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# TEST REPORT

Report: **STSGZ19061139**  
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Client Name:

Client Address:

Item Name: LIGHT UP LOGO WIRELESS CHARGING PEN HOLDER

Model/Style/Item #: CD-1057

Series Model #: -

Brand/Customer: -

Supplier/Manufacturer: SHENZHEN UNIWINS TECHNOLOGY CO., Limited

Receiving Date: 19-Jun-2019

Test Period: 19-Jun-2019 - 26-Jun-2019

Add Information: -

## Report Summary

#	Test	Reference Standard/Method	Result
1	Lead, Cadmium, Mercury, Hexavalent Chromium, PBBs, PBDEs, DBP, BBP, DEHP and DIBP EU RoHS Directive 2011/65/EU and its amendment directives 2015/863/EU (RoHS 2.0)	IEC 62321-3-1:2013 IEC 62321-4:2013 IEC 62321-5:2013 IEC 62321-6:2015 IEC 62321-7-1:2015 IEC 62321-7-2:2017 IEC 62321-8:2017	PASS

Signed for and on behalf of STS

Kevin Liu  
(Chemical Test Manager)





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## 1. EU RoHS Directive 2011/65/EU and its amendment directives on XRF IEC 62321-3-1:2013, Screening by X-ray Fluorescence Spectroscopy (XRF)

Seq. No.	Tested Part(s)	Results				
		Pb	Cd	Hg	Cr	Br
<b>A</b>	<b>Appearance</b>					
1	Black sponge with glue(Shell)	BL	BL	BL	BL	BL
2	Black metal(Screw)	BL	BL	BL	X	BL
3	Silver metal(Screw)	BL	BL	BL	X	BL
4	Black plastic(Shell)	BL	BL	BL	BL	BL
5	White/black plastic with glue(Screen)	BL	BL	BL	BL	BL
6	White plastic(Screen)	BL	BL	BL	BL	BL
7	Silver plastic(Screen)	BL	BL	BL	BL	BL
8	Transparent plastic(Screen)	BL	BL	BL	BL	BL
9	Transparent/white plastic(Screen)	BL	BL	BL	BL	BL
10	White/black plastic(Screen)	BL	BL	BL	BL	BL
11	White plastic(With screen)	BL	BL	BL	BL	BL
12	Yellow plastic(Light)	BL	BL	BL	BL	BL
13	Orange metal(Wire)	BL	BL	BL	BL	BL
14	Black plastic(Wire jacket)	BL	BL	BL	BL	BL
15	Red plastic(Wire jacket)	BL	BL	BL	BL	BL
<b>B</b>	<b>Main PCB</b>					
16	Yellow plastic paper(On magnet)	BL	BL	BL	BL	BL
17	Black plastic(Magnet)	BL	BL	BL	BL	BL
18	Pink fabric(On magnet)	BL	BL	BL	BL	BL
19	Orange metal(Wire)	BL	BL	BL	BL	BL
20	Green PCB	BL	BL	BL	BL	X
21	Solder	BL	BL	BL	BL	BL
22	Black IC	BL	BL	BL	BL	BL



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23	Black IC	BL	BL	BL	BL	BL
24	Black IC	BL	BL	BL	BL	BL
25	Black IC	BL	BL	BL	BL	BL
26	Black IC	BL	BL	BL	BL	BL
27	Black IC	BL	BL	BL	BL	BL
28	Black IC	BL	BL	BL	BL	BL
29	Brown capacitor	BL	BL	BL	BL	BL
30	Black plastic(Capacitor)	BL	BL	BL	BL	BL
31	Silver metal(Capacitor)	BL	BL	BL	X	BL
32	Gray metal(Capacitor)	BL	BL	BL	BL	BL
33	Yellow paper(Capacitor)	BL	BL	BL	BL	BL
34	Black rubber(Capacitor)	BL	BL	BL	BL	BL
35	Silver metal pin(Capacitor)	BL	BL	BL	BL	BL
36	Silver metal(USB)	BL	BL	BL	X	BL
37	Black plastic(In USB)	BL	BL	BL	BL	BL
38	Silver metal pin(In USB)	BL	BL	BL	BL	BL
39	Silver metal(Mini USB)	BL	BL	BL	X	BL
40	Black plastic(In mini USB)	BL	BL	BL	BL	BL
41	silver metal(In mini USB)	BL	BL	BL	BL	BL
C	Data line					
42	Silver metal(USB)	BL	BL	BL	X	BL
43	White plastic(In USB)	BL	BL	BL	BL	BL
44	Silver metal pin(In USB)	BL	BL	BL	BL	BL
45	Black plastic(USB holder)	BL	BL	BL	BL	BL
46	Black plastic(Jacket)	BL	BL	BL	BL	BL
47	Red plastic(Wire jacket)	BL	BL	BL	BL	BL
48	Black plastic(Wire jacket)	BL	BL	BL	BL	BL
49	Copper metal(Wire)	BL	BL	BL	BL	BL



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50	Silver metal(Mini USB)	BL	BL	BL	X	BL
51	Black plastic(In mini USB)	BL	BL	BL	BL	BL
52	silver metal(In mini USB)	BL	BL	BL	BL	BL

## Remark:

- (1) Results were obtained by XRF for primary screening, and further chemical testing by ICP (for Cd, Pb, Hg), UV-Vis (for Cr(VI)) and GC-MS (for PBBs, PBDEs) are recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321-3-1:2013.

Element	Unit	Non-metal	Metal	Composite Material
Cd	mg/kg	$BL \leq 70-3\sigma < X < 130+3\sigma \leq OL$	$BL \leq 70-3\sigma < X < 130+3\sigma \leq OL$	$BL \leq 50-3\sigma < X < 150+3\sigma \leq OL$
Pb	mg/kg	$BL \leq 700-3\sigma < X < 1300+3\sigma \leq OL$	$BL \leq 700-3\sigma < X < 1300+3\sigma \leq OL$	$BL \leq 500-3\sigma < X < 1500+3\sigma \leq OL$
Hg	mg/kg	$BL \leq 700-3\sigma < X < 1300+3\sigma \leq OL$	$BL \leq 700-3\sigma < X < 1300+3\sigma \leq OL$	$BL \leq 500-3\sigma < X < 1500+3\sigma \leq OL$
Cr	mg/kg	$BL \leq 700-3\sigma < X$	$BL \leq 700-3\sigma < X$	$BL \leq 500-3\sigma < X$
Br	mg/kg	$BL \leq 300-3\sigma < X$	--	$BL \leq 250-3\sigma < X$

## Note:

BL = Below Limit

OL = Over Limit

X = Inconclusive

- (2) The XRF screening test for RoHS elements – The reading may be different to the actual content in the sample be of non-uniformity composition.
- (3) The maximum permissible limit is quoted from the document 2011/65/EU and its amendment directives 2015/863/EU:

RoHS Restricted Substances	Maximum Concentration Value (mg/kg) (by weight in homogenous materials)
Cadmium (Cd)	100
Lead (Pb)	1000
Mercury (Hg)	1000
Hexavalent Chromium (Cr(VI))	1000



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Polybrominated biphenyls (PBBs)	1000
Polybrominated diphenyl ethers (PBDEs)	1000

## (4) Disclaimers:

This XRF Screening report is for reference purposes only. The applicant shall make its/his/her own judgment as to whether the information provided in this XRF screening report is sufficient for its/his/her purposes. The result shown in this XRF screening report will differ based on various factors, including but not limited to, the sample size, thickness, area, surface flatness, equipment parameters and matrix effect (e.g. plastic, rubber, metal, glass, ceramic etc.). Further wet chemical pre-treatment with relevant chemical equipment analysis are required to obtain quantitative data.

## 2. Hexavalent Chromium (Cr(VI))

Metal: IEC 62321-7-1:2015, extracted by boiling water and analyzed by UV-Vis

Non-metal: IEC 62321-7-2:2017, alkaline digested and analyzed by UV-Vis

Table 2.1

Compound	Material #2	Material #3	Material #31	Material #36	Limit	RL (ug/cm <sup>2</sup> )
1 Hexavalent Chromium (Cr(VI))	Negative	Negative	Negative	Negative	#	0.05
Conclusion	PASS	PASS	PASS	PASS	-	-

Table 2.2

Compound	Material #39	Material #42	Material #50	Limit	RL (ug/cm <sup>2</sup> )
1 Hexavalent Chromium (Cr(VI))	Negative	Negative	Negative	#	0.05
Conclusion	PASS	PASS	PASS	-	-

Remark(s): (a) mg/kg: milligram per kilogram = part per million = ppm

(b) RL: Report limit

(c) N.D.: Not detected (result is less than RL)

(d) Negative = Sample Cr(VI) concentration is less than 0.10 ug/cm<sup>2</sup>

Positive = Sample Cr(VI) concentration is greater than 0.13 ug/cm<sup>2</sup>

(e) # = Positive indicates the presence of Cr(VI) on the tested areas and result be regarded as conflict with RoHS requirement.

Negative indicates the absence of Cr(VI) on the tested areas and result be regarded as no conflict with RoHS requirement.





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## 3. Polybrominated Biphenyls and Polybrominated Diphenyl Ethers (PBBs and PBDEs) IEC 62321-6:2015, solvent extract and determined by GC/MS

Table 3.1

Compound		Material #20	Limit (mg/kg)	RL (mg/kg)
1	Monobromo biphenyl	N.D.	-	50
2	Dibromo biphenyl	N.D.	-	50
3	Tribromo biphenyl	N.D.	-	50
4	Tetrabromo biphenyl	N.D.	-	50
5	Pentabromo biphenyl	N.D.	-	50
6	Hexabromo biphenyl	N.D.	-	50
7	Heptabromo biphenyl	N.D.	-	50
8	Octabromo biphenyl	N.D.	-	50
9	Nonabromo biphenyl	N.D.	-	50
10	Decabromo biphenyl	N.D.	-	50
11	Monobromo diphenyl ether	N.D.	-	50
12	Dibromo diphenyl ether	N.D.	-	50
13	Tribromo diphenyl ether	N.D.	-	50
14	Tetrabromo diphenyl ether	N.D.	-	50
15	Pentabromo diphenyl ether	N.D.	-	50
16	Hexabromo diphenyl ether	N.D.	-	50
17	Heptabromo diphenyl ether	N.D.	-	50
18	Octabromo diphenyl ether	N.D.	-	50
19	Nonabromo diphenyl ether	N.D.	-	50
20	Decabromo diphenyl ether	N.D.	-	50



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21	Sum of PBBs	N.D.	1000	-
22	Sum of PBDEs	N.D.	1000	-
	<b>Conclusion</b>	<b>PASS</b>	-	-

Remark(s): (a) mg/kg: milligram per kilogram = part per million = ppm  
(b) RL: Report limit  
(c) N.D.: Not detected (result is less than RL)

## 4. Phthalates – (DBP, BBP, DEHP, DIBP) IEC 62321-8:2017, Solvent extract and determined by GC/MS

Material #	Position / Sample Description
1	Black sponge with glue(Shell)
2	Black plastic(Shell)
3	Black plastic(Wire jacket)
4	Red plastic(Wire jacket)
5	Black plastic(In USB)
6	Black plastic(In mini USB)
7	Black plastic(USB holder)
8	White plastic(In USB)
9	Black plastic(Jacket)
10	Black plastic(Wire jacket)
11	Red plastic(Wire jacket)
12	Black plastic(In mini USB)



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Table 4.1

Compound			Material #1	Material #2+5+8	Material #3	Material #4	Limit (%)	RL(%)
1	DBP	Dibutylphthalate CAS# 84-74-2	N.D.	N.D.	N.D.	N.D.	0.1	0.005
2	BBP	Benzylbutylphthalate CAS# 85-68-7	N.D.	N.D.	N.D.	N.D.	0.1	0.005
3	DEHP	Diethylhexylphthalate CAS# 117-81-7	N.D.	N.D.	N.D.	N.D.	0.1	0.005
4	DIBP	Diisobutyl phthalate CAS# 84-69-5	N.D.	N.D.	N.D.	N.D.	0.1	0.005
Conclusion			PASS	PASS	PASS	PASS	-	-

Table 4.2

Compound			Material #7	Material #6+12	Material #9	Material #10	Limit (%)	RL(%)
1	DBP	Dibutylphthalate CAS# 84-74-2	N.D.	N.D.	N.D.	N.D.	0.1	0.005
2	BBP	Benzylbutylphthalate CAS# 85-68-7	N.D.	N.D.	N.D.	N.D.	0.1	0.005
3	DEHP	Diethylhexylphthalate CAS# 117-81-7	N.D.	N.D.	N.D.	N.D.	0.1	0.005
4	DIBP	Diisobutyl phthalate CAS# 84-69-5	N.D.	N.D.	N.D.	N.D.	0.1	0.005
Conclusion			PASS	PASS	PASS	PASS	-	-

Table 4.3

Compound			Material #11	Limit (%)	RL(%)
1	DBP	Dibutylphthalate CAS# 84-74-2	N.D.	0.1	0.005
2	BBP	Benzylbutylphthalate CAS# 85-68-7	N.D.	0.1	0.005
3	DEHP	Diethylhexylphthalate CAS# 117-81-7	N.D.	0.1	0.005
4	DIBP	Diisobutyl phthalate CAS# 84-69-5	N.D.	0.1	0.005
Conclusion			PASS	-	-

Remark(s): (a) RL: Report limit  
(b) N.D.: Not detected (result is less than RL)



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## Photo(s)



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