中国认可
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检测
TESTING
CNAS L6478

TEST REPORT

Reference No.	:	WTF16F1267800A1C
Applicant	:	Foshan Ronse Lighting Technology CO., LTD
Address	:	Liansha Industrial Zone, Jinsha, Danzao Town, Nanhai, Foshan, GuangDong, China.
Manufacturer	:	Foshan Ronse Lighting Technology CO., LTD
Address	:	Liansha Industrial Zone, Jinsha, Danzao Town, Nanhai, Foshan, GuangDong, China.
Sample Name	:	LED High Bay Light Series
Model No.	:	GK02C200
Reference Model No.	:	GK01A050, GK01A100, GK01A150, GK01A200, GK01B050, GK01B100, GK01B150, GK01B200, GK01C050, GK01C100, GK01C150, GK02C050, GK02C100, GK02C150, GK01C200, GK02A050, GK02A100, GK02A150, GK02A200, GK03A050, GK03A100, GK03A150, GK03A200, GK01D050, GK01D100, GK01D150, GK01D200, GK01E050, GK01E100, GK01E150, GK01E200, GK01F050, GK01F100, GK01F150, GK01F200, GK01G050, GK01G100, GK01G150, GK01G200, GK02D050, GK02D100, GK02D150, GK02D200, GK02E050, GK02E100, GK02E150, GK02E200, GK02F050, GK02F100, GK02F150, GK02F200, GK02G050, GK02G100, GK02G150, GK02G200, GK03D050, GK03D100, GK03D150, GK03D200, GK03E050, GK03E100, GK03E150, GK03E200, GK03F050, GK03F100, GK03F150, GK03F200, GK03G050, GK03G100, GK03G150, GK03G200
Trademark	:	荣仕照明® RONSE 我们的阳光
Date of Receipt sample	:	2016-12-14 & 2017-01-03
Date of Test	:	2016-12-14 to 2017-01-03
Date of Issue	:	2017-01-07
Test Result	:	Please refer to next page (s)

Remarks:
The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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Test Requested.....	:	In accordance with the RoHS Directive 2011/65/EU
Test Method	:	1) With Reference to IEC 62321-2:2013, disassembly, disjointment and mechanical sample preparation 2) With Reference to IEC 62321-3-1:2013, screening - Lead, mercury, cadmium, total chromium and total bromine by X-ray fluorescence spectrometry 3) With reference to IEC62321-4:2013, determination of Mercury by ICP-OES 4) With reference to IEC62321-5:2013, determination of Lead and Cadmium by ICP-OES 5) With reference to IEC 62321: 2008 and IEC 62321-7-1:2015, determination of Hexavalent Chromium by UV-Vis 6) With reference to IEC62321-6:2015, determination of PBBs and PBDEs by GC-MS
Test Conclusion.....	:	Based on the performed tests on the submitted samples, the results comply with the RoHS Directive 2011/65/EU

Test Results:

Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
1	Semi-transparent plastic cover	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
2	Semi transparent rubber gasket	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
3	White glue	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
4	Grey glue	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
5	Semi-transparent glue	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
6	Silvery metal shell without black coating	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
7	Black coating	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
8	Silvery metal shackle	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		

Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
9	Silvery metal screw	Cd	BL	Cr^{6+} :Negative	Comply
		Pb	BL		
		Hg	BL		
		Cr	IN		
		Br	BL		
10	Silvery metal screw	Cd	BL	Cr^{6+} :Negative	Comply
		Pb	BL		
		Hg	BL		
		Cr	IN		
		Br	BL		
11	Silvery metal washer	Cd	BL	Cr^{6+} :Negative	Comply
		Pb	BL		
		Hg	BL		
		Cr	IN		
		Br	BL		
12	Silvery metal screw	Cd	BL	Cr^{6+} :Negative	Comply
		Pb	BL		
		Hg	BL		
		Cr	IN		
		Br	BL		
13	Silvery metal screw	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
14	Silvery metal cover without black coating	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
15	White rubber sleeve	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
16	Silvery metal cap	Cd	IN	Cd :53 **#Pb :3.06×10^4**	Comply
		Pb	**OL**		
		Hg	BL		
		Cr	BL		
		Br	BL		

Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
17	Silvery metal sleeve	Cd	IN	Cd :66 #**Pb :3.53×10^4**	Comply
		Pb	**OL**		
		Hg	BL		
		Cr	BL		
		Br	BL		
18	White rubber sleeve	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
19	Silvery metal washer	Cd	BL	Cr^{6+} :Negative	Comply
		Pb	BL		
		Hg	BL		
		Cr	IN		
		Br	BL		
20	Solder	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
21	Blue plastic wire covering	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
22	Coppery metal wire	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
23	Brown plastic wire covering	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
24	Black plastic wire jacket	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		

Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
25	Silvery plastic adhesive label with black printing	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
26	Yellow-green plastic wire covering	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
27	Black heat-shrinkable tube	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
28	Chip IC	Cd	BL	PBBs :ND PBDEs :ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
29	Chip resistor	Cd	BL	Cr^{6+} :ND	Comply
		Pb	***OL**		
		Hg	BL		
		Cr	IN		
		Br	BL		
30	Chip fuse	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
31	Blue body of resistor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
32	Silvery metal pin of resistor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		

Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
33	Chip capacitor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
34	Blue body of resistor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
35	Silvery metal pin of resistor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
36	Solder	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
37	Chip rectifier	Cd	BL	PBBs :ND PBDEs :ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
38	Silvery metal plate with white coating	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
39	Chip LED	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
40	Brown plastic wire covering	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		

Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
41	Coppery metal wire	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
42	Blue plastic wire covering	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
43	Yellow-green plastic wire covering	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
44	Golden metal terminal	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
45	Black plastic wire jacket	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
46	Silvery metal terminal	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
47	White plastic adhesive label with multicolour printing	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		

Remark:

(1) Results are obtained by EDXRF for primary screening, and further chemical testing by ICP (for Cd, Pb, 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 62321-3-1: 2013 (unit: mg/kg)

Element	Polymer	Metal	Composite Materials
Cd	BL ≤ (70-3σ) < IN < (130+3σ) ≤ OL	BL ≤ (70-3σ) < IN < (130+3σ) ≤ OL	LOD < IN < (150+3σ) ≤ OL
Pb	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (500-3σ) < IN < (1500+3σ) ≤ OL
Hg	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (500-3σ) < IN < (1500+3σ) ≤ OL
Cr	BL ≤ (700-3σ) < IN	BL ≤ (700-3σ) <IN	BL ≤ (500-3σ) < IN
Br	BL ≤ (300-3σ) < IN	--	BL ≤ (250-3σ) < IN

BL= Below Limit OL= Over Limit LOD = Limit of Detection -- = Not Regulated

(2) "IN" expresses the inconclusive region, and further chemical testing to confirm whether it complies with the requirement of RoHS Directive.

(3) The XRF screening test for RoHS elements – the reading may be different to the actual content in the sample be of non-uniformity composition.

(4) ppm = mg / kg, based on the dry weight of tested sample.

(5) ND = Not Detected, less than the value of Method Detection Limit.

(6) NA = Not Applicable, as the XRF screening test result was below the limit, it was not need to conduct the wet chemical testing.

(7) MDL= Method Detection Limit in wet chemical test

Test Items	Pb	Cd	Hg	Cr^{6+}		PBB	PBDE
Units	mg/kg	mg/kg	mg/kg	mg/kg	$\mu g/cm^2$	mg/kg	mg/kg
MDL	2	2	2	2	0.1	5	5

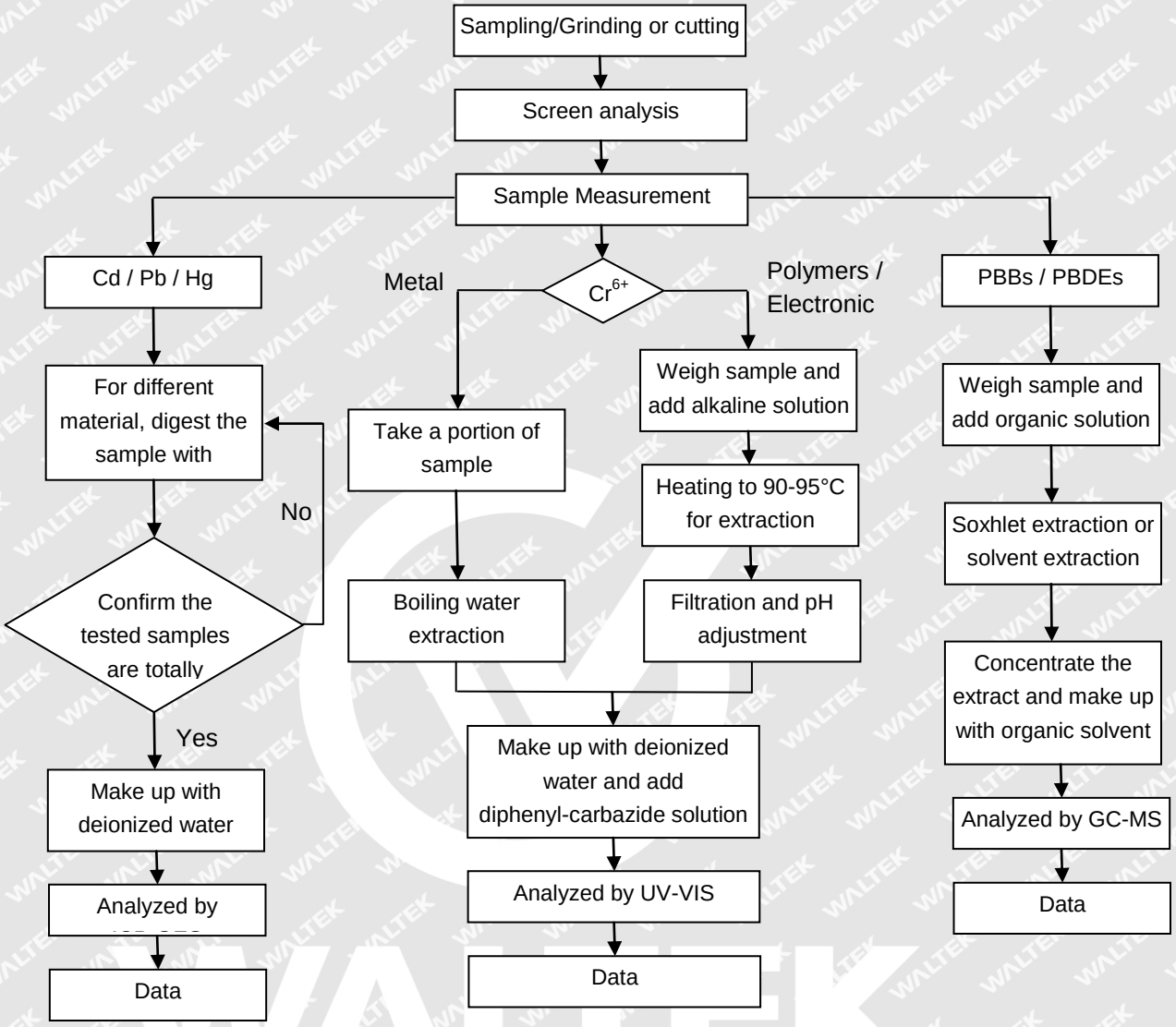
The MDL for single compound of PBBs and PBDEs is 5mg/kg, MDL of Cr^{6+} for polymer and composite sample is 2mg/kg and MDL of Cr^{6+} for metal sample is 0.1μg/cm^2.

(8) According to IEC 62321-7-1:2015, determined of Cr^{6+} on metal sample by boiling water extraction test method, and result is shown as Positive/Negative.
Boiling water extraction:
Negative = Absence of Cr^{6+} coating, the detected concentration in boiling water extraction solution is less than 0.10ug/cm^2.
Positive = Presence of Cr^{6+} coating, the detected concentration in boiling water extraction solution is greater than 0.13ug/cm^2.
Information on storage conditions and production date of the tested sample is unavailable and thus Cr^{6+} results represent status of the sample at the time of testing.

(9) * = According to the declaration from client, the source of lead in test sample could be from the glass or ceramic material of that electronic component which is exempted by Directive 2011/65/EU.

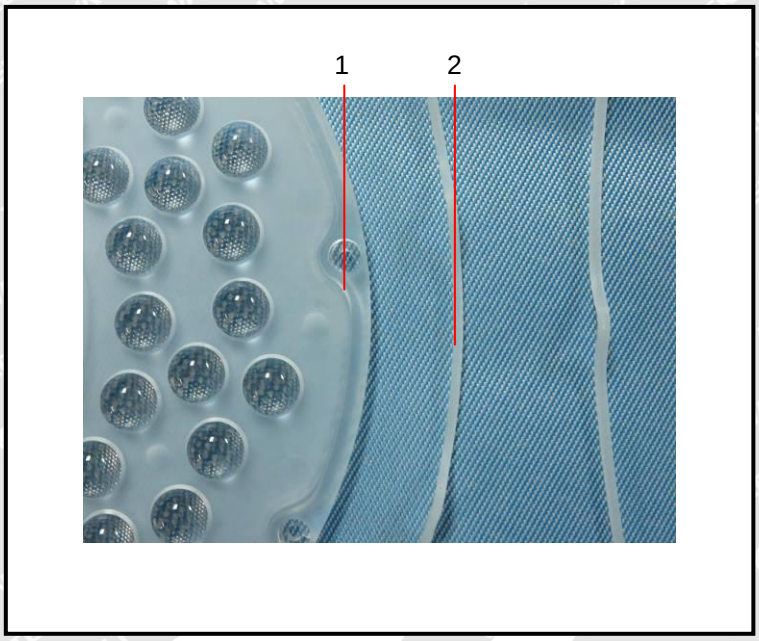
(10)# = According to the declaration from client, the source of lead in test sample could be from copper alloy while lead as copper alloy containing up to 4% lead by weight is exempted by Directive 2011/65/EU.

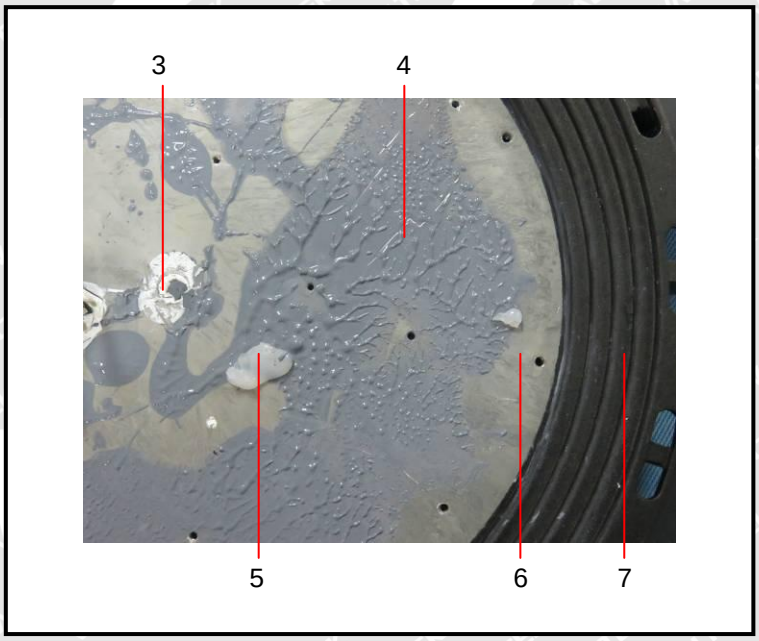
Measurement Flowchart:

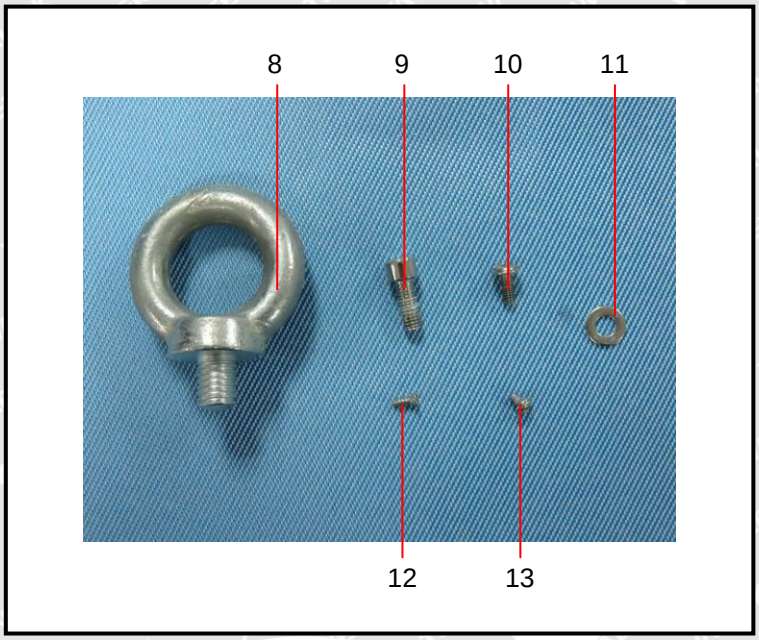


Sample Photo:

Photograph of parts tested:



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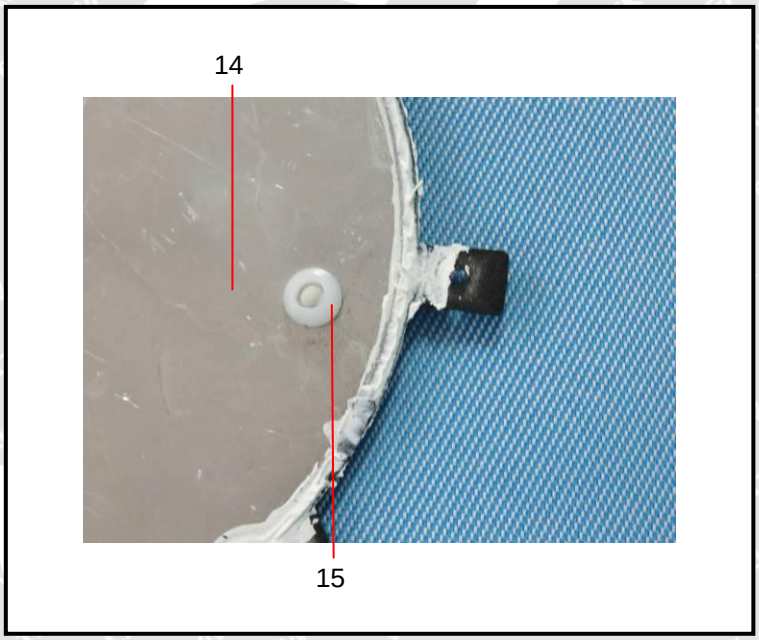
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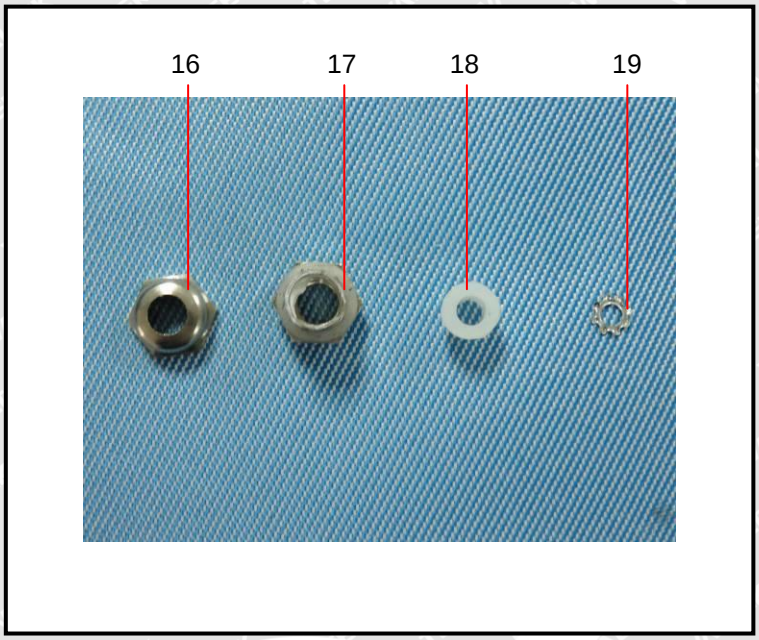
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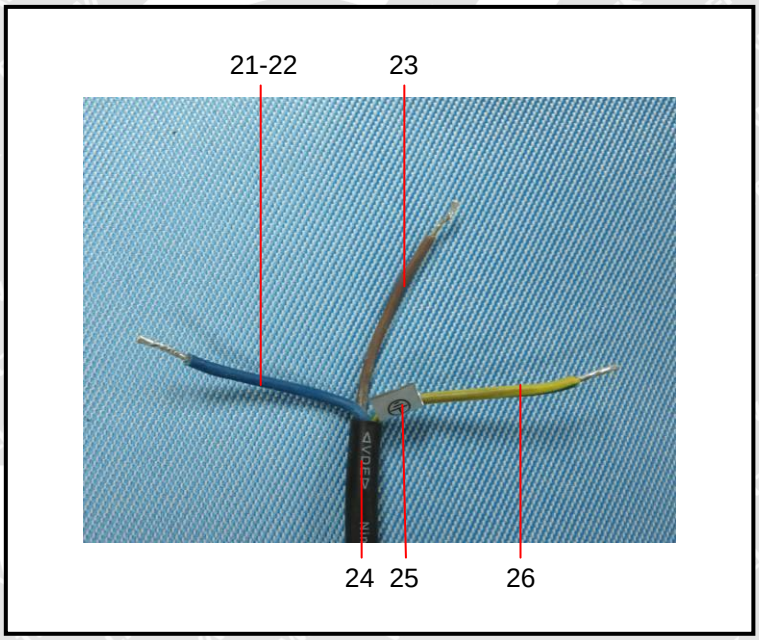
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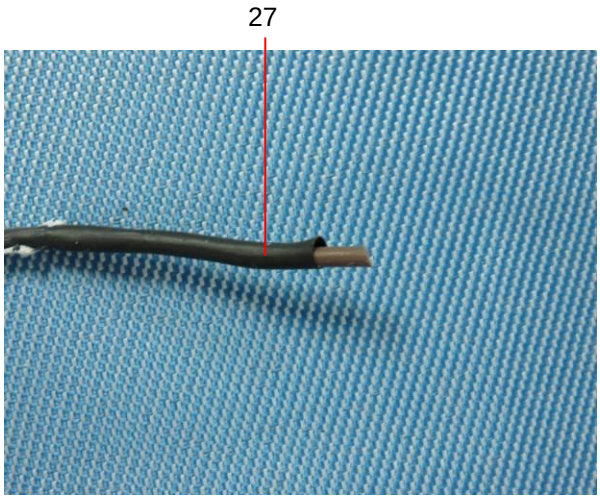
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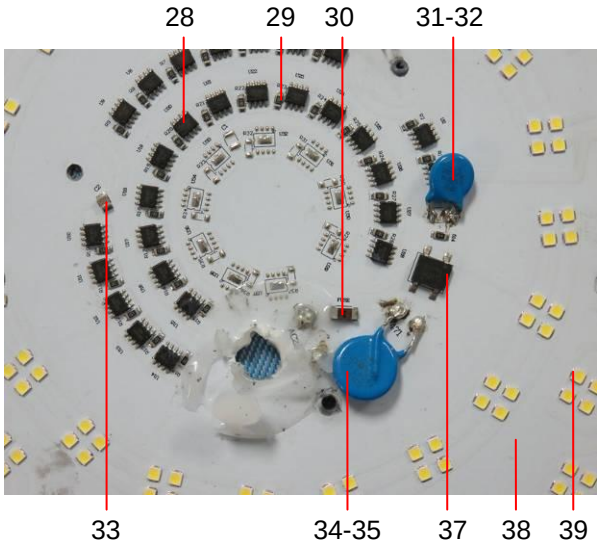
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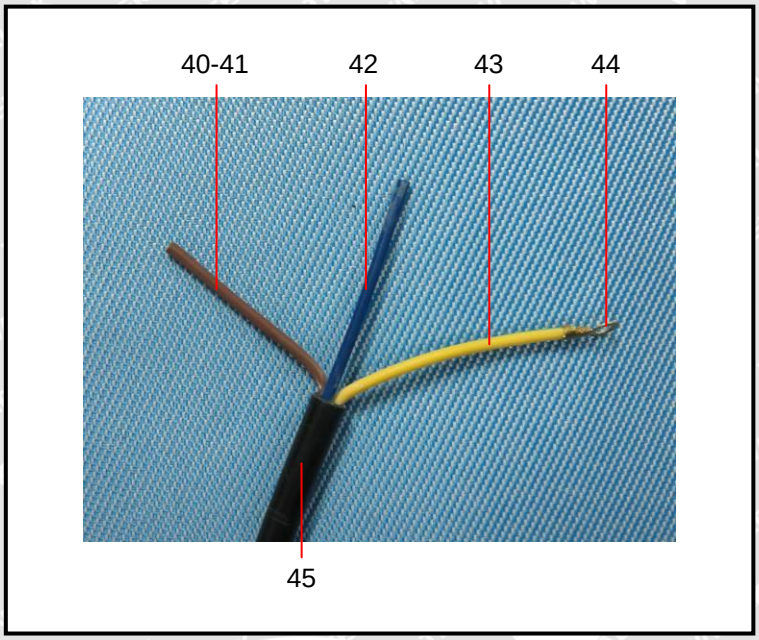
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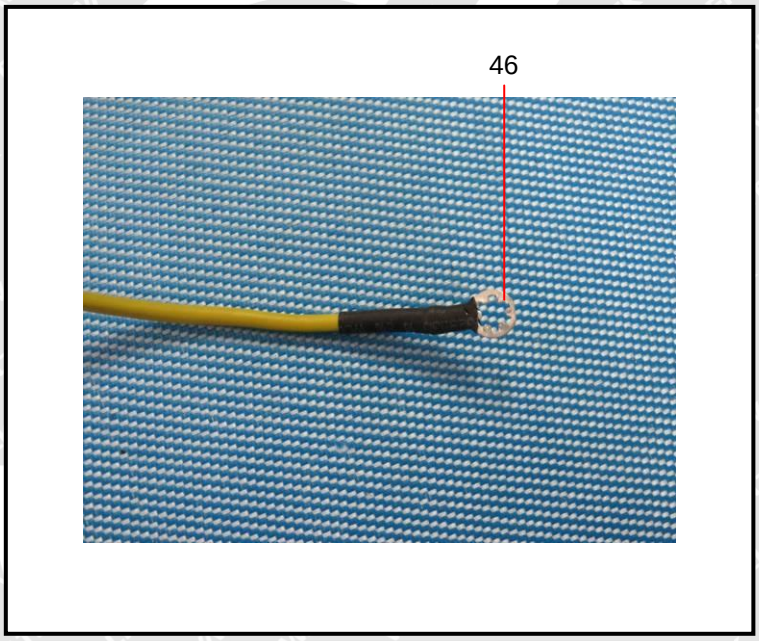
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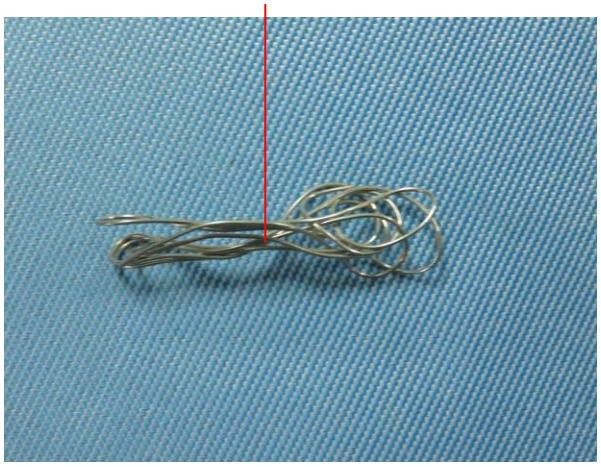

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