



Test Report No.: DGC12022902T05 Date: March 08, 2012 Page 1 of 10

Applicant: Xindao (Shanghai) Co., Ltd.

Address: 15th floor, LZY tower, No.4711, Jiao Tong Rd., Shanghai, P.R. China

Manufacturer:

Address

Sample Name: Sun flower with solar panel

Model No.: P323.233

Test period: February 29-March 08, 2012

Test requested: In accordance with RoHS Directive 2002/95/EC and its subsequent amendments.

Test method: With reference to IEC 62321-2008 Procedures for the Determination of Levels of

Regulated Substances in Electrotechnical Products, XRF scanning first test, then using

chemical test method to confirm.

Testing Item	Pretreatment Method	Measuring Instrument	MDL
Lead (Pb)	IEC 62321: section 8/9/10	ICP-OES	2mg/kg
Cadmium (Cd)	IEC 62321: section 8/9/10	ICP-OES	2mg/kg
Mercury (Hg)	IEC 62321: section 7	ICP-OES	2mg/kg
Chromium (Cr6t)	IEC 62321: Annex C	UV-Vis	2mg/kg
Chromium (Cr ⁶⁺)	IEC 62321: Annex B	UV-VIS	
PBBs/PBDEs	IEC 62321: Annex A	GC-MS	5mg/kg

Test result: Please refer to next page.

Conclusion: Based on the test results, the submitted sample(s) comply with the RoHS Directive 2002/95/EC and its subsequent amendments.

Written by:

Shecked by:

Department Director

Approved by:

Technical Manager





Test Report Date: March 08, 2012 No.: DGC12022902T05 Page 2 of 10

Details of test results(Unit: mg/kg):

Part No.	Test Part Name	Restricted Substances	Results of EDXRF	Result of Chemical Testing	Conclusion on RoHS
		Cd	N.D.	1	Comply
		Pb	N.D.	1	Comply
,	Data wire protecting	Hg	N.D.	1	Comply
1	sleeve	Cr ⁶⁺	N.D.	1	Comply
		PBBs	N.D.	1	Comply
		PBDEs	N.D.	1	Comply
		Cd	N.D.	1	Comply
		Pb	N.D.	1	Comply
2	Dlack wire akin	Hg	N.D.	1	Comply
2	Black wire skin	Cr ⁶⁺	N.D.	1	Comply
		PBBs	N.D.	1	Comply
		PBDEs	N.D.	1	Comply
		Cd	N.D.	1	Comply
		Pb	N.D.	1	Comply
3	Red wire skin	Hg	N.D.	1	Comply
3	Red wire skin	Cr ⁶⁺	N.D.	1	Comply
		PBBs	N.D.	1	Comply
		PBDEs	N.D.	1	Comply
		Cd	N.D.	1	Comply
		Pb	N.D.	1	Comply
,	MANIE La continua de Labora	Hg	N.D.	1	Comply
4	White wire skin	Cr ⁶⁺	N.D.	/	Comply
		PBBs	NB	1	Comply
		PBDEs	N.D.	/	Comply
		Cd	N.D.	/	Comply
		Pb	N.D.	/	Comply
_	One are reduced the	Hg	N.D.	/	Comply
5	Green wire skin	Cr ⁶⁺	N.D.	1	Comply
		PBBs	N.D.	1	Comply
		PBDEs	N.D.	/	Comply
		Cd	N.D.	1	Comply
		Pb	N.D.	1	Comply
	\A <i>(</i> :	Hg	N.D.	1	Comply
6	Wire core	Cr ⁶⁺	N.D.	1	Comply
		PBBs		1	Comply
		PBDEs		/	Comply
		Cd	N.D.	1	Comply
		Pb	N.D.	1	Comply
_	Diversity of the second	Hg	N.D.	/	Comply
7	Plug handle palstic	Cr ⁶⁺	N.D.	/	Comply
		PBBs		/	Comply
		PBDEs	N.D.	/	Comply





No.: DGC12022902T05 Date: March 08, 2012 Page 3 of 10

Part No.	Test Part Name	Restricted Substances	Results of EDXRF	Result of Chemical Testing	Conclusion on RoHS
		Cd	N.D.	/	Comply
		Pb	N.D.	1	Comply
_		Hg	N.D.	1	Comply
8	USB plug metal	Cr ⁶⁺	N.D.	1	Comply
		PBBs		1	Comply
		PBDEs		1	Comply
		Cd	N.D.	1	Comply
		Pb	N.D.	1	Comply
		Hg	N.D.	1	Comply
9	Plug white plastic	Cr ⁶⁺	N.D.	,	Comply
		PBBs		1	Comply
		PBDEs	N.D.	,	Comply
		Cd	N.D.	,	Comply
		Pb	N.D.	,	Comply
		Hg	N.D.	1	Comply
10	Plug black plastic	Cr ⁶⁺	N.D.	1	Comply
		PBBs	14.5.	N.D.	Comply
		PBDEs	489	N.D.	Comply
		Cd	N.D.	/	Comply
		Pb	N.D.	,	Comply
		Hg	N.D.	1	Comply
11	USB plug pin	Cr ⁶⁺	N.D.	1	Comply
		PBBs	N.D.	1	Comply
		PBDEs		/	Comply
			N.D.	/	
		Cd Pb	N.D. N.D.	1	Comply
		\vdash		1	Comply
12	Pin solder	Hg Cr ⁶⁺	N.D.	1	Comply
			N.D.	1	Comply
		PBBs		1	Comply
		PBDEs	N.D.	/	Comply
		Cd	N.D.	/	Comply
		Pb	N.D.	/	Comply
13	White plastic shell	Hg	N.D.	/	Comply
	·	Cr ⁶⁺	N.D.	/	Comply
		PBBs	N.D.	/	Comply
		PBDEs		/	Comply
		Cd	N.D.	/	Comply
		Pb	N.D.	1	Comply
14	Black solar panel	Hg	N.D.	1	Comply
		Cr ⁶⁺	N.D.	/	Comply
		PBBs	42487	N.D.	Comply
		PBDEs	.= . • .	N.D.	Comply





Test Report No.: DGC12022902T05 Date: March 08, 2012 Page 4 of 10

Part No.	Test Part Name	Restricted Substances	Results of EDXRF	Result of Chemical Testing	Conclusion on RoHS
		Cd	N.D.	1	Comply
		Pb	N.D.	1	Comply
4.5	Toom on a work we also also all	Hg	N.D.	1	Comply
15	Transparent resin shell	Cr ⁶⁺	N.D.	1	Comply
		PBBs	ND	1	Comply
		PBDEs	N.D.	1	Comply
		Cd	N.D.	1	Comply
		Pb	288	1	Comply
10	Dia ak baat aa waa film	Hg	N.D.	1	Comply
16	Black heat source film	Cr ⁶⁺	N.D.	1	Comply
		PBBs	ND	1	Comply
		PBDEs	N.D.	1	Comply
		Cd	N.D.	1	Comply
		Pb	598	1	Comply
47	0-1	Hg	N.D.	1	Comply
17	Solar panel solder	Cr ⁶⁺	N.D.	1	Comply
		PBBs		1	Comply
	PBDEs		/	Comply	
	Cd	N.D.	1	Comply	
	Pb	N.D.	1	Comply	
10	Dia alcusina alcia	Hg	N.D.	1	Comply
18	Black wire skin	Cr ⁶⁺	N.D.	1	Comply
		PBBs	ND	1	Comply
		PBDEs	N.D.	1	Comply
		Cd	N.D.	1	Comply
		Pb	N.D.	1	Comply
40	Deducted tests	Hg	N.D.	1	Comply
19	Red wire ksin	Cr ⁶⁺	N.D.	1	Comply
		PBBs	ND	1	Comply
		PBDEs	N.D.	1	Comply
		Cd	N.D.	/	Comply
		Pb	N.D.	1	Comply
20	\\/!!!!!	Hg	N.D.	1	Comply
20	Wire core	Cr ⁶⁺	N.D.	1	Comply
		PBBs		1	Comply
		PBDEs		1	Comply
		Cd	N.D.	1	Comply
		Pb	N.D.	1	Comply
21	Croon plantia last	Hg	N.D.	1	Comply
۷۱	Green plastic leaf	Cr ⁶⁺	N.D.	1	Comply
		PBBs	N.D.	1	Comply
		PBDEs	N.D.	/	Comply





No.: DGC12022902T05 Date: March 08, 2012 Page 5 of 10

Part No.	Test Part Name	Restricted Substances	Results of EDXRF	Result of Chemical Testing	Conclusion on RoHS
		Cd	N.D.	1	Comply
		Pb	N.D.	1	Comply
00	0	Hg	N.D.	1	Comply
22	Screw	Cr ⁶⁺	N.D.	1	Comply
		PBBs		1	Comply
		PBDEs		1	Comply
		Cd	N.D.	1	Comply
		Pb	N.D.	1	Comply
00	5	Hg	N.D.	1	Comply
23	Basin white plastic	Cr ⁶⁺	N.D.	/	Comply
		PBBs		/	Comply
		PBDEs	N.D.	/	Comply
		Cd	N.D.	/	Comply
		Pb	N.D.	/	Comply
		Hg	N.D.	/	Comply
24	Base cotton pad	Cr ⁶⁺	N.D.	/	Comply
		PBBs		/	Comply
		PBDEs	N.D.	/	Comply
		Cd	N.D.	/	Comply
		Pb	N.D.	/	Comply
		Hg	N.D.	/	Comply
25	Piece screw	Cr ⁶⁺	N.D.	1	Comply
		PBBs		,	Comply
		PBDEs		1	Comply
		Cd	N.D.	,	Comply
		Pb	N.D.	,	Comply
		Hg	N.D.	1	Comply
26	Iron	Cr ⁶⁺	233	,	Comply
		PBBs		,	Comply
		PBDEs		1	Comply
		Cd	N.D.	,	Comply
		Pb	N.D.	,	Comply
		Hg	N.D.	,	Comply
27	USB interface metal	Cr ⁶⁺	N.D.	1	Comply
		PBBs		1	Comply
		PBDEs		,	Comply
		Cd	N.D.	/	Comply
		Pb	N.D.	,	Comply
		Hg	N.D.	,	Comply
28	Interface white plastic	Cr ⁶⁺	N.D.	,	Comply
		PBBs		N.D.	Comply
		PBDEs	862	N.D.	Comply





No.: DGC12022902T05 Date: March 08, 2012 Page 6 of 10

Part No.	Test Part Name	Restricted Substances	Results of EDXRF	Result of Chemical Testing	Conclusion on RoHS
		Cd	N.D.	1	Comply
		Pb	N.D.	1	Comply
00		Hg	N.D.	/	Comply
29	Interface black plastic	Cr ⁶⁺	N.D.	/	Comply
		PBBs	0.4.4	N.D.	Comply
		PBDEs	341	N.D.	Comply
		Cd	N.D.	/	Comply
		Pb	N.D.	/	Comply
0.0		Hg	N.D.	/	Comply
30	USB interface pin	Cr ⁶⁺	N.D.	/	Comply
		PBBs		/	Comply
		PBDEs		/	Comply
		Cd	N.D.	/	Comply
		Pb	N.D.	/	Comply
		Hg	N.D.	1	Comply
31	LED	Cr ⁶⁺	N.D.	,	Comply
		PBBs		N.D.	Comply
		PBDEs	2172	N.D.	Comply
		Cd	N.D.	1	Comply
		Pb	N.D.	'	Comply
		Hg	N.D.	1	Comply
32	LED pin	Cr ⁶⁺	N.D.	1	Comply
		PBBs	N.D.	,	Comply
		PBDEs		/	Comply
		Cd	N.D.	,	Comply
		Pb	N.D.	,	Comply
		Hg	N.D.	,	Comply
33	Inductance ceramic	Cr ⁶⁺	N.D.	1	Comply
		PBBs	14.5.	,	Comply
		PBDEs	N.D.	,	Comply
		Cd	N.D.	,	Comply
		Pb	N.D.	,	Comply
	Inductance enameled	Hg	N.D.	,	Comply
34	wire	Cr ⁶⁺	N.D.	,	Comply
		PBBs	11.5.	,	Comply
		PBDEs		/	Comply
		Cd	N.D.	/	Comply
		Pb	N.D.	/	Comply
		Hg	N.D.	/	Comply
35	IC	Cr ⁶⁺	N.D.	/	Comply
		PBBs		/	Comply
		PBDEs	N.D.	/	Comply





No.: DGC12022902T05 Date: March 08, 2012 Page 7 of 10

Part No.	Test Part Name	Restricted Substances	Results of EDXRF	Result of Chemical Testing	Conclusion on RoHS
		Cd	N.D.	/	Comply
		Pb	N.D.	1	Comply
		Hg	N.D.	1	Comply
36	SMD diode	Cr ⁶⁺	N.D.	1	Comply
		PBBs		N.D.	Comply
		PBDEs	6773	N.D.	Comply
		Cd	N.D.	/	Comply
		Pb	N.D.	/	Comply
0.7	OMB (:)	Hg	N.D.	1	Comply
37	SMD triode	Cr ⁶⁺	N.D.	/	Comply
		PBBs	00.40	N.D.	Comply
		PBDEs	8349	N.D.	Comply
		Cd	N.D.	1	Comply
		Pb	N.D.	1	Comply
	0145	Hg	N.D.	/	Comply
38	SMD resisitor	Cr ⁶⁺	N.D.	1	Comply
		PBBs		1	Comply
		PBDEs	PBDEs N.D.	/	Comply
		Cd	N.D.	1	Comply
		Pb	N.D.	1	Comply
		Hg	N.D.	1	Comply
39	SMD capacitor	Cr ⁶⁺	N.D.	/	Comply
		PRRs		1	Comply
		PBDEs	N.D.	1	Comply
		Cd	N.D.	/	Comply
		Pb	N.D.	/	Comply
		Hg	N.D.	/	Comply
40	PCB	Cr ⁶⁺	N.D.	/	Comply
		PBBs	04404	N.D.	Comply
		PBDEs	21164	N.D.	Comply
		Cd	N.D.	1	Comply
		Pb	612	1	Comply
44	DOD I-I	Hg	N.D.	1	Comply
41	PCB solder	Cr ⁶⁺	N.D.	1	Comply
		PBBs		1	Comply
		PBDEs		1	Comply
		Cd	N.D.	1	Comply
		Pb	N.D.	1	Comply
40	5	Hg	N.D.	1	Comply
42	Red wire skin	Cr ⁶⁺	N.D.	1	Comply
		PBBs		1	Comply
1		PBDEs	N.D.	/	Comply





No.: DGC12022902T05 Date: March 08, 2012 Page 8 of 10

Part No.	Test Part Name	Restricted Substances	Results of EDXRF	Result of Chemical Testing	Conclusion on RoHS
		Cd	N.D.	/	Comply
		Pb	N.D.	1	Comply
		Hg	N.D.	/	Comply
43	Black wire skin	Cr ⁶⁺	N.D.	1	Comply
		PBBs		1	Comply
		PBDEs	N.D.	/	Comply
		Cd	N.D.	1	Comply
		Pb	N.D.	1	Comply
		Hg	N.D.	/	Comply
44	Battery yellow stickers	Cr ⁶⁺	N.D.	1	Comply
		PBBs		/	Comply
		PBDEs	N.D.	/	Comply
		Cd	N.D.	1	Comply
		Pb	N.D.	1	Comply
		Hg	N.D.	1	Comply
45	Battery IC	Cr ⁶⁺	N.D.	1	Comply
		PBBs		N.D.	Comply
		PBDEs 2609	N.D.	Comply	
		Cd	N.D.	/	Comply
		Pb	N.D.	1	Comply
		Hg	N.D.	/	Comply
46	Battery PCB	Cr ⁶⁺	N.D.	1	Comply
		PBBs		N.D.	Comply
		PBDEs	33608	N.D.	Comply
		Cd	N.D.	1	Comply
		Pb	N.D.	,	Comply
		Hg	N.D.	1	Comply
47	PCB solder	Cr ⁶⁺	N.D.	1	Comply
		PBBs		1	Comply
		PBDEs			Comply
		Cd	N.D.	1	Comply
		Pb	N.D.	1	Comply
		Hg	N.D.	/	Comply
48	Battery contacts film	Cr ⁶⁺	N.D.	/	Comply
		PBBs		/	Comply
		PBDEs		1	Comply
		Cd	N.D.	1	Comply
		Pb	N.D.	1	Comply
40		Hg	N.D.	1	Comply
49	Lithium battery	Cr ⁶⁺		1	Comply
		PBBs		1	Comply
		PBDEs		1	Comply





Test Report No.: DGC12022902T05 Date: March 08, 2012 Page 9 of 10

Note:

- (1) (a) It is the result on total Br while test PBBs/PBDEs by XRF, It is the result on total Cr while test Cr6+ by XRF;
 - (b) Results are obtained by XRF for primary screening and further chemical testing by ICP-OES (for Pb, Cd and Hg), UV-Vis (for Cr⁶⁺) and GC-MS (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321-2008 (unit: mg/kg);

Element	Polymer	Metal	Composite Materials
Cd	BL≤(70 -3σ) <x<(130+3σ)≤ol< td=""><td>BL≤(70-3σ)<x<(70+3σ)≤ol< td=""><td>LOD<x<(150+3σ)≤ol< td=""></x<(150+3σ)≤ol<></td></x<(70+3σ)≤ol<></td></x<(130+3σ)≤ol<>	BL≤(70-3σ) <x<(70+3σ)≤ol< td=""><td>LOD<x<(150+3σ)≤ol< td=""></x<(150+3σ)≤ol<></td></x<(70+3σ)≤ol<>	LOD <x<(150+3σ)≤ol< td=""></x<(150+3σ)≤ol<>
Pb	BL≤(700-3σ) <x<(1300+3σ)≤ol< td=""><td>BL≤(700-3σ)<x<(1300+3σ)≤ol< td=""><td>BL≤(500-3σ)<x<(1500+3σ)≤ol< td=""></x<(1500+3σ)≤ol<></td></x<(1300+3σ)≤ol<></td></x<(1300+3σ)≤ol<>	BL≤(700-3σ) <x<(1300+3σ)≤ol< td=""><td>BL≤(500-3σ)<x<(1500+3σ)≤ol< td=""></x<(1500+3σ)≤ol<></td></x<(1300+3σ)≤ol<>	BL≤(500-3σ) <x<(1500+3σ)≤ol< td=""></x<(1500+3σ)≤ol<>
Hg	BL≤(700-3σ) <x<(1300+3σ)≤ol< td=""><td>BL≤(700-3σ)<x<(1300+3σ)≤ol< td=""><td>BL≤(500-3σ)<x<(1500+3σ)≤ol< td=""></x<(1500+3σ)≤ol<></td></x<(1300+3σ)≤ol<></td></x<(1300+3σ)≤ol<>	BL≤(700-3σ) <x<(1300+3σ)≤ol< td=""><td>BL≤(500-3σ)<x<(1500+3σ)≤ol< td=""></x<(1500+3σ)≤ol<></td></x<(1300+3σ)≤ol<>	BL≤(500-3σ) <x<(1500+3σ)≤ol< td=""></x<(1500+3σ)≤ol<>
Cr	BL≤(700-3σ) <x< td=""><td>BL≤(700-3σ)<x< td=""><td>BL≤(500-3σ)<x< td=""></x<></td></x<></td></x<>	BL≤(700-3σ) <x< td=""><td>BL≤(500-3σ)<x< td=""></x<></td></x<>	BL≤(500-3σ) <x< td=""></x<>
Br	BL≤(300-3σ) <x< td=""><td></td><td>BL≤(250-3σ)<x< td=""></x<></td></x<>		BL≤(250-3σ) <x< td=""></x<>

- (c) OL=Over Limit, BL=Below Limit, IN=Inconclusive, LOD= Limit of Detection;
- (d) The XRF screening test for RoHS elements –The reading may be different to the actual content in the sample be of non-uniformity composition.
- (2) (a) mg/kg=ppm=0.0001%, N.D.=Not detected(<MDL), MDL=Method Detection Limit, "---"=Not conducted, "/"=Not available
 - (b) According to IEC 62321-2008, result on Cr⁶⁺ for metal coating sample is shown as Positive/Negative. Negative= Absence of Cr⁶⁺ coating, Positive= Presence of Cr⁶⁺ coating

(3) RoHS Requirement

Restricted substances	Limits
Lead (Pb)	0.1% (1000 ppm)
Cadmium (Cd)	0.01% (100 ppm)
Chromium(VI) (Cr ⁶⁺)	0.1% (1000 ppm)
Mercury (Hg)	0.1% (1000 ppm)
Polybrominated biphenyls (PBBs)	0.1% (1000 ppm)
Polybrominated diphenyl ethers (PBDEs)	0.1% (1000 ppm)

The above limits are reference with 2002/95/EC and amendment 2005/618/EC.

(4) Specimens, which requested to determine Cadmium, Mercury and Lead Content, have been dissolved completely.





No.: DGC12022902T05 Date: March 08, 2012

Page 10 of 10

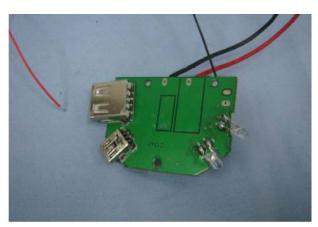
Photographs of Sample:













End of Report