



**BUREAU
VERITAS**

TEST REPORT

LAB NO. : (9318)094-1034
DATE : Apr 20, 2018
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APPLICANT : **FLASHBAY ELECTRONICS**
BLDG B&C XI FENG CHENG IND ZONE, NO 2 FUYUAN ROAD
HE PING, VILLAGE, FUYONG TOWN, SHENZHEN, CHINA

CONTACT PERSON : LEVIN

DATE OF SUBMISSION : Apr 04, 2018

TEST PERIOD : Apr 04, 2018 to Apr 20, 2018

NO. OF WORKING DAYS : 12

SAMPLE DESCRIPTION : wireless charger

Color: /

Style no. / Model no.: Aero(AO) Forest(FR) Loop(LP)

P.O. No.: /

Country of Origin: /

Country of Destination: /

MANUFACTURER : /

SUMMARY OF TEST RESULTS

TEST REQUESTED	CONCLUSION	REMARK
European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)	PASS	
Phthalates Test – Directive 2015/863/EU Amendment of European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)	PASS	

LA

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BUREAU VERITAS CONSUMER PRODUCTS SERVICES (GUANGZHOU) CO., LTD

NINA REN
SENIOR MANAGER



REMARK

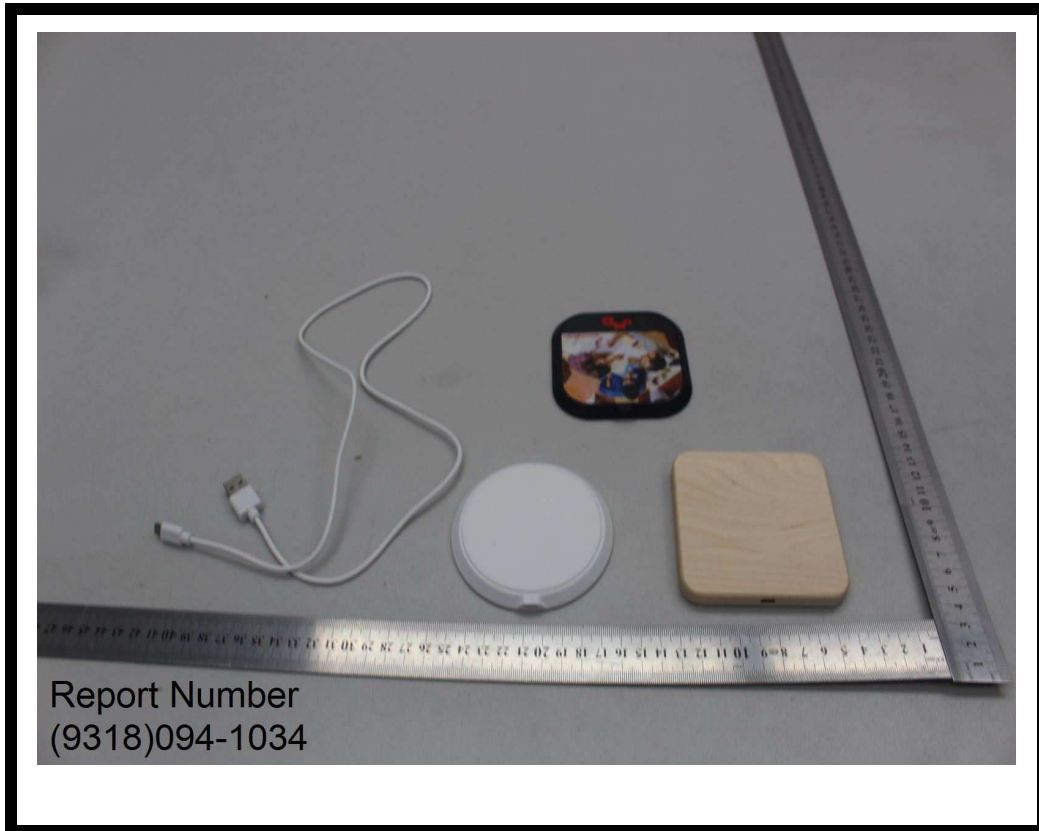
If there are questions or concerns on this report, please contact the following persons:

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FAX: (86)755 83439100
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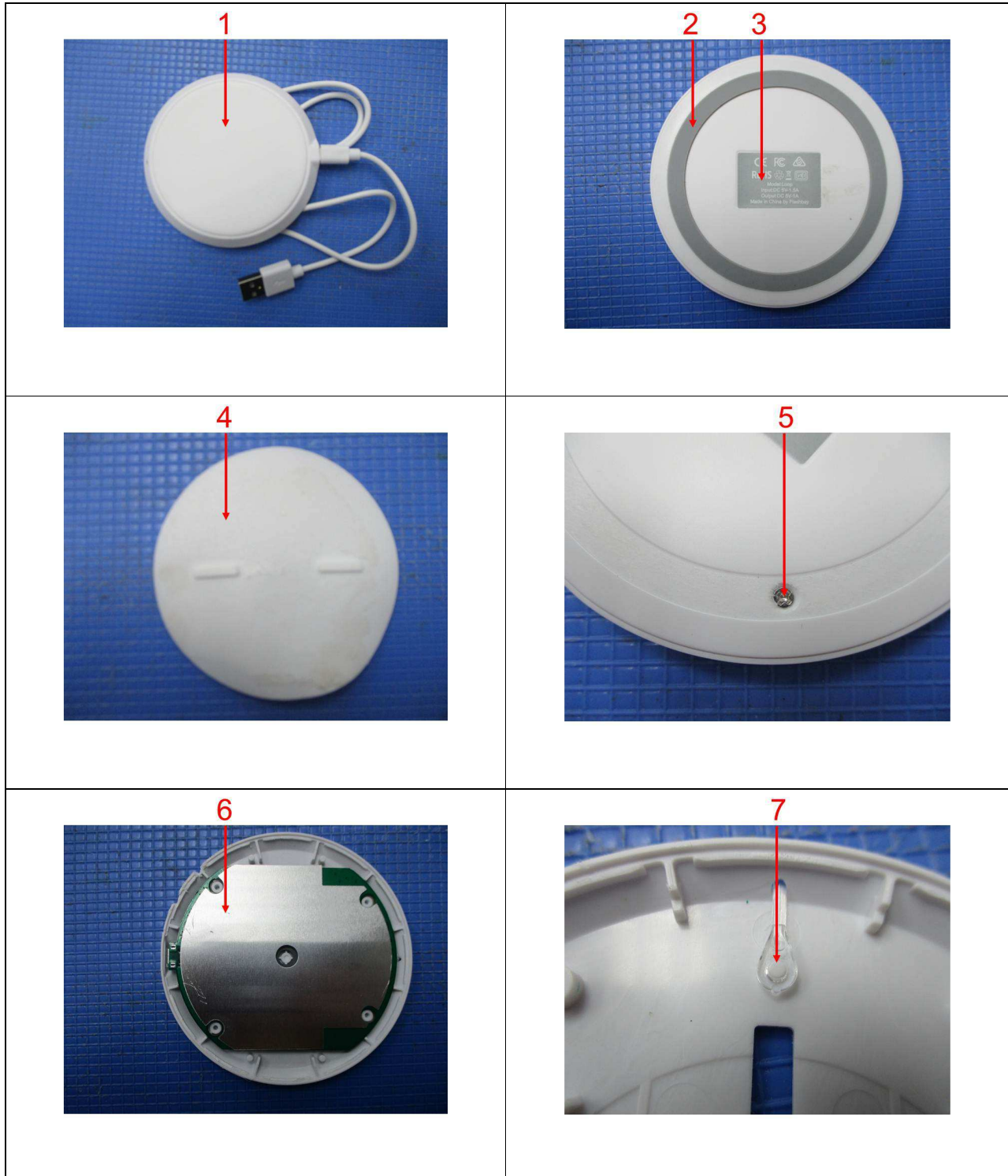


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Photo of the Submitted Sample



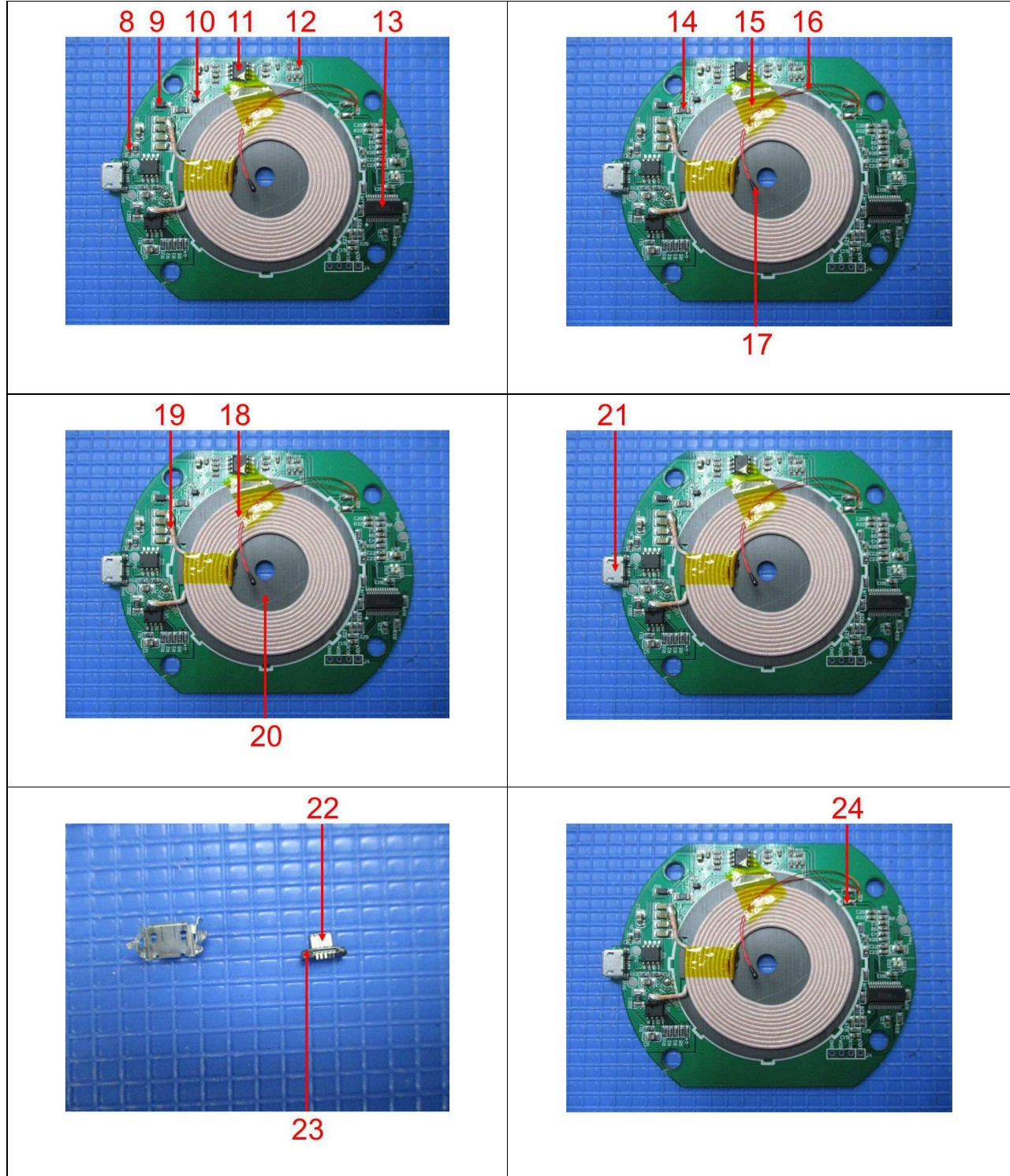
Photograph of test item(s)





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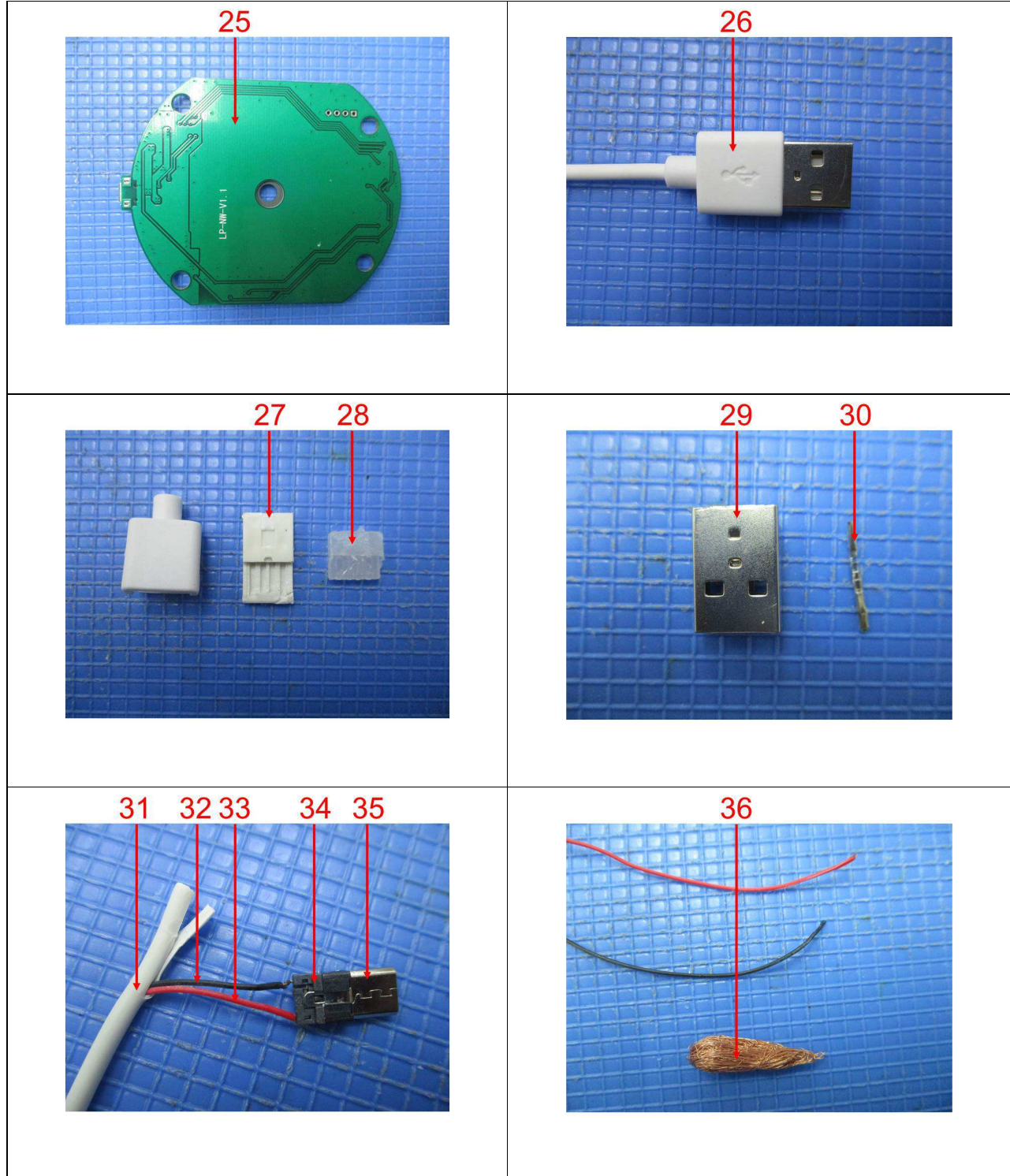
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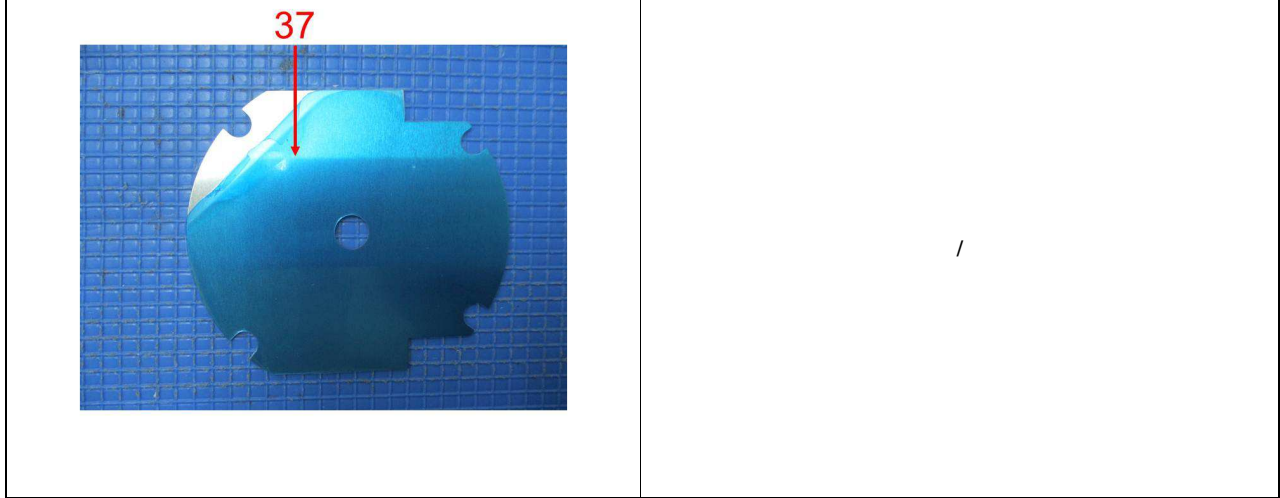
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TEST RESULT

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)

Test Method : See Appendix.

Test Item(s)	Item / Component Description(s) + Location(s)	Style(s)
1	White plastic (base)	-
2	Grey soft plastic (o ring)	-
3	White printed grey plastic with adhesive (label)	-
4	White soft plastic (cover)	-
5	Silvery metal (screw, base)	-
6	Silvery metal (plate, base)	-
7	White transparent plastic (led connector)	-
8	Brown body (smd capacitor" c1", pcb)	-
9	Black body (smd diode"zd1", pcb)	-
10	Black body (smd diode"d1", pcb)	-
11	Black body (ic"u3", pcb)	-
12	Silvery printed black body (smd resistor"r19", pcb)	-
13	Black body (ic"u4", pcb)	-
14	Black body (smd resistor"r1", pcb (-
15	Yellow transparent soft plastic with adhesive (tape, pcb)	-
16	Coppery metal (coil, pcb)	-
17	Black body (ec, pcb)	-
18	White fabric (sleeve, wire)	-
19	Coppery metal (wire)	-
20	Black ceramic (cover, pcb)	-
21	Silvery metal (case, plug, pcb)	-
22	Silvery metal (pin, plug, pcb)	-
23	Black plastic (insulation, plug, pcb)	-
24	Silvery solder (pcb)	-
25	Green pcb (pcb)	-
26	White soft plastic (case, usb)	-
27	Bone plastic (insulation, usb)	-
28	White transparent plastic (insulation, usb)	-
29	Silvery metal (case, plug)	-
30	Golden metal (pin, plug)	-
31	White plastic (sleeve, wire)	-
32	Black plastic (wire jacket)	-
33	Red plastic (wire jacket)	-
34	Black plastic (insulation, usb)	-
35	Silvery metal (case, usb)	-
36	Coppery metal (wire)	-
37	Blue transparent soft plastic (tape, connector plate)	-



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See Analytes and their corresponding Maximum Allowable Limit in Appendix

Parameter	Result						Conclusion
	Lead (Pb)	Cadmium (Cd)	Mercury (Hg)	Chromium VI (Cr VI)	PBBs	PBDEs	
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-
Test Item(s)	-	-	-	-	-	-	-
1	ND	ND	ND	ND	ND	ND	PASS
2	ND	ND	ND	ND	ND	ND	PASS
3	ND	ND	ND	ND	ND	ND	PASS
4	ND	ND	ND	ND	ND	ND	PASS
5	ND	ND	ND	Negative*	NA	NA	PASS
6	ND	ND	ND	ND	NA	NA	PASS
7	ND	ND	ND	ND	ND	ND	PASS
8	ND	ND	ND	ND	ND	ND	PASS
9	ND	ND	ND	ND	ND*	ND*	PASS
10	ND	ND	ND	ND	ND	ND	PASS
11	ND	ND	ND	ND	ND	ND	PASS
12	ND	ND	ND	ND	ND	ND	PASS
13	ND	ND	ND	ND	ND	ND	PASS
14	ND	ND	ND	ND	ND	ND	PASS
15	ND	ND	ND	ND	ND	ND	PASS
16	ND	ND	ND	ND	NA	NA	PASS
17	ND	ND	ND	ND	ND	ND	PASS
18	ND	ND	ND	ND	ND	ND	PASS
19	ND	ND	ND	ND	NA	NA	PASS
20	ND	ND	ND	ND	NA	NA	PASS
21	ND	ND	ND	ND	NA	NA	PASS
22	ND	ND	ND	ND	NA	NA	PASS
23	ND	ND	ND	ND	ND	ND	PASS
24	ND	ND	ND	ND	NA	NA	PASS
25	ND	ND	ND	ND	ND	ND	PASS
26	ND	ND	ND	ND	ND	ND	PASS
27	ND	ND	ND	ND	ND	ND	PASS
28	ND	ND	ND	ND	ND	ND	PASS
29	ND	ND	ND	ND	NA	NA	PASS
30	ND	ND	ND	ND	NA	NA	PASS
31	ND	ND	ND	ND	ND	ND	PASS
32	ND	ND	ND	ND	ND	ND	PASS
33	ND	ND	ND	ND	NA	NA	PASS
34	ND	ND	ND	ND	ND	ND	PASS
35	ND	ND	ND	Negative*	NA	NA	PASS
36	ND	ND	ND	ND	NA	NA	PASS
37	ND	ND	ND	ND	ND	ND	PASS



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Note / Key :

ND = Not detected
NR = Not requested
% = percent
Detection Limit : See Appendix.

“>” = Greater than
mg/kg = milligram(s) per kilogram = ppm = part(s) per million
10 000 mg/kg = 1 %

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.
- 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.



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TEST RESULT

Phthalates Test – Directive 2015/863/EU Amendment of European Parliament and Council Directive 2011/65/EU on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)

Test Method : With reference to draft International Standard IEC 62321-8.

Test Item(s)	Item / Component Description(s) + Location(s)	Style(s)
1	White plastic (base)	-
2	Grey soft plastic (o ring)	-
3	White printed grey plastic with adhesive (label)	-
4	White soft plastic (cover)	-
7	White transparent plastic (led connector)	-
9	Black body (smd diode"zd1", pcb)	-
10	Black body (smd diode"d1", pcb)	-
11	Black body (ic"u3", pcb)	-
13	Black body (ic"u4", pcb)	-
15	Yellow transparent soft plastic with adhesive (tape, pcb)	-
17	Black body (ec, pcb)	-
23	Black plastic (insulation, plug, pcb)	-
25	Green pcb (pcb)	-
26	White soft plastic (case, usb)	-
27	Bone plastic (insulation, usb)	-
28	White transparent plastic (insulation, usb)	-
31	White plastic (sleeve, wire)	-
32	Black plastic (wire jacket)	-
33	Red plastic (wire jacket)	-
34	Black plastic (insulation, usb)	-
37	Blue transparent soft plastic (tape, connector plate)	-

Maximum Allowable Limit:	DEHP, BBP, DBP & DIBP: 0.1% (Each)
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Tested Item(s)	Result			Conclusion
	Detected Analyte(s)	Conc.	Unit	
1+2+3	ND	ND	%	PASS
4+7+9	ND	ND	%	PASS
10+23+25	ND	ND	%	PASS
11+26+27	ND	ND	%	PASS
13+28+31	ND	ND	%	PASS
15+17+32	ND	ND	%	PASS
33+34+37	ND	ND	%	PASS

Note / Key :

ND = Not detected
 NR = Not requested
 % = percent
 Detection Limit (%) : 0.005

">" = Greater than
 mg/kg = milligram(s) per kilogram = ppm = part(s) per million
 10 000 mg/kg = 1 %

Remark : The list of phthalates is summarized in table of Appendix.

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 Analytes	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, j]	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
<p>NA = Not applicable</p> <p>^[a] Test method with reference to International Standard IEC 62321-3-1: 2013.</p> <p>^[b] Test method with reference to International Standard IEC 62321-5: 2013.</p> <p>^[c] Test method with reference to International Standard IEC 62321-4: 2017.</p> <p>^[d] Polymers and Electronics - Test method with reference to European Standard EN 62321-7-2: 2017.</p> <p>^[e] Metal - Test method with reference to International Standard IEC 62321-7-1: 2015^[i].</p> <p>^[f] Test method with reference to International Standard IEC 62321-6: 2015.</p> <p>^[g] Leather - Test method International Standard ISO 17075: 2007.</p> <p>^[h] Other Than Metal, Leather, Polymers and Electronics - Test method with reference to International Standard ISO 17075: 2007.</p> <p>^[i] The principle of this method was evaluated and supported by two studies organized by IEC TC 111 WG3. These studies were focused on detecting the presence of Cr VI in the corrosion protection coatings on metallic samples. 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</p> <p>^[j]</p>						



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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: 2013
- 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)

List of Phthalates:

No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.
1	Bis(2-ethylhexyl) phthalate (DEHP)	117-81-7	3	Dibutyl phthalate (DBP)	84-74-2
2	Butyl benzyl phthalate (BBP)	85-68-7	4	Diisobutyl phthalate (DIBP)	84-69-5

END