

NO.: B-R14096158 Date: Apr. 25, 2014 Page 1 of 9

Customer: Everbright Electronics (Ningbo) Co., Ltd.

Address: NO. 1525, Juxian Road, Hi-tech Park, Ningbo, Zhejiang, China

**Client No.:** 05712362

Report on the submitted sample said to be: Sample name: LED Bulb Light (Dimmable)

Model: EBT-QPD-01, EBT-QPD-02, EBT-QPD-03, EBT-QPD-04, EBT-QPD-05, EBT-LZD-01,

EBT-LZD-02, EBT-LZD-03, EBT-LZD-04, EBT-ZG-E40, EBT-ZG-E38

Sample Model: EBT-QPD-01

Manufacturer: Everbright Electronics (Ningbo) Co., Ltd.

Address: NO. 1525, Juxian Road, Hi-tech Park, Ningbo, Zhejiang, China

Sample received date: Apr. 17, 2014

Testing period: From Apr. 18, 2014 to Apr. 25, 2014



Company No. 07113834

### Testing method:

(1) With reference to IEC 62321:2008 Ed 1.0, IEC 62321:2013 Ed 1.0

(2) Chemical test:

Testing Item	Pretreatment method	Measuring instrument	MQL
Lead (Pb)	IEC 62321-5:2013 Ed 1.0, section 7.3	ICP-OES	2mg/kg
Cadmium (Cd)	IEC 62321-5:2013 Ed 1.0, section 7.3	ICP-OES	2 mg/kg
Mercury (Hg)	IEC 62321-4:2013 Ed 1.0, section 7.2	ICP-OES	2 mg/kg
Chromium (Cr VI)	IEC 62321:2008 Ed 1.0, Annex C	UV-VIS	2 mg/kg 0.02 mg/kg*
PBBs/ PBDEs	IEC 62321:2008 Ed 1.0, Annex A	GC-MS	5 mg/kg

Note:\*0.02mg/kg refers to the MQL of sample extraction liquid.

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Tested samples .....: Screening components of submitted samples

(2011/65/EU)

Result..... Pass

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

Written by: \_\_\_\_\_ Inspected by: \_\_\_\_\_ Approved by \_\_\_\_\_

(Joseph)



NO.: B-R14096158 Date: Apr. 25, 2014 Page 2 of 9

#### **Test Results:**

Part No.	Sample Name		XRF Results	Chemical Confirmation Result(mg/kg)
1		Pb	N.D.	
		Cd	N.D.	
	Metal lamp cap	Hg	N.D.	
		Cr	N.D.	
		Br	N.A.	
		Pb	N.D.	
		Cd	N.D.	
2	White plastic shell	Hg	N.D.	
		Cr	N.D.	
		Br	N.D.	
		Pb	N.D.	
		Cd	N.D.	
3	Opal lamp cover	Hg	N.D.	
		Cr	N.D.	
		Br	N.D.	
		Pb	N.D.	
		Cd	N.D.	
4	White PVC wire	Hg	N.D.	
		Cr	N.D.	
		Br	N.D.	
5		Pb	N.D.	
		Cd	N.D.	
	Core of wire	Hg	N.D.	
		Cr	N.D.	
		Br	N.A.	
		Pb	N.D.	
		Cd	N.D.	
6	Gray metal	Hg	N.D.	
		Cr	N.D.	
		Br	N.A.	
			1	



NO.: B-R14096158 Date: Apr. 25, 2014 Page 3 of 9

Part No.	Sample Name	XRF Results		Chemical Confirmation Result(mg/kg)
7	РСВ	Pb	N.D.	
		Cd	N.D.	
		Hg	N.D.	
		Cr	N.D.	
		Br	N.D.	
8	LED	Pb	N.D.	
		Cd	N.D.	
		Hg	N.D.	
		Cr	N.D.	
		Br	N.D.	
9	Solder	Pb	N.D.	
		Cd	N.D.	
		Hg	N.D.	
		Cr	N.D.	
		Br	N.A.	



### Rohs Test Report

NO.: B-R14096158 Date: Apr. 25, 2014 Page 4 of 9

#### Remark:

N.D. = Not Detected

N.A. = Not Applicable

- -Specimens, which requested to determine Cadmium, Mercury and Lead Content by chemical test, have been dissolved completely.
- mg/kg = ppm
- (#1) = The screening result was found in the region of inconclusive (See Table B) and further chemical tests were suggested.
- (#2) = Cr or Br were detected above the screening Limit (See Table B) and further chemical tests were suggested.
- (#3) = Exceeded Screening Limit but if sample is electronic component. The lead content in glass of electronic components is exempted from the requirement of RoHS Directive (2011/65/EU)
- (#4) = Exceeded Screening Limit but if sample is copper alloy. The lead content which is under 4% (40000ppm) is exempted from the requirement of RoHS Directive (2011/65/EU)

OL= OVER LIMIT

**BL=BELOW LIMIT** 



NO.: B-R14096158 Date: Apr. 25, 2014 Page 5 of 9

#### Remark:

- (A) "BELOW LIMIT" (BL) or "OVER LIMIT" (OL) determination will be set at 30 % (50 % for composite materials) less than or greater than the limit, respectively. The margins of safety have been agreed upon based on the experience of many experts and practitioners in the industry. Further explanation for this approach to estimating uncertainty.
- -The symbol "X" marks the region, where further investigation is necessary.
- -LOD means Limit of Detection.
- -The term "3σ" expresses the repeatability of the analyzer at the action level.

(B) XRF Screening Limit in mg/kg for regulated elements in various matrices.

Polymer materials	Metallic materials	Composite materials	
BL ≤(70 -3σ)< X <( 130+3σ)≤OL	BL ≤(70 -3σ) < X < (70 +3σ)≤OL	LOD < X < (150 +3σ) ≤OL	
BL≤ (700 -3σ) < X < (1300 +3σ)≤OL	BL≤ (700 -3σ) < X < (1300	BL≤ (500 -3σ) < X < (1500 +3σ)≤OL	
BL3 (700 -30) < X < (1300 +30)30L	+3σ)≤OL		
BL≤ (700 -3σ) < X < (1300 +3σ)≤OL	BL≤ (700 -3σ) < X < (1300	BL≤ (500 -3σ) < X < (1500 +3σ)≤OL	
DE3 (700 -30) \ X \ (1300 130)30E	+3σ)≤OL		
BL ≤ (700-3σ)< X	BL ≤ (700-3σ)< X	BL ≤ (500-3σ)< X	
BL ≤( 300-3σ)< X	Not Applicable	BL ≤(250 -3σ)< X	

### (C) RoHS Requirement

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

The above limits were quoted from 2011/65/EU and amendment 2005/618/EC.



NO.: B-R14096158 Date: Apr. 25, 2014 Page 6 of 9

#### Remark:

- -Chemical confirmation tests were conducted to verify the inconclusive results, Chromium (VI) (Cr<sup>6+</sup>), Polybrominated biphenyls(PBBs) and Polybrominated diphenyl ethers(PBDEs) content.
- -As requested by the applicant, only components shown in this report were screened by XRF spectroscopy for 2011/65/EU, other components were not screened included in this report.

#### **Disclaimers:**

This XRF Screening Report is for reference purposes only. The applicant shall make its/his/her own judgment as to whether the information provided in this XRF Screening Report is sufficient for its/his/her purposes. The results shown in this XRF Screening Report will differ based on various factors, including but not limited to, the sample size, thickness, area, surface flatness, equipment parameters and matrix effect

(e.g. Plastic, Rubber, Metal, Glass, Ceramic etc.). Further wet chemical pre-treatment with relevant chemical equipment analysis are required to obtain quantitative data.

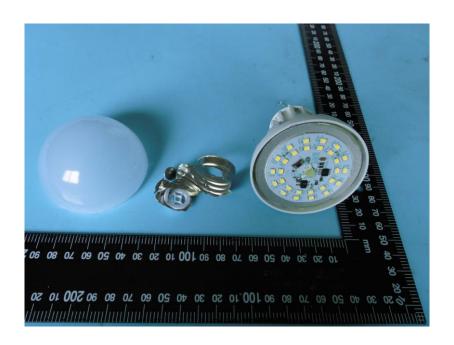
- Photo is included.



NO.: B-R14096158 Date: Apr. 25, 2014 Page 7 of 9

**Photographs of Samples** 

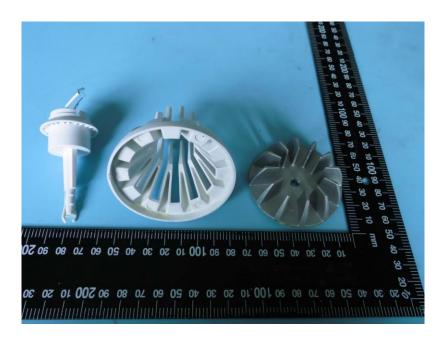






NO.: B-R14096158 Date: Apr. 25, 2014 Page 8 of 9







NO.: B-R14096158 Date: Apr. 25, 2014 Page 9 of 9





\*\*\*End of Report\*\*\*