



# Verification Report

Report No.:LCS210713023AR

Date: 2021.10.28

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**Applicant** : Shenzhen Goldenlux Co., Ltd  
**Address** : 3/F Building 1, Bei Fang Yong Fa Industrial Area, Sha Jing Town, Bao'an District, Shenzhen , China

**Report on the submitted samples said to be:**

**Sample Name(s)** : LED High Bay  
**Trade Mark** : GOLDENLUX®  
**Part No.** : GL-UFO500-J, GL-UFO400-J, GL-UFO300-J, GL-UFO240-J, GL-UFO200-J, GL-UFO180-J, GL-UFO150-J, GL-UFO120-J, GL-UFO100-J, GL-UFO80-J, GL-UFO240-N, GL-UFO200-N, GL-UFO180-N, GL-UFO150-N, GL-UFO120-N, GL-UFO100-N, GL-UFO80-N, GL-UFO200-K, GL-UFO180-K, GL-UFO150-K, GL-UFO120-K, GL-UFO100-K, GL-UFO80-K, GL-UFO200-C, GL-UFO180-C, GL-UFO150-C, GL-UFO120-C, GL-UFO100-C, GL-UFO80-C  
**Sample Received Date** : October 22, 2021  
**Testing Period** : October 22, 2021 ~ October 28, 2021  
**Results** : Please refer to next page(s).

TEST REQUEST	CONCLUSION
As specified by client, based on the performed tests on submitted sample, the result of Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), PBBs, PBDEs, Dibutyl Phthalate(DBP), Butylbenzyl Phthalate(BBP), Di-2-ethylhexyl Phthalate(DEHP) and Diisobutyl phthalate(DIBP) content comply with the limits set by RoHS Directive 2011/65/EU with amendment (EU) 2015/863.	PASS

Signed for and on behalf of LCS



Young/Laboratory Manager



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## Results:

### A. EU RoHS Directive 2011/65/EU and its amendment directives

Test method: With reference to IEC 62321-3-1:2013, Screening by X-ray Fluorescence Spectroscopy (XRF)

Sample No.	Sample Description	Results						Date of sample submission/ Resubmission
		Cd	Pb	Hg	Cr <sup>v</sup>	Br <sup>v</sup>		
						PBBs	PBDEs	
1	Silver metal screw	BL	BL	BL	BL	/	/	2021-10-22
2	Transparent plastic shell	BL	BL	BL	BL	BL	BL	2021-10-22
3	White rubber ring	BL	BL	BL	BL	BL	BL	2021-10-22
4	Ferrous metal shell	BL	BL	BL	BL	/	/	2021-10-22
5	Silver metal solder	BL	BL	BL	BL	/	/	2021-10-22
6	Silver metal plate	BL	BL	BL	BL	/	/	2021-10-22
7	White plastic sheet	BL	BL	BL	BL	BL	BL	2021-10-22
8	Yellow body led	BL	BL	BL	BL	BL	BL	2021-10-22
9	Black rubber ring	BL	BL	BL	BL	BL	BL	2021-10-22
10	White plastic label	BL	BL	BL	BL	BL	BL	2021-10-22
11	White rubber ring	BL	BL	BL	BL	BL	BL	2021-10-22
12	Silver metal nut	BL	BL	BL	BL	/	/	2021-10-22
13	Black metal screw	BL	BL	BL	BL	/	/	2021-10-22
14	Silver metal rod	BL	BL	BL	BL	/	/	2021-10-22
15	Silver metal solder	BL	BL	BL	BL	/	/	2021-10-22
16	Brown plastic thin wire skin	BL	BL	BL	BL	BL	BL	2021-10-22
17	Blue plastic thin thread leather	BL	BL	BL	BL	BL	BL	2021-10-22
18	Yellow green plastic thin thread leather	BL	BL	BL	BL	BL	BL	2021-10-22
19	Copper wire	BL	BL	BL	BL	/	/	2021-10-22
20	Black dry glue	BL	BL	BL	BL	BL	BL	2021-10-22
21	Black plastic board	BL	BL	BL	BL	BL	BL	2021-10-22
22	Color Sticker	BL	BL	BL	BL	BL	BL	2021-10-22
23	Ferrous metal housing	BL	BL	BL	BL	/	/	2021-10-22
24	Ferrous metal housing	BL	BL	BL	BL	/	/	2021-10-22
25	Ferrous metal housing	BL	BL	BL	BL	/	/	2021-10-22



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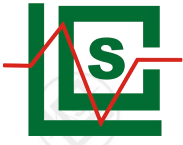
Note:

1. Results were obtained by XRF for primary screening, and further chemical testing by ICP(for Cd, Pb, Hg), UV-Vis(for Cr(VI)) and GC-MS(for PBBs, PBDEs) are recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321-3-1:2013(Unit: mg/kg).

Element	Polymers	Metals	Composite material
Cd	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$LOD < X < (150+3\sigma) \leq OL$
Pb	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Hg	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$
Br	$BL \leq (300-3\sigma) < X$	N/A	$BL \leq (250-3\sigma) < X$

Remark:

- BL= Below Limit
  - OL= Over Limit
  - X= The range of needing to do further testing
  - $3\sigma$ = The reproducibility of analytical instruments
  - N/A= Not applicable
  - LOD= Detection limit
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 document RoHS Directive 2011/65/EU with amendment (EU) 2015/863.
  4. ▼=For restricted substances PBBs and PBDEs, the results show the total Br content, the restricted substance was Cr(VI), and the results showed the total Cr content.



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RoHS Restricted Substances	Maximum Concentration Value (mg/kg) (by weight in homogenous materials)
Cadmium(Cd)	100
Lead(Pb)	1000
Mercury(Hg)	1000
Hexavalent Chromium(Cr(VI))	1000
Polybrominated biphenyls(PBBs)	1000
Polybrominated diphenylethers(PBDEs)	1000
Dibutyl Phthalate(DBP)	1000
Butylbenzyl Phthalate(BBP)	1000
Di-(2-ethylhexyl) Phthalate(DEHP)	1000
Diisobutyl phthalate(DIBP)	1000

## 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 result 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.



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## **B. EU RoHS Directive 2011/65/EU with amendment (EU) 2015/863 on DBP, BBP, DEHP & DIBP content**

Test method:

DBP, BBP, DEHP & DIBP Content:

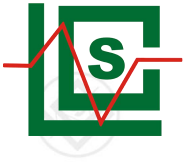
With reference to IEC 62321-8:2017, by solvent extraction and analysis was performed by gas chromatographic-mass spectrometer (GC-MS).

### **1) The test results of DBP, BBP, DEHP & DIBP**

Tested Items	Unit	MDL	Results	Limit
			22	
Dibutyl Phthalate(DBP) Content	mg/kg	100	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	mg/kg	100	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	mg/kg	100	N.D.	1000
Diisobutyl phthalate(DIBP) Content	mg/kg	100	N.D.	1000

Tested Items	Unit	MDL	Results	Limit
			2+3+7+8+9+10	
Dibutyl Phthalate(DBP) Content	mg/kg	600	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	mg/kg	600	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	mg/kg	600	N.D.	1000
Diisobutyl phthalate(DIBP) Content	mg/kg	600	N.D.	1000

Tested Items	Unit	MDL	Results	Limit
			11+16+17+18+20+21	
Dibutyl Phthalate(DBP) Content	mg/kg	600	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	mg/kg	600	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	mg/kg	600	N.D.	1000
Diisobutyl phthalate(DIBP) Content	mg/kg	600	N.D.	1000



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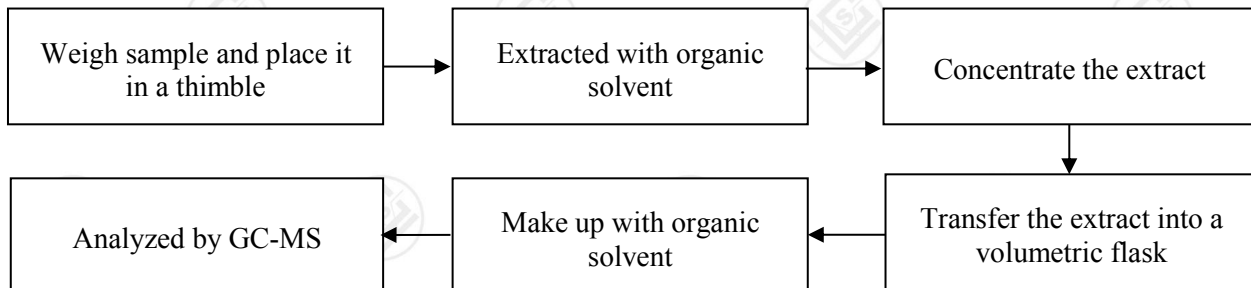
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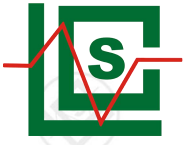
Note:

- MDL = Method Detection Limit
- N.D.=Not Detected(<MDL or LOQ)
- mg/kg = ppm=parts per million

## Test Process

1. Phthalates(DBP, BBP, DEHP & DIBP) : IEC 62321-8:2017





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## The photo(s) of the sample



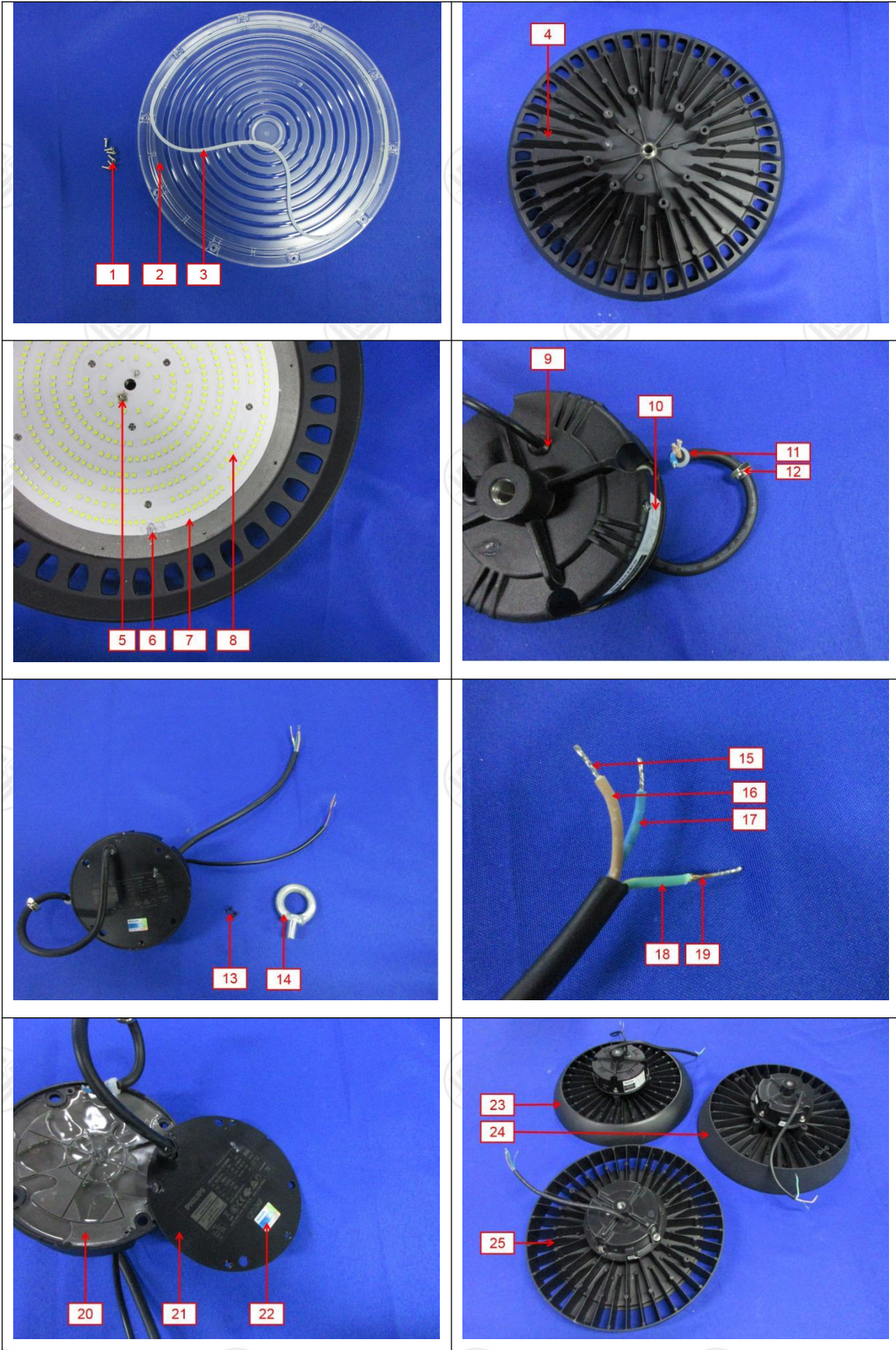


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## Statement:

1. The report is considered invalid without approved signature, special seal;
2. The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which LCS hasn't verified;
3. The result(s) shown in this report refer only to the sample(s) tested.;
4. Without written approval of LCS, this report can't be reproduced except in full;
5. In case of any discrepancy between the English version and Chinese version of the testing reports (if generated), the Chinese version shall prevail.

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