per mm^2 of light- emitting area) for use in solid state illumination or display systems (expires on 1 July 2014)
41	Lead in solders and termination finishes of electrical and electronic components and finishes of printed circuit boards used in ignition modules and other electrical and electronic engine control systems, which for technical reasons must be mounted directly on or in the crankcase or cylinder of hand-held combustion engines (classes SH:1, SH:2, SH:3 of Directive 97/68/EC of the European Parliament and of the Council (2)) (Expires on 31 December 2018)