



ROHS TEST REPORT

Report Reference No : DER2200440081038

Applicant :

Address :

Report on the submitted sample said to be:

Sample Name : LED High Bay Light

Trade Mark : N/A

Model No. : BT-PT80W, BT-PT100W, BT-PT120W, BT-PT150W, BT-PT200W

Sample Received Date : March 09, 2022

Testing Period : March 12, 2022 to March 31, 2022

Test location : Shenzhen De-Testing Detection Co., Ltd.

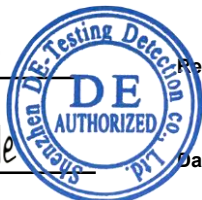
Room 202, Building 3, Xin Nan Tian Industrial Area, No.106, Dan Zi Road,
Lao Keng Community, Long Tian Street, Ping Shan District, Shenzhen

Test Requested	Result
1 As specified by the client, to determine Pb, Cd, Hg, Cr(VI), PBBs&&PBDEs content in the submitted sample in accordance with EU Directive 2011/65/EU (ROHS 2.0) and to determine DIBP, DEHP, DBP&&BBP content in the submitted sample in accordance with EU Directive 2015/863 (RoHS, Previously 2002/95/EC).	Pass

*****FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S)*****

Tested by : Arin wang Reviewed by : Simon Yao

Approved by : Baton He Date : April 19, 2022



TEST RESULT:

1.1 EU Directive 2011/65/EU (ROHS, Previously 2002/95/EC) - XRF

Method: With reference to IEC 62321-3-1:2013

Analysis was performed by X-ray Fluorescence Spectrometry (XRF)

No.	Specimen Description	Result(s)				
		Br	Pb	Hg	Cd	Cr
1	Black Iron shell	BL	BL	BL	BL	BL
2	Powder plastic wires	BL	BL	BL	BL	BL
3	Black wire sheath	BL	BL	BL	BL	BL
4	Pink wires	BL	BL	BL	BL	BL
5	Iron shell	BL	BL	BL	BL	BL
6	Stainless steel screw caps	BL	BL	BL	BL	BL
7	Blue capacitor	BL	BL	BL	BL	BL
8	Brown wires	BL	BL	BL	BL	BL
9	Blue wires	BL	BL	BL	BL	BL
10	Yellow-green wires	BL	BL	BL	BL	BL
11	PCB	BL	BL	BL	BL	BL
12	Blue capacitor	BL	BL	BL	BL	BL
13	White wires	BL	BL	BL	BL	BL
14	Yellow plastic	BL	BL	BL	BL	BL
15	Pink wires	BL	BL	BL	BL	BL
16	Purple wire	BL	BL	BL	BL	BL
17	Copper wire	BL	BL	BL	BL	BL
18	Green capacitor	BL	BL	BL	BL	BL
19	Electrical conduit	BL	BL	BL	BL	BL
20	Blue capacitor	BL	BL	BL	BL	BL
21	Red wire	BL	BL	BL	BL	BL
22	White wires	BL	BL	BL	BL	BL
23	iron	BL	BL	BL	BL	BL
24	Iron absorbing stone	BL	BL	BL	BL	BL
25	Screw caps	BL	BL	BL	BL	BL
26	Orange capacitors	BL	BL	BL	BL	BL
27	Copper wire	BL	BL	BL	BL	BL
28	Black rubber	BL	BL	BL	BL	BL
29	Black capacitance	BL	BL	BL	BL	BL
30	PPS lampshade	BL	BL	BL	BL	BL
31	Tempered lampshade	BL	BL	BL	BL	BL
32	Stainless steel screws	BL	BL	BL	BL	BL
33	White rubber	BL	BL	BL	BL	BL
34	Plastic sheet	BL	BL	BL	BL	BL
35	PU circle	BL	BL	BL	BL	BL
36	Black plastic ring	BL	BL	BL	BL	BL



No.	Specimen Description	Result(s)				
		Br	Pb	Hg	Cd	Cr
37	toughened glass	BL	BL	BL	BL	BL

Note:	(1)	Results were obtained by XRF for primary screening, and further chemical testing by ICP (for Cd, Pb, Hg), UV-VIS (for CrVI) and GC/MS (for PBBs/PBDEs) are recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321: 2013.
	BL	= Below Limit by XRF analysis
	OL	= Over Limit by XRF analysis
	X	= Inconclusive
	LOD	= Limit of Detection
	(2)	The XRF screening test for RoHS elements – The reading may be different to the actual content in the sample be of non-uniformity composition.
	(3)	The maximum permissible limit is quoted from the EU Directive 2011/65/EU Annex II

Element	Unit	Polymer	Metal	Composite Material
Cd	mg/kg	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$LOD < X < (150+3\sigma) \leq OL$
Pb	mg/kg	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Hg	mg/kg	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Br	mg/kg	$BL \leq (300-3\sigma) < X$	--	$BL \leq (250-3\sigma) < X$
Cr	mg/kg	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$
ROHS Restricted Substances		Maximum Concentration Value (by weight in homogenous materials)		
Lead (Pb)		0.1%		
Cadmium (Cd)		0.01%		
Mercury (Hg)		0.1%		
Hexavalent Chromium (Cr VI)		0.1%		
Polybrominated biphenyls (PBBs)		0.1%		
Polybrominated Diphenylethers (PBDEs)		0.1%		
Diisobutyl phthalate (DIBP)		0.1%		
Phthalic acid (DEHP)		0.1%		
Dibutyl phthalate (DBP)		0.1%		
Butyl benzyl phthalate (BBP)		0.1%		

1.2 EU Directive 2015/863 (RoHS, Previously 2002/95/EC) - Phthalates

Method: With reference to IEC 62321-6:2015

Analysis was performed by Gas Chromatography Mass Spectrometer (GC-MS)

No.	Specimen Description	Result(s)			
		DIBP	DEHP	DBP	BBP
1	Black Iron shell	ND	ND	ND	ND
2	Powder plastic wires	ND	ND	ND	ND
3	Black wire sheath	ND	ND	ND	ND
4	Pink wires	ND	ND	ND	ND
5	Iron shell	ND	ND	ND	ND
6	Stainless steel screw caps	ND	ND	ND	ND
7	Blue capacitor	ND	ND	ND	ND
8	Brown wires	ND	ND	ND	ND
9	Blue wires	ND	ND	ND	ND
10	Yellow-green wires	ND	ND	ND	ND
11	PCB	ND	ND	ND	ND
12	Blue capacitor	ND	ND	ND	ND
13	White wires	ND	ND	ND	ND
14	Yellow plastic	ND	ND	ND	ND
15	Pink wires	ND	ND	ND	ND
16	Purple wire	ND	ND	ND	ND
17	Copper wire	ND	ND	ND	ND
18	Green capacitor	ND	ND	ND	ND
19	Electrical conduit	ND	ND	ND	ND
20	Blue capacitor	ND	ND	ND	ND
21	Red wire	ND	ND	ND	ND
22	White wires	ND	ND	ND	ND
23	iron	ND	ND	ND	ND
24	Iron absorbing stone	ND	ND	ND	ND
25	Screw caps	ND	ND	ND	ND
26	Orange capacitors	ND	ND	ND	ND
27	Copper wire	ND	ND	ND	ND
28	Black rubber	ND	ND	ND	ND
29	Black capacitance	ND	ND	ND	ND
30	PPS lampshade	ND	ND	ND	ND
31	Tempered lampshade	ND	ND	ND	ND
32	Stainless steel screws	ND	ND	ND	ND
33	White rubber	ND	ND	ND	ND



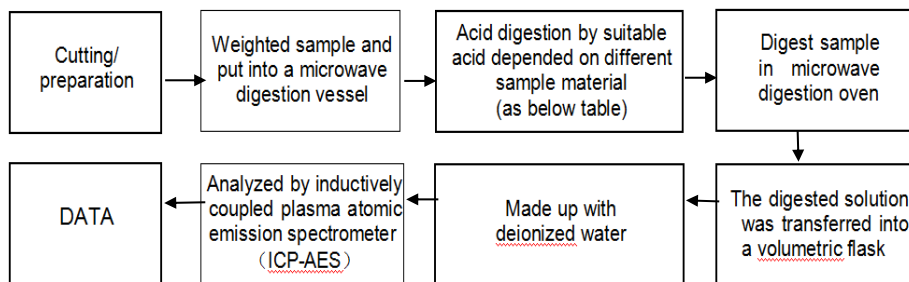
34	Plastic sheet	ND	ND	ND	ND
35	PU circle	ND	ND	ND	ND
36	Black plastic ring	ND	ND	ND	ND
37	toughened glass	ND	ND	ND	ND
MDL		0.005%	0.005%	0.005%	0.005%
Permissible Limit		0.1%	0.1%	0.1%	0.1%

Note:	-	% = percentage by weight
	-	MDL = Method Detection Limit
	-	ND = Not Detected (lower than MDL)
	-	1% = 10000 mg/kg = 10000 ppm
	-	The maximum permissible limit is quoted from the EU Directive 2011/65/EU Annex II

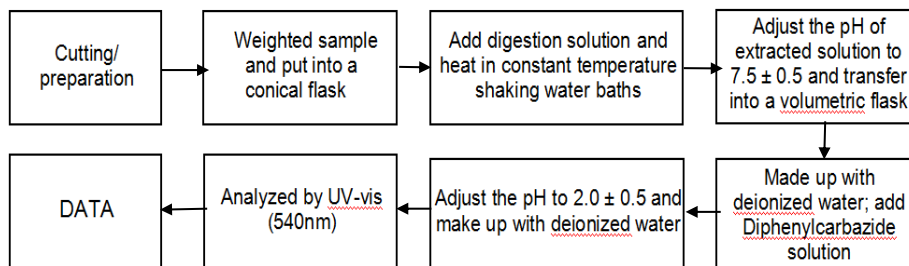
Test Flow chart

1. Test Flowchart for Cd / Pb /Hg content

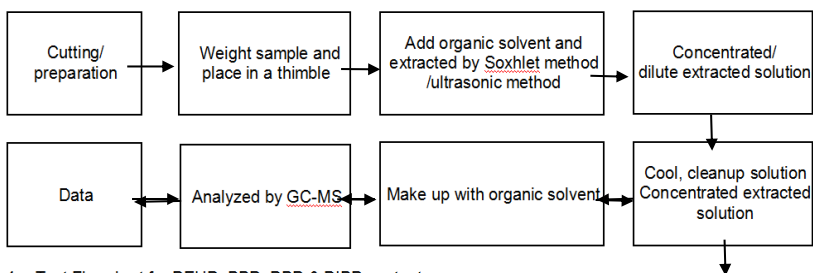
These samples were dissolved totally by pre-conditioning method according to below flow chart.



2. Test Flowchart for Cr⁶⁺ content



3. Test Flowchart for PBBs & PBDEs content



4. Test Flowchart for DEHP, BBP, DBP & DIBP content

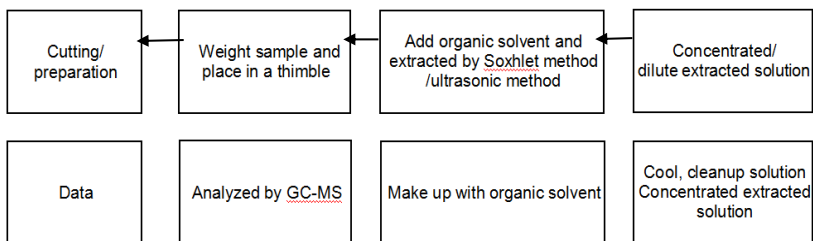


Table:

	Digestion Acid
Steel, copper, aluminum, solder	Aqua regia, HNO ₃ , HCl, HF, H ₂ O ₂
Glass	HNO ₃ /HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO ₃
Plastic	H ₂ SO ₄ , H ₂ O ₂ , HNO ₃ , HCl
Others	Any acid to total digestion



PHOTO OF THE MAIN TEST SAMPLE

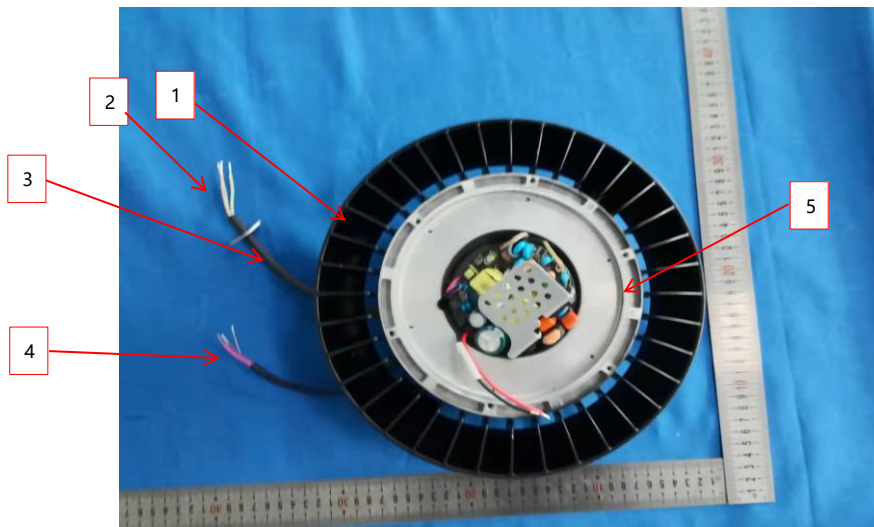


Fig. 1 - Front view



Fig. 2 - Rear view

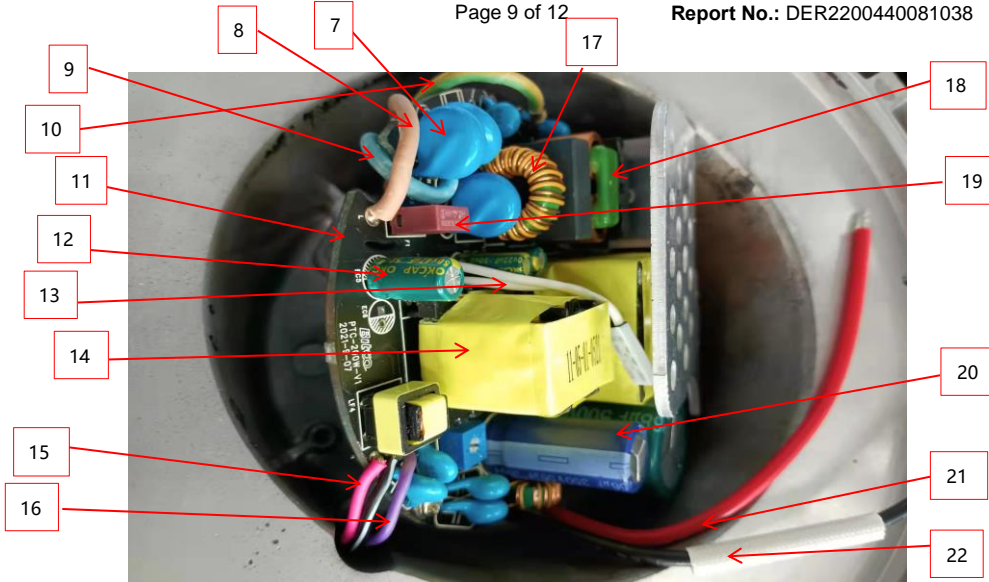


Fig. 3 - Partial view

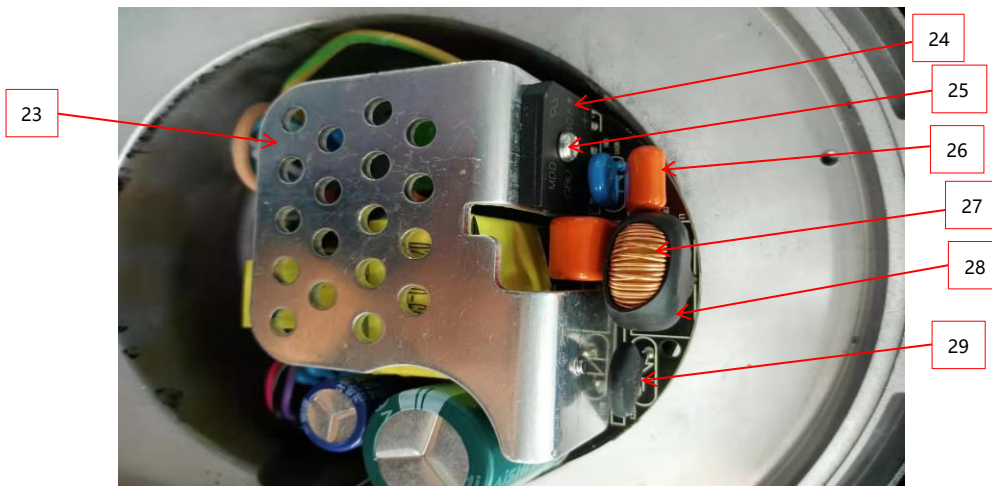


Fig. 4 -Partial view

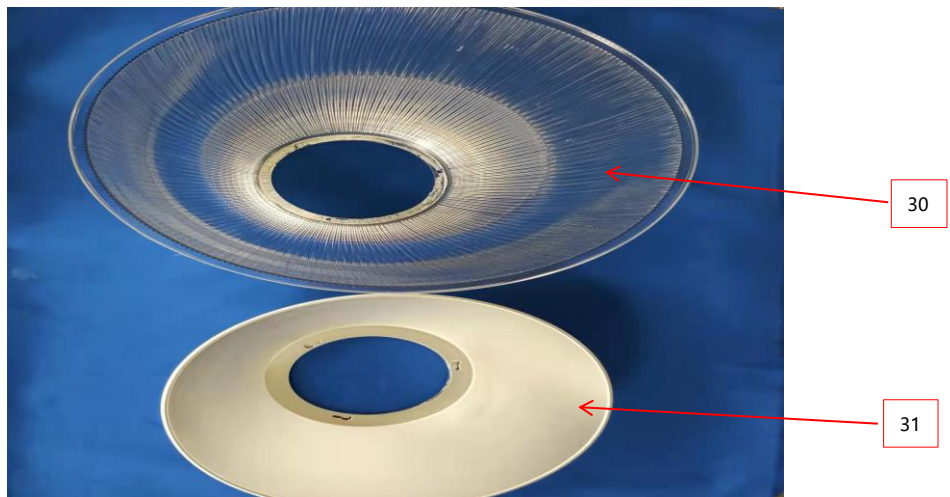


Fig. 5 -Protective cover

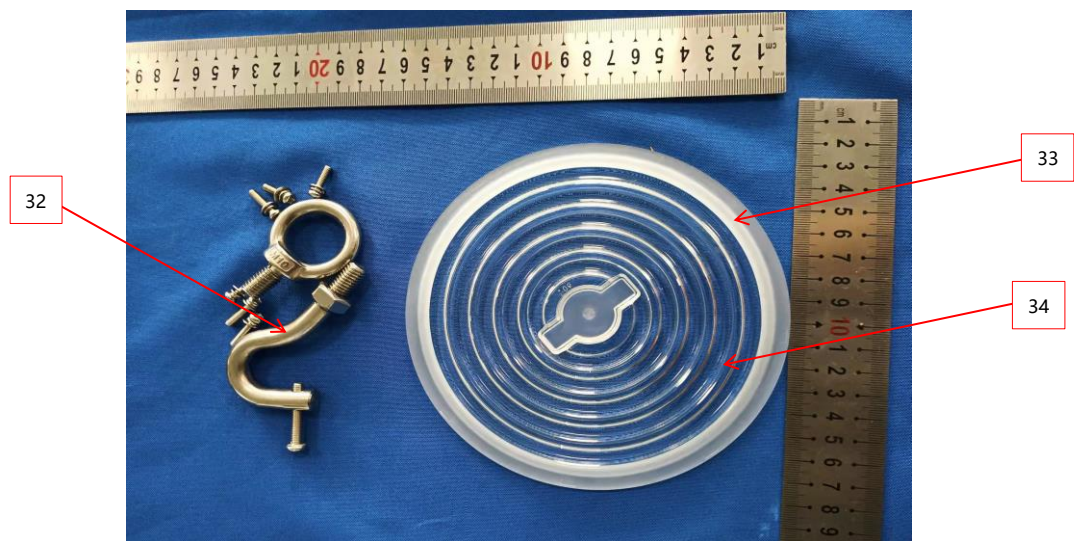


Fig. 6 -Some accessories



Fig. 7 -Some accessories

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