TEST REPORT

LAB NO. : (6623)332-0177
DATE : December 20, 2023

Applicant:
NINGBO LANDSIGN ELECTRIC APPLIANCE CO.,LTD.
NO.485,XINGCI 5TH RD,HANGZHOU BAY NEW ZONE,CIXI,NINGBO,ZHEJIANG

Date of Submission: 2023-11-28/2023-12-13/2023-12-19
Test Period: 2023-11-28 to 2023-12-20
Sample Mode: Sample Presentation
BV EE Ref. No.: ASIQ-ESH-Q23112301-A0

Sample Description:	Sample(s) received is(are) stated to be: Solar garden light XLTD series		
Manufacturer:	/	Buyer:	/
Style No(s):	/	PO No.:	/
Country of Origin:	/	Country of Destination:	Oversea Country

SUMMARY OF TEST RESULTS

TEST REQUESTED	CONCLUSION
Compliance Test - European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) with its Amendments (EU) 2015/863	PASS

REMARK
If there are questions or concerns on this report, please contact the following persons:

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BUREAU VERITAS
CONSUMER PRODUCTS SERVICES DIVISION (SHANGHAI)

Laboratory Test Location:
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PREPARED BY : Ann

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Photo of the Submitted Sample

TEST RESULT

Compliance Test - Heavy Metals, Flame Retardants Content - European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) with its Amendments

Test Method : See Appendix.

See Analytes and their corresponding Maximum Allowable Limit in Appendix

-			Result					
Parameter			**Lead (Pb)**	**Cadmium (Cd)**	**Mercury (Hg)**	**Chromium VI (Cr VI)**	**PBBs & PBDEs**	**Conclusion**
Unit			**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**	-
Test Item	**Description**	**Location**	-	-	-	-	-	-
1	Transparent plastic	Housing	ND	ND	ND	ND	ND	PASS
2	Black plastic		ND	ND	ND	ND	ND	PASS
3	Black plastic		ND	ND	ND	ND	ND	PASS
4	Black plastic		ND	ND	ND	ND	ND	PASS
5	Black plastic	Battery box	ND	ND	ND	ND	ND	PASS
6	Silvery metal		ND	ND	ND	ND	NA	PASS
7	Silvery metal screw		ND	ND	ND	ND	NA	PASS
8	Silvery metal solder[R2]		ND	ND	ND	ND	NA	PASS
9	Black glue		ND	ND	ND	ND	ND	PASS
10	Black plastic		ND	ND	ND	ND	192*	PASS
11	Transparent plastic		ND	ND	ND	ND	ND	PASS
12	Blue ceramic		ND	ND	ND	ND	NA	PASS
13	Silvery metal		ND	ND	ND	ND	NA	PASS
14	Coppery metal wire	PCB	ND	ND	ND	ND	NA	PASS
15	Black EC		ND	ND	ND	ND	ND	PASS
16	Transparent LED [R1]		ND	ND	ND	ND	ND	PASS
17	Transparent plastic		ND	ND	ND	ND	ND	PASS
18	Black EC [R1]		ND	ND	ND	ND	ND*	PASS
19	Green resistor		ND	ND	ND	ND	NA	PASS
20	Black plastic wire jacket		ND	ND	ND	ND	ND	PASS
21	Red plastic wire jacket		ND	ND	ND	ND	ND	PASS
22	Silvery metal solder [R1]		ND	ND	ND	ND	NA	PASS
23	Green PCB		ND	ND	ND	ND	ND	PASS
24	Black plastic		ND	ND	ND	ND	ND	PASS
25	Silvery metal		ND	ND	ND	ND	NA	PASS
26	Silvery metal		ND	ND	ND	ND	NA	PASS
27	Black plastic		ND	ND	ND	ND	ND	PASS
28	Silvery metal		ND	ND	ND	ND	NA	PASS
29	Silvery metal		ND	ND	ND	ND	NA	PASS
30	Brown paper		ND	ND	ND	ND	ND	PASS

Note / Key :

ND = Not detected	">" = Greater than	"<" = Less than
NR = Not requested	mg/kg = milligram(s) per kilogram = ppm = part(s) per million	
Detection Limit: See Appendix.	NA = Not applicable	EX= Exempted

Remark :

- The testing approach is listed in table of Appendix.
- * denotes as reported result(s) was (were) performed by wet chemistry method. Others were screened by XRF. For XRF screening, the result(s) of Cr VI was (were) reported as total chromium and the result(s) of PBBs and PBDEs was (were) reported as total bromine. Also, the XRF result(s) may be different to the actual content based on various factors including, but not limit to, sample size, thickness, area, non-uniformity composition, surface flatness.
- Only selected example(s) is (are) indicated on the photograph(s) in Comment.
- According to European Parliament and Council Directive 2011/65/EU, Article 5 "Adaptation of the Annexes to scientific and technical progress", exemption(s) should be granted to the materials and components of Test Item(s) in the lists in Annexes III and IV of this directive.
- R1=2023-12-13 Second Submission
  R2=2023-12-19 Third Submission

TEST RESULT

Compliance Test - Phthalate Test – (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method : Reference to IEC 62321-8: 2017.

Maximum Allowable Limit : 0.1% (Each)

Parameter	CAS No.	Unit	MDL	Result		
				1+2+3+4+5 +10+11+24 +30	9+17+20+21 +27	15+23
Dibutyl phthalate (DBP)	84-74-2	%	0.005	ND	ND	ND
Butyl benzyl phthalate (BBP)	85-68-7	%	0.005	ND	ND	ND
Di-2-ethylhexyl phthalate (DEHP)	117-81-7	%	0.005	ND	ND	ND
Diisobutyl phthalate (DIBP)	84-69-5	%	0.005	ND	ND	ND
Conclusion	-	-	-	PASS	PASS	PASS

Parameter	CAS No.	Unit	MDL	Result
				(16+18) R1
Dibutyl phthalate (DBP)	84-74-2	%	0.005	ND
Butyl benzyl phthalate (BBP)	85-68-7	%	0.005	ND
Di-2-ethylhexyl phthalate (DEHP)	117-81-7	%	0.005	ND
Diisobutyl phthalate (DIBP)	84-69-5	%	0.005	ND
Conclusion	-	-	-	PASS

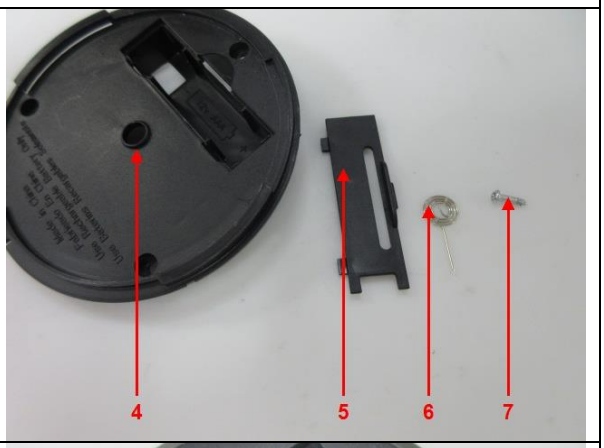
Note: mg/kg= milligram per kilogram % = percentage 1 mg/kg = 0.0001%
MDL = Method Detection Limit ND = Not Detected (< MDL) "-" = Not Regulated

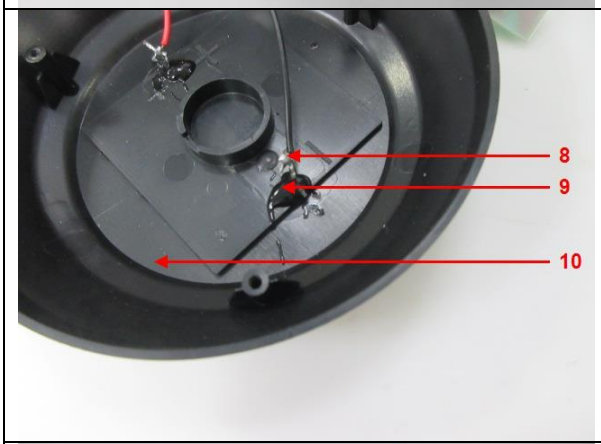
\- R1=2023-12-13 Second Submission
R2=2023-12-19 Third Submission

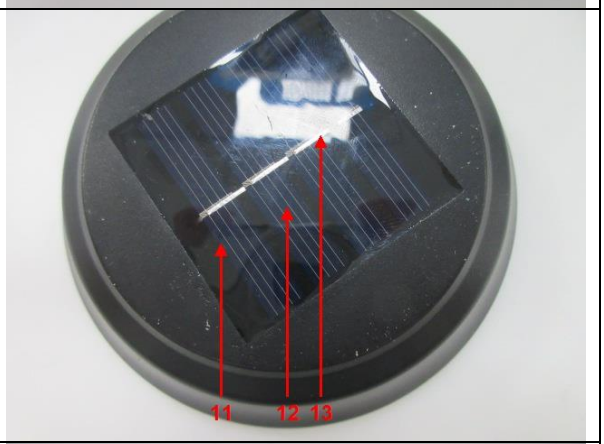
Comment :

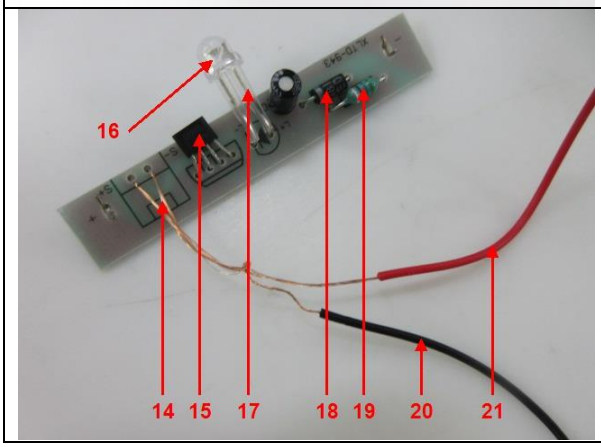
Photograph(s) [Compliance Test for European Parliament and Council Directive 2011/65/EU] :

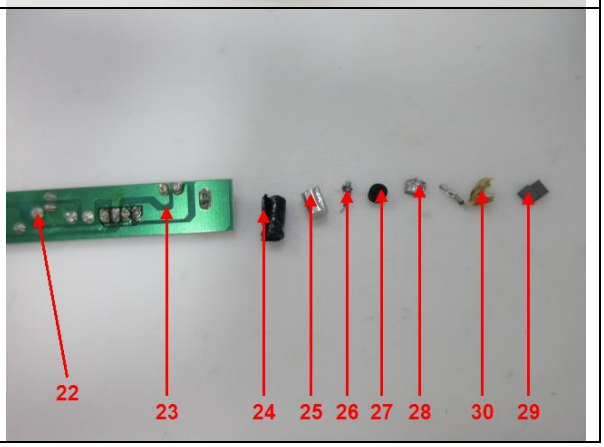
Photograph depicting Test Item(s)











END

APPENDIX

List of Analytes and their Corresponding Test Methods, Detection Limit and Maximum Allowable Limit [Compliance Test for European Parliament and Council Directive 2011/65/EU] :

No.	Name of Analyte(s)	Detection Limit (mg/kg)				Maximum Allowable Limit (mg/kg)
		X-ray fluorescence (XRF)[a]			Wet Chemistry	
		Plastic	Metallic / glass / ceramic	Others		
1	Lead (Pb)	100	200	200	10[b]	1 000
2	Cadmium (Cd)	50	50	50	10[b]	100
3	Mercury (Hg)	100	200	200	10[c]	1 000
4	Chromium (Cr)	100	200	200	NA	NA
5	Chromium VI (Cr VI)	NA	NA	NA	3[g, h] / 10[d] / See [e, i]	1 000 / Negative[i]
6	Bromine (Br)	200	NA	200	NA	NA
7	Polybromobiphenyls (PBBs) - Bromobiphenyl (MonoBB) - Dibromobiphenyl (DiBB) - Tribromobiphenyl (TriBB) - Tetrabromobiphenyl (TetraBB) - Pentabromobiphenyl (PentaBB) - Hexabromobiphenyl (HexaBB) - Heptabromobiphenyl (HeptaBB) - Octabromobiphenyl (OctaBB) - Nonabromobiphenyl (NonaBB) - Decabromobiphenyl (DecaBB)	NA	NA	NA	Each 50[f]	Sum 1 000
8	Polybromodiphenyl ethers (PBDEs) - Bromodiphenyl ether (MonoBDE) - Dibromodiphenyl ether (DiBDE) - Tribromodiphenyl ether (TriBDE) - Tetrabromodiphenyl ether (TetraBDE) - Pentabromodiphenyl ether (PentaBDE) - Hexabromodiphenyl ether (HexaBDE) - Heptabromodiphenyl ether (HeptaBDE) - Octabromodiphenyl ether (OctaBDE) - Nonabromodiphenyl ether (NonaBDE) - Decabromodiphenyl ether (DecaBDE)	NA	NA	NA	Each 50[f]	Sum 1 000

NA = Not applicable IEC = International Electrotechnical Commission

[a] Test method with reference to International Standard IEC 62321-3-1: 2013.

[b] Test method with reference to International Standard IEC 62321-5: 2013.

[c] Test method with reference to International Standard IEC 62321-4: 2013+AMD1: 2017.

[d] Polymers and Electronics - Test method with reference to International Standard IEC 62321-7-2: 2017.

[e] Metal - Test method with reference to International Standard IEC 62321-7-1: 2015.

[f] Test method with reference to International Standard IEC 62321-6: 2015.

[g] Leather - Test method International Standard ISO 17075: 2017.

[h] Other Than Metal, Leather, Polymers and Electronics - Test method with reference to International Standard ISO 17075: 2017.

[i] Result(s) of Cr VI for metallic material(s) was (were) expressed in term of positive and negative. Negative means the absence of Cr VI on the tested areas and the result(s) was (were) regarded as in compliance with European Parliament and Council Directive 2011/65/EU, Article 4(1). While, positive means the presence of Cr VI on tested areas and the result(s) was (were) regarded as in conflict with European Parliament and Council Directive 2011/65/EU, Article 4(1).

Testing Approach [Compliance Test for European Parliament and Council Directive 2011/65/EU] :

The testing approach was with reference to the following document(s).

1 International Standards IEC 62321-1: 2013 and IEC 62321-2: 2021

2 "RoHS Enforcement Guidance Document Version 1" by EU RoHS Enforcement Authorities Informal Network. (May 2006)

3 "RoHS Regulations - Government Guidance Notes" by United Kingdom Department for Business Innovation & Skills. (February 2011)

4 "Final Report to RoHS substances (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. (November 2005)

Annex

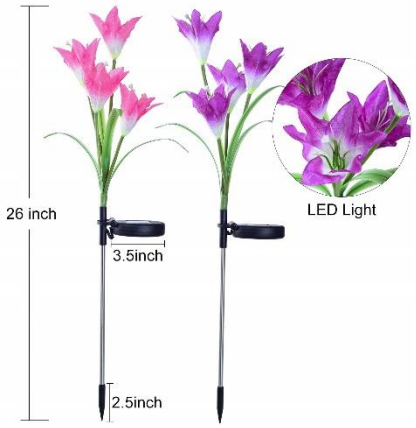
The client declared that the materials used of below Styles are same as tested style

Model list

No	Model	Rated Voltage	Remark
1.	XLTD-300A-1	DC 2V	Based on the same Circuit diagram, Use PCB1
2.	XLTD-300-1	DC 2V	
3.	XLTD-317-1	DC 2V	
4.	XLTD-262-1	DC 2V	
5.	XLTD-263	DC 4V	
6.	XLTD -1808	DC 2V	
7.	XLTD-1514	DC 5.5V	
8.	XLTD-1725	DC 2V	
9.	XLTD-1906	DC 2V	
10.	XLTD-1903	DC 2V	
11.	XLTD-1730	DC 2V	
12.	XLTD-910S	DC 5V	
13.	XLTD-505	DC 2V	
14.	XLTD-722S	DC 2V	
15.	XLTD-723F	DC 2V	
16.	XLTD-734	DC 2V	
17.	XLTD-P6101	DC 2V	
18.	XLTD-770-1	DC 2V	

pcb1
XLTD-944 XLTD-952 XLTD-2308 XLTD-1731 XLTD-251 XLTD-940 XLTD-942 XLTD-943 XLTD-945 XLTD-2302 XLTD-968 XLTD-939 XLTD-1505 XLTD-938 XLTD-962 XLTD-936 XLTD-937 XLTD-1910 XLTD-729 XLTD-730 XLTD-5090 XLTD-5092 XLTD-5091 XLTD-2301 XLTD-2311 XLTD-2312 XLTD-2322 XLTD-2320 XLTD-2321 XLTD-2323 XLTD-2318 XLTD-5058
pcb3：
XLTD-911
pcb4 ：
XLTD-5041 XLTD-5043 XLTD-5040 XLTD-7203 XLTD-7201 XLTD-6005 XLTD-148 XLTD-1812 XLTD7204-XLTD-6007 XLTD-1723 XLTD-4046 XLTD-210 XLTD-7202、XLTD-7208、XLTD-7205、XLTD-P6008
Pcb7：
XLTD-967 XLTD-2306 XLTD-6003 XLTD-2313 XLTD-2314 XLTD-2315 XLTD-2316 XLTD-6004、
pcb9：
XLTD-5038

19.	XLTD-101-1	DC 4V	PCB 2
20.	XLTD-1511	DC 4V	Based on the same Circuit diagram, PCB 3
21.	XLTD-1515	DC 2V	
22.	XLTD-905SA-1	DC 4V	
23.	**XLTD-P5030**	**DC 2V**	
24.	**XLTD-1501**	**DC 2V**	
25.	XLTD-P5002（30CM）	DC 2V	Based on the same Circuit diagram, PCB 4
26.	XLTD-P4045	DC 2V	
27.	XLTD-1708C	DC 5.5V	PCB 5
28.	XLTD-514	DC 2V	PCB 6
29.	XLTD-P6002	DC 5V	PCB 7
30.	XLTD-P5081-1	DC 5.5V	Based on the same Circuit diagram, PCB 8
31.	XLTD-P5082	DC 2V	
32.	XLTD-P5027	DC 5.5V	PCB 9
33.	**XLTD-P5037**	**DC 5.5V**	
34.	**XLTD-1607S**	**DC 5.5V**	

 XLTD-251	 XLTD-262	 XLTD-263
 XLTD-300	 XLTD-300A	 XLTD-317
 XLTD-505	 XLTD-722	 XLTD-723F

 XLTD-729	 XLTD-730	 XLTD-734
 XLTD-910S	 XLTD-936	 XLTD-937
 XLTD-938	 XLTD-939	 XLTD-940

 XLTD-942	 XLTD-943	 XLTD-944
 XLTD-945	 XLTD-952	 XLTD-962
 XLTD-968	 XLTD-1505	 XLTD-1514

 XLTD-1725	 XLTD-1730	 XLTD-1731
 XLTD-1808	 XLTD-1906	 XLTD-1910
 XLTD-2301	 XLTD-2302	 XLTD-2308

 XLTD-5058	 XLTD-5090	 XLTD-5091
 XLTD-5092	 XLTD-101	 XLTD-905S
 XLTD911-1	 XLTD-1501	 XLTD-1515

 XLTD-1511	 XLTD-5030	 XLTD-148
 XLTD-210	 XLTD-1723	 XLTD-1812
 XLTD-4045	 XLTD-4046	 XLTD-5040

 XLTD-5041	 XLTD-5043	 XLTD-6005
 XLTD-6007	 XLTD-7201	 XLTD-7202
 XLTD-7203	 XLTD-7204	 XLTD-7205

 XLTD-7208	 XLTD-P6008	 XLTD-1708C
 XLTD-514	 XLTD-967	 XLTD-2306
 XLTD-6002	 XLTD-6003	 XLTD-6004

 XLTD-5082	 XLTD-P5081	 XLTD-1607S
 XLTD-5027	 XLTD-5038	 XLTD-1510
 XLTD-511		

Remark:
Since the client was not able to provide the sample of additional Style, above additional Style(s) hasn't been tested, but only based on the guarantee letter provided by the client. Bureau Veritas-CPS takes no responsibility for any mistakes and the problems of product consistency caused by inaccurate and/or invalid information submitted by the client. The client will take the responsibility of all discrepancy and risk.