

TEST REPORT

Report No.: BCTC2303513802R

Applicant: Maiori Design Company Limited

Product Name: D09010-89 Luna Moonshadow

Product Type: D09010-89

Tested Date: 2023-03-09 to 2023-03-16

Issued Date: 2023-03-22

Shenzhen BCTC Testing Co., Ltd.



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Product Name	D09010-89 Luna Moonshadow
Product Type	D09010-89
Applicant	Maiori Design Company Limited
Address	Unit 1-3, 17/F, Shun Kwong Commercial Building, 8 Des Voeux Road West, Sheung Wan, HK
Manufacturer	El Dongguan Limited
Address	No.3 Fukang West Road, Honghualin Industrial Zone, Chongkoushequ, Houjie Dongguan, 523947 China
Trademark	TRIBU The art of leisure
Sample Received Date	2023-03-09
Test Type	Entrustment Test
Test Method	See page 3 for details.
Test Requested	1. As specified by client, to screen Lead(Pb), Cadmium(Cd), Mercury(Hg), Chromium(Cr) and Bromine(Br) in the submitted sample(s) by XRF. 2. As specified by client, when screening results exceed the XRF screening limit in IEC 62321-3-1:2013, further use of chemical methods are required to test the Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers(PBDEs) in the submitted samples. 3. As specified by client, to test the Diisobutyl phthalate(DIBP), Dibutyl phthalate(DBP), Butyl benzyl phthalate(BBP), Bis(2-ethylhexyl) phthalate(DEHP) in the submitted sample(s).
Test Standard	RoHS Directive 2011/65/EU and amendment Commission Delegated Directive (EU) 2015/863
Test Result	The samples were tested according to the entrusted requirements and test standard, and the test items of the test samples were qualified.
Prepared by:	Deor Approved by: Saher Chen Bear Saher Chen

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Test Method:

A. Screening test by XRF spectroscopy

XRF screening limits in mg/kg for regulated elements according to IEC 62321-3-1:2013.

	Screening limits of IEC 623	MDL		
Element	Polymers and metals	Composite material	Polymers	Other material
Pb	BL≤(700-3σ) <x<(1300+3σ)≤ol< td=""><td>BL≤(500-3σ)<x<(1500+3σ)≤ol< td=""><td>10 mg/kg</td><td>50 mg/kg</td></x<(1500+3σ)≤ol<></td></x<(1300+3σ)≤ol<>	BL≤(500-3σ) <x<(1500+3σ)≤ol< td=""><td>10 mg/kg</td><td>50 mg/kg</td></x<(1500+3σ)≤ol<>	10 mg/kg	50 mg/kg
Cd	BL≤(70-3σ) <x<(130+3σ)≤ol< td=""><td>LOD<x<(150+3σ)≤ol< td=""><td>10 mg/kg</td><td>50 mg/kg</td></x<(150+3σ)≤ol<></td></x<(130+3σ)≤ol<>	LOD <x<(150+3σ)≤ol< td=""><td>10 mg/kg</td><td>50 mg/kg</td></x<(150+3σ)≤ol<>	10 mg/kg	50 mg/kg
Hg	BL≤(700-3σ) <x<(1300+3σ)≤ol< td=""><td>BL≤(500-3σ)<x<(1500+3σ)≤ol< td=""><td>10 mg/kg</td><td>50 mg/kg</td></x<(1500+3σ)≤ol<></td></x<(1300+3σ)≤ol<>	BL≤(500-3σ) <x<(1500+3σ)≤ol< td=""><td>10 mg/kg</td><td>50 mg/kg</td></x<(1500+3σ)≤ol<>	10 mg/kg	50 mg/kg
Cr	BL≤(700-3σ) <x< td=""><td>BL≤(500-3σ)<x< td=""><td>10 mg/kg</td><td>50 mg/kg</td></x<></td></x<>	BL≤(500-3σ) <x< td=""><td>10 mg/kg</td><td>50 mg/kg</td></x<>	10 mg/kg	50 mg/kg
Br	BL≤(300-3σ) <x< td=""><td>BL≤(250-3σ)<x< td=""><td>10 mg/kg</td><td>50 mg/kg</td></x<></td></x<>	BL≤(250-3σ) <x< td=""><td>10 mg/kg</td><td>50 mg/kg</td></x<>	10 mg/kg	50 mg/kg

Note:

- -BL = Under the XRF screening limit
- -OL = Further chemical test will be conducted while result is above the screening limit
- -X= The symbol "X" marks the region where further investigation is necessary
- -3σ = The reproducibility of analytical instruments
- -LOD= Detection limit
- -"--" = Not regulated.

B. Chemical Test

Test Item(s)	Test Method	Measured Equipment(s)	MDL	Limit
Lead (Pb)	IEC 62321-5:2013 Ed.1.0	ICP-OES	2 mg/kg	1000 mg/kg
Cadmium (Cd)	IEC 62321-5:2013 Ed.1.0	ICP-OES	2 mg/kg	100 mg/kg
Mercury (Hg)	IEC 62321-4:2013+AMD1:2017	ICP-OES	2 mg/kg	1000 mg/kg
Have valent Observivos Or(//)	IEC 62321-7-1:2015 Ed.1.0	10/1/40	-	1000 mg/kg
Hexavalent Chromium Cr(VI)	IEC 62321-7-2:2017 Ed.1.0	UV-VIS	8 mg/kg	1000 mg/kg
Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015 Ed.1.0	HPLC-UV	5 mg/kg	1000 mg/kg
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015 Ed.1.0	HPLC-UV	5 mg/kg	1000 mg/kg
Phthalates	IEC 62321-8:2017 Ed.1.0	GC-MS	50 mg/kg	1000 mg/kg

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Test Result(s):

Sample	Sample	Tootod Itomo	XRF Screening Test	Chemical Test	Canalusian		
No.	Description	Tested Items	Unit (mg/kg)	Unit (mg/kg)	Conclusion		
		Pb	BL	1			
	Black	Cd	BL	/			
1	transparent	Hg	BL	/	PASS		
	glass	Cr(Cr(VI))	BL	/			
		Br(PBBs&PBDEs)	BL	/			
		Pb	BL	1			
		Cd	BL	1			
2	Black rubber	Hg	BL	/	PASS		
		Cr(Cr(VI))	BL	1			
		Br(PBBs&PBDEs)	BL	/			
		Pb	BL	1			
	NA stal with	Cd	BL	1			
3	Metal with	Hg	BL	1	PASS		
	copper plating	Cr(Cr(VI))	BL	1			
		Br(PBBs&PBDEs)	1	1			
		Pb	BL	1			
	Matal:the black	Cd	BL	1			
4	Metal with black plating	Ha BL /		1	PASS		
		Cr(Cr(VI))	BL	1			
		Br(PBBs&PBDEs)	1	/			
		Pb	BL	/			
		Cd	BL	\1 :			
5	Black plastic	Hg	BL	, i	PASS		
		Cr(Cr(VI))	BL	\ \ \ \ \ \			
		Br(PBBs&PBDEs)	BL				
		Pb	BL \				
	T	Cd	BL	/ / / / / / / / / / / / / / / / / / /			
6	Transparent	Hg	BL		PASS		
	plastic	Cr(Cr(VI))	BL				
		Br(PBBs&PBDEs)	BL	1			
		Pb	BL	1			
	Die als with a m	Cd	BL	I			
7	Black rubber	Hg	BL				
	ring	Cr(Cr(VI))	BL				
		Br(PBBs&PBDEs)	BL	J			

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				I		
		Pb	BL	1		
		Cd	BL	1		
8	Black plastic	Hg	BL	1	PASS	
		Cr(Cr(VI))	BL	1		
		Br(PBBs&PBDEs)	BL	1		
		Pb	BL	1		
		Cd	BL	1		
9	Gray magnet	Hg	BL	1	PASS	
		Cr(Cr(VI))	BL	1		
		Br(PBBs&PBDEs)	I	1		
		Pb	BL	1		
		Cd	BL	1		
10	Silver screw	Hg	BL	1	PASS	
		Cr(Cr(VI))	176639	Negative		
		Br(PBBs&PBDEs)	1	1		
		Pb	BL	1		
	Disabashbas	Cd	BL	1		
11	11 Black rubber foot pad	Hg	BL	1	PASS	
		Cr(Cr(VI))	BL	1		
		Br(PBBs&PBDEs)	BL	1		
		Pb	BL	1		
	Disal matel	Cd	BL	1		
12	Black metal	Hg	BL	1	PASS	
	(switch)	Cr(Cr(VI))	BL	1		
		Br(PBBs&PBDEs)	1	1		
		Pb	BL	\1		
	Black heat	Cd	BL .	1		
13	shrink tube	Hg	BL		PASS	
	Sillink tube	Cr(Cr(VI))	BL .			
		Br(PBBs&PBDEs)	1013	N.D.		
		Pb	BL			
	Plack wire	Cd	BL	1		
14	Black wire	Hg	BL	1	PASS	
	jacket	Cr(Cr(VI))	BL			
		Br(PBBs&PBDEs)	BL	1		
		Pb	·BL			
		Cd	BL	1		
15	15 Red wire jacket	d wire jacket Hg BL //		1	PASS	
		Cr(Cr(VI))	BL			
		Br(PBBs&PBDEs)	BL			

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		Pb	BL	1	
	Black outside	Cd	BL	1	
16		Hg	BL	1	PASS
	wire jacket	Cr(Cr(VI))	BL	1	
		Br(PBBs&PBDEs)	BL	/	
		Pb	BL	1	
	Dia di avitalida	Cd	BL	/	
17	Black outside	Hg	BL	1	PASS
	wire jacket	Cr(Cr(VI))	BL	1	
		Br(PBBs&PBDEs)	BL	1	
		Pb	BL	/	
	Vallano da	Cd	BL	1	
18	Yellow wire	Hg	BL	1	PASS
	jacket	Cr(Cr(VI))	BL	1	
		Br(PBBs&PBDEs)	BL	/	
		Pb	BL	1	
	Disabasias	Cd	BL	1	
19	Black wire	Hg	BL	1	PASS
	jacket	Cr(Cr(VI))	BL	1	
		Br(PBBs&PBDEs)	BL	/	
		Pb	BL	/	
		Cd	BL	1	
20	Red wire jacket	Hg	BL	1	PASS
		Cr(Cr(VI))	BL	1	
		Br(PBBs&PBDEs)	BL	1	
		Pb	BL	1	
	Croop wire	Cd	BL .	1	
21	Green wire jacket	Hg	BL		PASS
	jacket	Cr(Cr(VI))	BL 🔩		
		Br(PBBs&PBDEs)	BL		
		Pb	BL		
	White wire	Cd	BL	1	
22	jacket	Hg	BL	/	PASS
	jacket	Cr(Cr(VI))	BL		
		Br(PBBs&PBDEs)	BL	1	
		Pb	·BL	1	
		Cd	BL		
23	Blue wire jacket	Hg	BL		PASS
		Cr(Cr(VI))	BL	1	
		Br(PBBs&PBDEs)	BL	1	



					,
		Pb	BL	1	
		Cd	BL	1	
24	Black plastic	Hg	BL	1	PASS
		Cr(Cr(VI))	BL	1	
		Br(PBBs&PBDEs)	BL	1	
		Pb	BL	1	
		Cd	BL	1	
25	Black PCB	Hg	BL	1	PASS
		Cr(Cr(VI))	BL	1	
		Br(PBBs&PBDEs)	6878	N.D.	
		Pb	BL	1	
		Cd	BL	1	
26	Tin solder	Hg	BL	1	PASS
		Cr(Cr(VI))	BL	1	
		Br(PBBs&PBDEs)	1	1	
		Pb	BL	1	
		Cd	BL	1	
27	Yellow plastic	Hg	BL	1	PASS
		Cr(Cr(VI))	BL	1	
		Br(PBBs&PBDEs)	BL	1	
		Pb	BL	1	
		Cd	BL	1	
28	Green PCB	Hg	BL	1	PASS
		Cr(Cr(VI))	BL	1	
		Br(PBBs&PBDEs)	5648	N.D.	
		Pb	BL	1	:
		Cd	BL ,	1	
29	Tin solder	Hg	BL		PASS
		Cr(Cr(VI))	BL 🦠		
		Br(PBBs&PBDEs)	1		
		Pb	BL.		
	M/hita plantin	Cd	BL	1	N II II / / / /
30	White plastic	Hg	BL	1	PASS
	(terminal)	Cr(Cr(VI))	BL	I	
		Br(PBBs&PBDEs)	BL	1	
		Pb	·BL	1	
	Cray magnet	Cd	BL		
31	Gray magnet (102)	Hg	BL		PASS
	(102)	Cr(Cr(VI))	BL		
		Br(PBBs&PBDEs)	1	ii	

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		Pb	BL	1	
	Gray inductor	Cd	BL	1	
32	(2R2)	Hg	BL	1	PASS
	(2112)	Cr(Cr(VI))	42370	Negative	
		Br(PBBs&PBDEs)	1	1	
		Pb	BL	1	
		Cd	BL	1	
33	Black chip	Hg	BL	1	PASS
		Cr(Cr(VI))	BL	1	
		Br(PBBs&PBDEs)	BL	1	
		Pb	BL	/	
		Cd	BL	1	
34	Yellow capacitor	Hg	BL	1	PASS
		Cr(Cr(VI))	BL	1	
		Br(PBBs&PBDEs)	BL	1	
		Pb	BL	1	
	B	Cd	BL	1	
35	Black wire	Hg	BL	1	PASS
	jacket	Cr(Cr(VI))	BL	1	
		Br(PBBs&PBDEs)	BL	1	
		Pb	BL	/	
	White wire	Cd	BL	1	
36		Hg	BL	1	PASS
	jacket	Cr(Cr(VI))	BL	1	
		Br(PBBs&PBDEs)	BL	1	
		Pb	BL	1	
	Transparent	Cd	BL .	1	
37	Transparent LED	Hg	BL		PASS
	LED	Cr(Cr(VI))	BL 🧸		
		Br(PBBs&PBDEs)	BL		
		Pb	BL.		
		Cd	BL	, I	
38	Crystal	Hg	BL	1	PASS
		Cr(Cr(VI))	BL		
		Br(PBBs&PBDEs)	· · · · · · · · · · · · · · · · · · ·	1	
		Pb	·BL	1	
		Cd	BL		
39	SMD diode	Hg	BL	1	PASS
		Cr(Cr(VI))	BL		
		Br(PBBs&PBDEs)	BL	I	

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		Pb	BL	/	
	Grav magnet	Cd	BL	1	
40	Gray magnet (4R7)	Hg	BL	1	PASS
	(4K7)	Cr(Cr(VI))	BL	1	
		Br(PBBs&PBDEs)	1	1	

Tested Item(s)	Results Unit (mg/kg)									
	1	2	5	6	7	8	11	13	14	15
Diisobutyl phthalate(DIBP)	ND	N.D. N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
CAS No.:84-69-5	IN.D.		IN.D.							
Dibutyl phthalate(DBP)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	75	N.D.	N.D.
CAS No.:84-74-2	IN.D.									
Butyl benzyl phthalate(BBP)	ND	N.D.	N.D.	N.D.	ND	N.D. N.D.	N.D.	N.D.	N.D.	N.D.
CAS No.:85-68-7	N.D.	IN.D.	N.D.	N.D.	N.D.					
Bis(2-ethylhexyl) phthalate(DEHP)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	ND
CAS No.:117-81-7	IN.D.		IN.D.	IN.D.	IN.D.	IN.D.	IN.D.	IN.D.	IN.D.	N.D.

Tested Item(s)	Results Unit (mg/kg)									
	16	17	18	19	20	21	22	23	24	25
Diisobutyl phthalate(DIBP) CAS No.:84-69-5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dibutyl phthalate(DBP) CAS No.:84-74-2	312	300	N.D.							
Butyl benzyl phthalate(BBP) CAS No.:85-68-7	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Bis(2-ethylhexyl) phthalate(DEHP) CAS No.:117-81-7	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

3C

PPF





Tested Item(s)	Results Unit (mg/kg)								
	27	28	30	33	34	35	36	37	39
Diisobutyl phthalate(DIBP) CAS No.:84-69-5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Dibutyl phthalate(DBP) CAS No.:84-74-2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	76	N.D.	N.D.
Butyl benzyl phthalate(BBP) CAS No.:85-68-7	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Bis(2-ethylhexyl) phthalate(DEHP) CAS No.:117-81-7	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Note:

- -MDL = Method Detection Limit
- -N.D. = Not Detected (<MDL)
- -mg/kg = ppm = parts per million
- -" / "= Not conducted.
- -Negative = Absence of Cr(VI), the detected Cr(VI) concentration in the boiling water extraction solution is less than $0.1\mu g/cm^2$ with $50cm^2$ sample surface area used.
- -Positive = Presence of Cr(VI), the detected Cr(VI) concentration in the boiling water extraction solution is equal to or greater than $0.13\mu g/cm^2$ with $50cm^2$ sample surface area used.

Remark:

- -The screening results are only used for reference.
- -When conducting the test for PBBs&PBDEs, XRF was introduced to screen Br Exclusively; When conducting the test for Hexavalent Chromium, XRF was introduced to screen Chromium exclusively.

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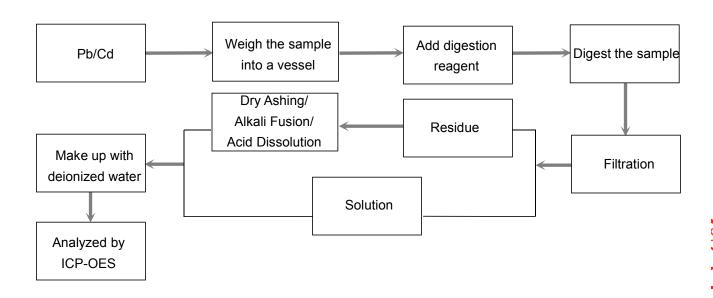




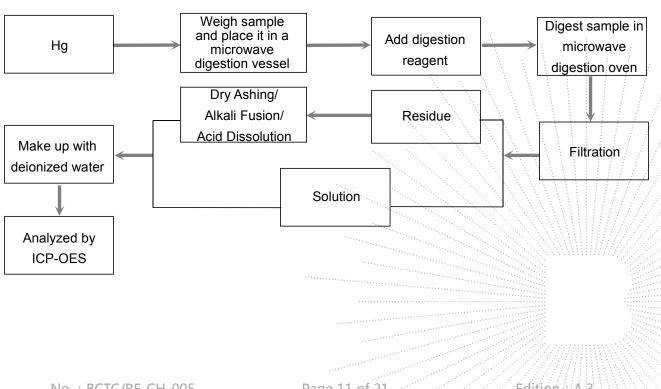
Test Process:

The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.

♦IEC 62321-5:2013 Ed.1.0



♦IEC 62321-4:2013+AMD1:2017



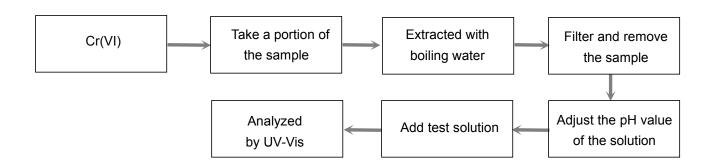
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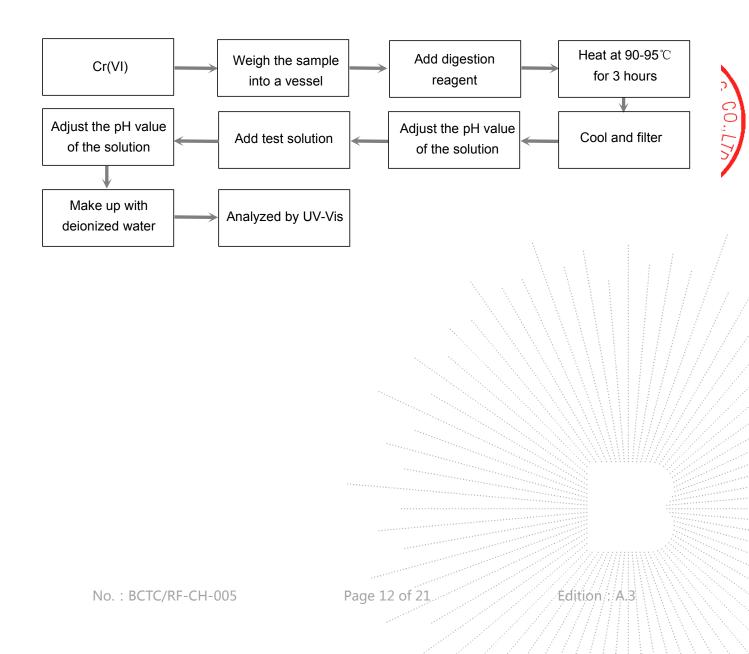
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♦IEC 62321-7-1:2015 Ed.1.0

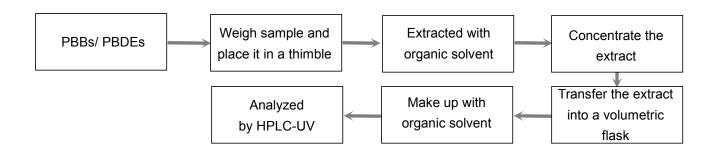


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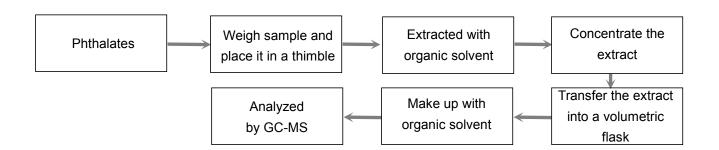


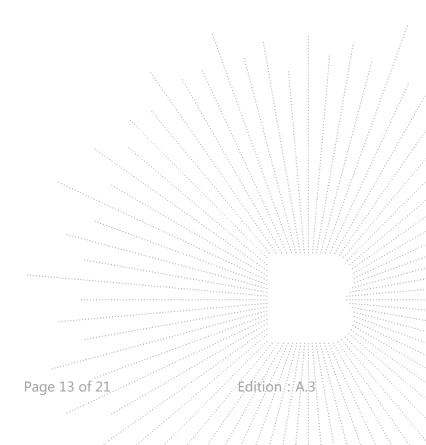


♦IEC 62321-6:2015 Ed.1.0

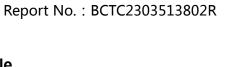


♦IEC 62321-8:2017 Ed.1.0





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Photograph of Sample

BCTC



Fig.1



Fig.2

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Photo(s) of the tested component(s)



Fig.3

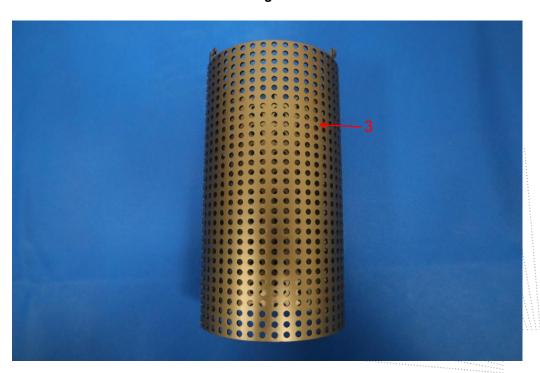


Fig.4

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Fig.5

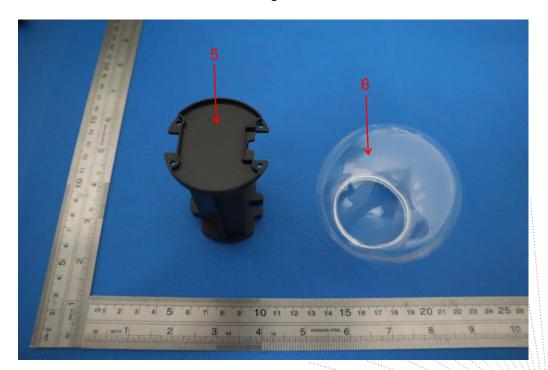


Fig.6

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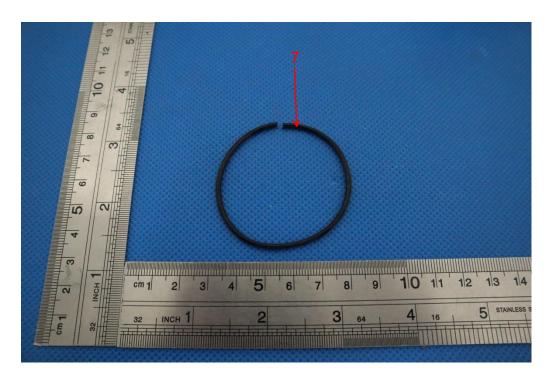


Fig.7

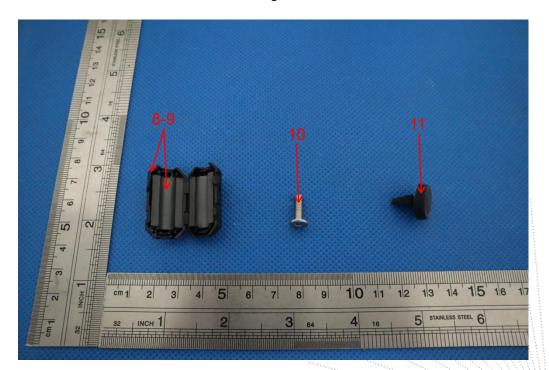


Fig.8

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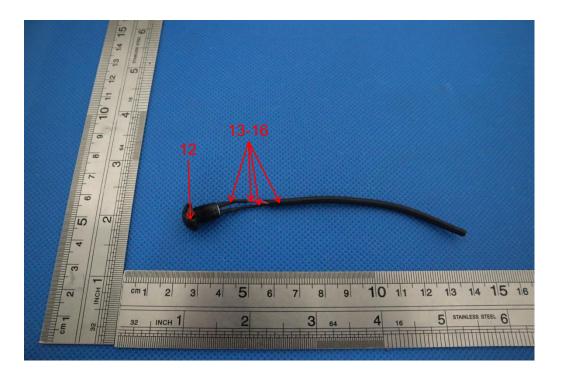


Fig.9

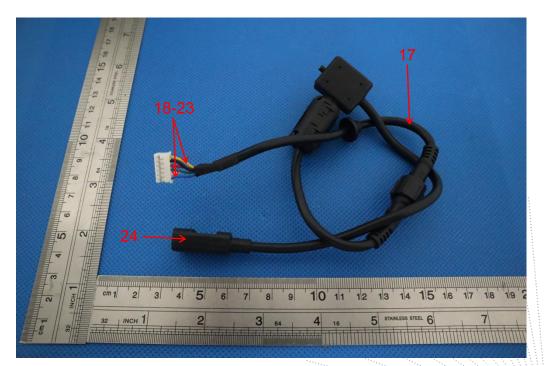


Fig.10

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Fig.11

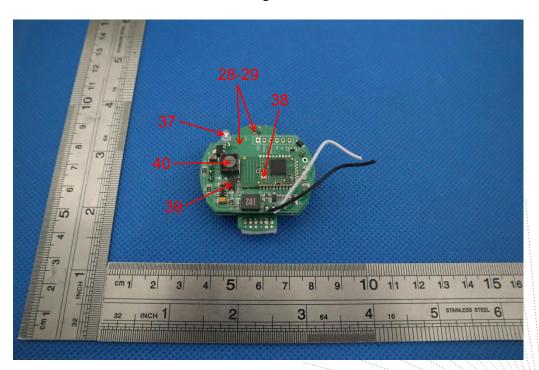


Fig.12

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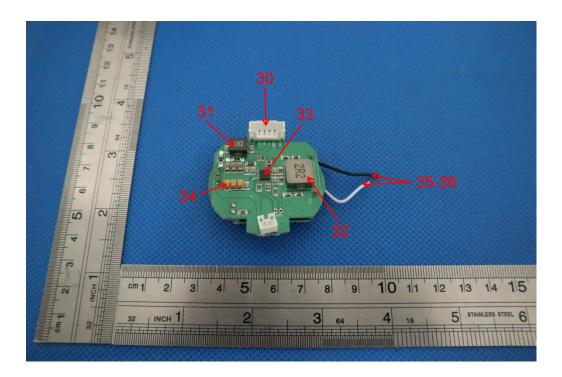


Fig.13



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STATEMENT

- 1. The equipment lists are traceable to the national reference standards.
- 2. The test report can not be partially copied unless prior written approval is issued from our lab.
- 3. The test report is invalid without the "special seal for inspection and testing".
- 4. The test report is invalid without the signature of the approver.
- 5. The test process and test result is only related to the Unit Under Test.
- 6. Sample information is provided by the client and the laboratory is not responsible for its authenticity.
- 7. The test report without CMA mark is only used for scientific research, teaching, enterprise product development and internal quality control purposes.
- 8. The quality system of our laboratory is in accordance with ISO/IEC17025.
- 9. If there is any objection to this test report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

Address:

1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

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P. C.: 518103

FAX: 0755-33229357

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E-Mail: bctc@bctc-lab.com.cn

**** END ****

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