


# TEST REPORT

Client company : SBC LIGHTING SDN BHD  
Client address : No, 15 JALAN SKI 4/KU7, KAWASAN INDUSTRI HI TECH, SUNGAI KAPAR  
INDAH, 42200, KAPAR, SELANGOR D.E, MALAYSIA  
Manufacturer : SBC LIGHTING SDN BHD  
Address : No, 15 JALAN SKI 4/KU7, KAWASAN INDUSTRI HI TECH, SUNGAI KAPAR  
INDAH, 42200, KAPAR, SELANGOR D.E, MALAYSIA

Report on the submitted samples said to be:

Sample Name : LED Flood Light  
Trade Mark :   
Style/ Item No. : See Model List  
Sample Receiving Date : April 28, 2025  
Testing Period : April 28, 2025 ~ May 8, 2025  
Results : Please refer to next page(s).

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**Summary of Test Results:**

**TEST REQUEST**

**CONCLUSION**

A RoHS Directive (EU) 2017/2102 amending Annex II to Directive 2011/65/EU.

**POSITIVE**

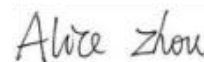
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Signed for and on behalf of AOCE

Written By:



Sunny Su  
File administrators

Approved by:



Alice Zhou  
Manager

**Results:**

**A. EU RoHS Directive 2011/65/EU and its amendment directives on XRF**

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

Seq. No.	Tested Part(s)	Results				
		Pb	Cd	Hg	Cr	Br
1	black metal enclosure	BL	BL	BL	BL	BL
2	Gray metal enclosure	BL	BL	BL	BL	BL
3	Black wire	BL	BL	BL	BL	BL
4	Lamp bead	BL	BL	BL	BL	BL
5	Lampshade	BL	BL	BL	BL	BL
6	Silver metal screw	BL	BL	BL	BL	BL
7	Chips of resistance	BL	BL	BL	BL	BL
8	Chips of capacitance	BL	BL	BL	BL	BL
9	PCB	BL	BL	BL	BL	BL
10	Solder on PCB	BL	BL	BL	BL	BL

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Note:

-- = Not Conducted  
\* = Screening by XRF and detected by chemical method. The test results of chemical method please refer to next pages.

- i 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.

Element	Unit	Non-metal	Metal	Composite Material
Cd	mg/kg	$BL \leq 70 - 3\sigma < X < 130 + 3\sigma \leq OL$	$BL \leq 70 - 3\sigma < X < 130 + 3\sigma \leq OL$	$BL \leq 50 - 3\sigma < X < 150 + 3\sigma \leq OL$
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	$BL \leq 700 - 3\sigma < X < 1300 + 3\sigma \leq OL$	$BL \leq 700 - 3\sigma < X < 1300 + 3\sigma \leq OL$	$BL \leq 500 - 3\sigma < X < 1500 + 3\sigma \leq OL$
Cr	mg/kg	$BL \leq 700 - 3\sigma < X$	$BL \leq 700 - 3\sigma < X$	$BL \leq 500 - 3\sigma < X$
Br	mg/kg	$BL \leq 300 - 3\sigma < X$	--	$BL \leq 250 - 3\sigma < X$

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Note:

BL = Below Limit  
OL = Over Limit  
X = Inconclusive

- ii The XRF screening test for RoHS elements – The reading may be different to the actual content in the sample be of non-uniformity composition.
- iii The maximum permissible limit is quoted from the document 2005/618/EC amending RoHS directive 2011/65/EU:

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
Bis(2-ethylhexyl) phthalate(DEHP)	1000
Butyl benzyl phthalate(BBP)	1000
Dibutyl phthalate(DBP)	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. The Test Results of Chemical Method:**

### Test method:

#### Lead & Cadmium Content:

With reference to IEC 62321-5:2013, by acid digestion and analysis was performed by inductively coupled plasma atomic emission spectrometer (ICP-AES)

#### Mercury Content:

With reference to IEC 62321-4:2013, by acid digestion and analysis was performed by inductively coupled plasma atomic emission spectrometer (ICP-AES)

#### Hexavalent Chromium Content:

With reference to IEC 62321-7-1:2013, by alkaline digestion and analysis was performed by UV-visible spectrophotometer (UV-Vis)

#### PBBs & PBDEs Content:

With reference to IEC 62321-6:2015, by solvent extraction and analysis was performed by gas chromatographic-mass spectrometer (GC-MS)

#### Phthalates Content:

With reference to IEC 62321-8:2017, by gas chromatography-mass spectrometry (GC-MS)

### **1) The test results of Lead (Pb)**

Item	Unit	MDL	Results		Limit
			(1)	(2)	
Lead Content (Pb)	mg/kg	2	38	21	1000 mg/kg
<b>Conclusion</b>	<b>/</b>	<b>/</b>	<b>Pass</b>	<b>Pass</b>	<b>/</b>

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### **2) The test results of PBBs & PBDEs**

Item	Unit	MDL	Results		Limit
			1	2	
<b>Polybrominated Biphenyls (PBBs)</b>					
Monobromobiphenyl	mg/kg	5	N.D.	N.D.	
Dibromobiphenyl	mg/kg	5	N.D.	N.D.	
Tribromobiphenyl	mg/kg	5	N.D.	N.D.	
Tetrabromobiphenyl	mg/kg	5	N.D.	N.D.	
Pentabromobiphenyl	mg/kg	5	N.D.	N.D.	
Hexabromobiphenyl	mg/kg	5	N.D.	N.D.	
Heptabromobiphenyl	mg/kg	5	N.D.	N.D.	

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Octabromobiphenyl	mg/kg	5	N.D.	N.D.	
Nonabromodiphenyl	mg/kg	5	N.D.	N.D.	
Decabromodiphenyl	mg/kg	5	N.D.	N.D.	
Total content	mg/kg	/	N.D.	N.D.	1000 mg/kg
<b>Polybrominated Diphenylethers (PBDEs)(Mon-Deca)</b>					
Monobromodiphenyl ether	mg/kg	5	N.D.	N.D.	
Dibromodiphenyl ether	mg/kg	5	N.D.	N.D.	
Tribromodiphenyl ether	mg/kg	5	N.D.	N.D.	
Tetrabromodiphenyl ether	mg/kg	5	N.D.	N.D.	
Pentabromodiphenyl ether	mg/kg	5	N.D.	N.D.	
Hexabromodiphenyl ether	mg/kg	5	N.D.	N.D.	
Heptabromodiphenyl ether	mg/kg	5	N.D.	N.D.	
Octabromodiphenyl ether	mg/kg	5	N.D.	N.D.	
Nonabromodiphenyl ether	mg/kg	5	N.D.	N.D.	
Decabromodiphenyl ether	mg/kg	5	N.D.	N.D.	
Total content	mg/kg	/	N.D.	N.D.	1000 mg/kg

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Item	Unit	MDL	Results					Limit
			(1)	(2)	(3)	(4)	(5)	
Dibutyl Phthalate(DBP)	mg/kg	50	N.D.	N.D.	N.D.	N.D.	N.D.	1000 mg/kg
Benzylbutyl Phthalate(BBP)	mg/kg	50	N.D.	N.D.	N.D.	N.D.	N.D.	1000 mg/kg
Bis(2-ethylhexyl) Phthalate(DEHP)	mg/kg	50	N.D.	N.D.	N.D.	N.D.	N.D.	1000 mg/kg
Diisobutyl phthalate(DIBP)	mg/kg	50	N.D.	N.D.	N.D.	N.D.	N.D.	1000 mg/kg

Item	Unit	MDL	Results					Limit
			(6)	(7)	(8)	(9)	(10)	
Dibutyl Phthalate(DBP)	mg/kg	50	N.D.	N.D.	N.D.	N.D.	N.D.	1000 mg/kg
Benzylbutyl Phthalate(BBP)	mg/kg	50	N.D.	N.D.	N.D.	N.D.	N.D.	1000 mg/kg
Bis(2-ethylhexyl) Phthalate(DEHP)	mg/kg	50	N.D.	N.D.	N.D.	N.D.	N.D.	1000 mg/kg
Diisobutyl phthalate(DIBP)	mg/kg	50	N.D.	N.D.	N.D.	N.D.	N.D.	1000 mg/kg

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Note:

- N.D. = Not Detected or less than MDL
- mg/kg = ppm
- MDL = Method Detection Limit
- Photo appendix is included.

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## Appendix

### Photograph of Sample

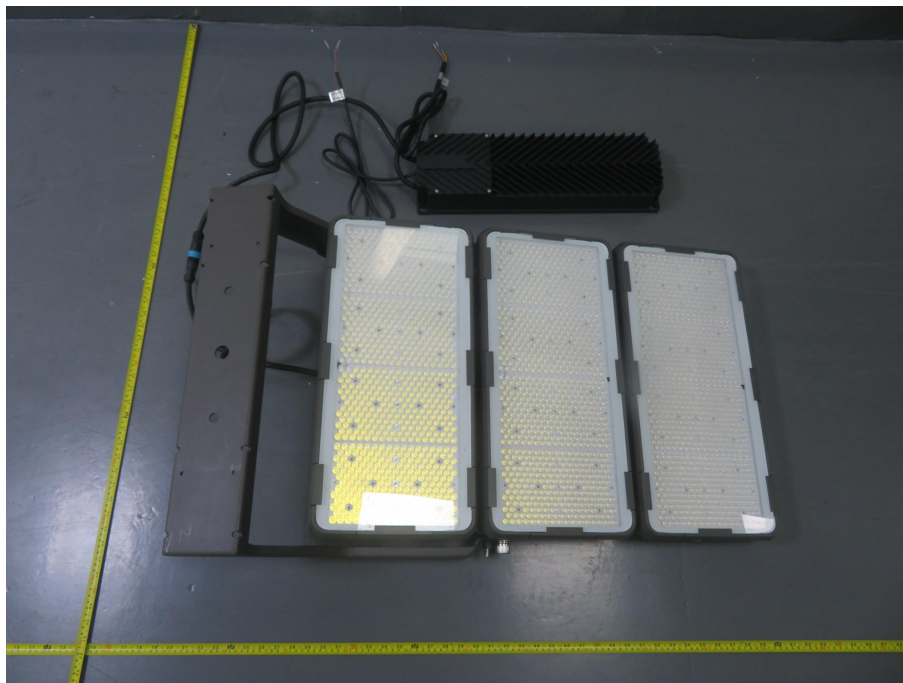


Fig.1



Fig.2



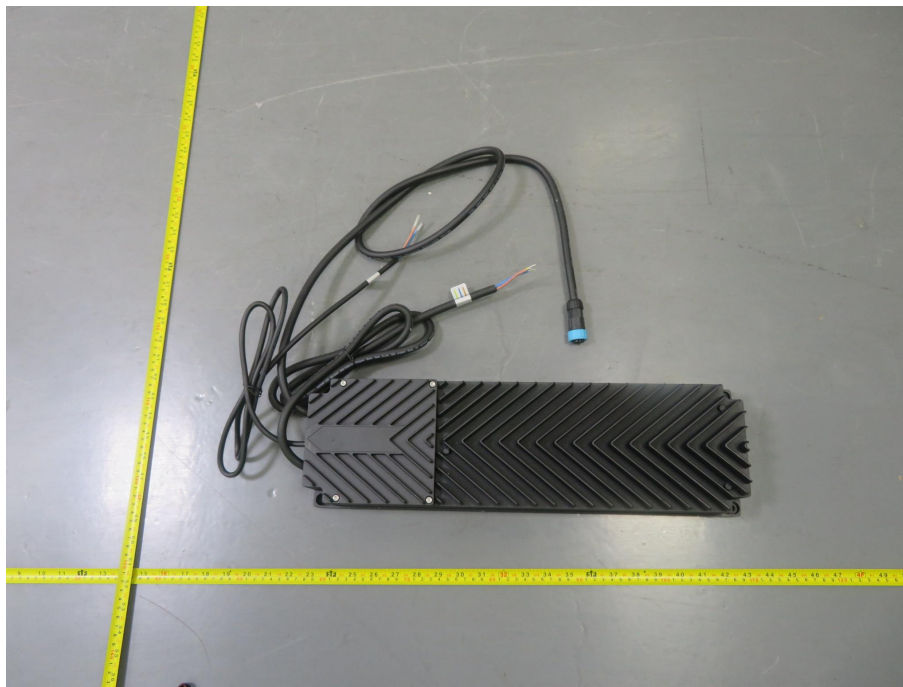


Fig.3

AOCE authenticate the photo on original report only

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Report No.:AOC250508002R

Model list:

Model	Rating	LED Driver	LED Qty.
VL-VL-G4.5-300W	AC 220-277V, 50/60Hz, 300W	N7-240M260A12 2pcs 600FGH420C 1pc	2835: (12C6B+16C7B)× 2+(8C7B+20C8B) × 2
VL-VL-G4.5-350W	AC 220-277V, 50/60Hz, 350W	N7-240M260A12 2pcs 600FGH420C 1pc	3030: (26C4B+16C5B)× 2+(36C5B+6C6B)×2
VL-VL-G4.5-400W	AC 220-277V, 50/60Hz, 400W	N7-240M260A12 2pcs 600FGH420C 1pc	2424: (68C2B+16C3B)× 2+36C2B+48C3B)× 2
VL-VL-G4.5-450W	AC 220-277V, 50/60Hz, 450W	N7-240M260A12 2pcs 600FGH420C 1pc	
VL-VL-G4.5-500W	AC 220-277V, 50/60Hz, 500W	N7-240M260A12 2pcs 600FGH420C 1pc	
		EUM-480S280MG 1pc	3030: 816pcs or 810 pcs; or
		EUM-480S280BG 1pc	2835: 816pcs or 810pcs or
		EUM-680S350MG 1pc	3535: 240pcs; or
		EUM-680S350BG 1pc	2424: 240pcs:
		S6-600D360 1pc S6-600R360 1pc	
VL-VL-G4.5-600W	AC 220-277V, 50/60Hz, 600W	EUM-680S350MG 1pc EUM-680S350BG 1pc 600FGH420C 1pc S6-600D360 1pc S6-600R360 1pc	3030: 816pcs or 810 pcs; or 2835: 816pcs or 810pcs or 3535: 240pcs; or 2424: 240pcs:
VL-VL-G4.5-800W	AC 220-277V, 50/60Hz, 800W	EUM-880S420MG 1pc	
VL-VL-G4.5-1000W	AC 220-277V, 50/60Hz, 1000W	EUM-480S280MG 2pcs EUM-480S280BG 2pcs EUM-680S350MG 2pcs EUM-680S350BG 2pcs S6-1K2D500 1pc S6-1K2R500 1pc	
VL-VL-G4.5-1200W	AC 220-277V, 50/60Hz, 1200W	EUM-680S350MG 2pcs EUM-680S350BG 2pcs S6-1K2D500 1pc S6-1K2R500 1pc	3030: 1632pcs or 1620pcs or
VL-VL-G4.5-1500W	AC 220-277V, 50/60Hz, 1500W	1800STH500C-xxxxx 1pc HDE-1800STH500C 1pc EUM-880S420MG 2pcs	2835: 1632pcs or 1620pcs or 3535: 480pcs; or 2424: 480pcs:
VL-VL-G4.5-1600W	AC 220-277V, 50/60Hz, 1600W	EUM-880S420MG 2pcs	
VL-VL-G4.5-1500W	AC 220-277V, 50/60Hz, 1500W	EUM-480S280MG 3pcs EUM-480S280BG 3pcs EUM-680S350MG 3pcs EUM-680S350BG 3pcs	3030: 2448pcs or 2430pcs; or 2835: 2448pcs or 2430pcs; or

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Report No.:AOC250508002R

		EUCO-1K5140GLA 1pc	3535: 720pcs; or 2424: 720pcs:
		EUCO-1K5140GDA 1pc	
		S6-1K8D500 1pc	
		S6-1K8R500 1pc	
		1800STH500C-xxxxx 1pc	
		HDE-1800STH500C 1pc	
VL-VL-G4.5-1800W	AC 220-277V, 50/60Hz, 1800W	EUM-680S350MG 3pcs	3030: 2448pcs or 2430pcs; or 2835: 2448pcs or 2430pcs; or 3535: 720pcs; or 2424: 720pcs:
		EUM-680S350BG 3pcs	
		S6-1K8D500 1pc	
		S6-1K8R500 1pc	
		1800STH500C-xxxxx 1pc	
		HDE-1800STH500C 1pc	
Remark: Covers all 2700K,3000K,3500K,4000K,4500K,5000K,5700K,6000K, 6500K. indicates CCT.			

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