



## TEST REPORT

Product: Solar Street Light  
Trademark: N/A  
Applicant: Blue Carbon Technology Inc.  
Address: No.C1 Technology Innovation Center, High-Tech Zone, Rizhao, Shandong Province, China  
Manufacturer: Blue Carbon Technology Inc.  
Address: No.C1 Technology Innovation Center, High-Tech Zone, Rizhao, Shandong Province, China  
Model No: BCT-OLK3.0-B (Series models please see the next page.)  
Date of Sample Received: 2023-10-25  
Testing Period: 2023-10-25 to 2023-11-03  
Verification Requested : With reference to RoHS Directive (EU) 2015/863 amending 2011/65/EU.  
Verification Method : Please refer to next page(s).  
Verification Result : Please refer to next page(s).  
Verification Conclusion : Based on the verification results of the submitted samples, the results of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) do not exceed the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.  
Note : The test results are related only to the tested items. The report shall not be reproduced except in full without the written approval of the testing laboratory.

Check by : Sifeifei Date : 2023-11-03  
(Si feifei)

Approved by : Xu Peng Date : 2023-11-03  
(Xu Peng)





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### Series Models:

BCT-OLJ,BCT-OLMJ,BCT-OLJS,BCT-OLJP,BCT-OLC-A,BCT-OLC-B,BCT-OLC-C,BCT-OTL-A,  
BCT-OTL-B,BCT-OTL-C,BCT-OPP-A,BCT-OPP-B-,BCT-OPP-B,BCT-OPP-C,BCT-OPP-D,  
BCT-OPP-E,BCT-OLB2.0-A,BCT-OLB2.0-B,BCT-OLB2.0-C,BCT-OPP2.0-A,BCT-OPP2.0-B,  
BCT-OPP2.0-B-,BCT-OPP2.0-C,BCT-OPP2.0-D,BCT-OPP2.0-E,BCT-OPP2.0-AO,  
BCT-OPP2.0-BO,BCT-OPP2.0-CO,BCT-OPP2.0-DO,BCT-OPP2.0-EO,BCT-OPP2.0-FO,  
BCT-OLC2.0-A,BCT-OLC2.0-B,BCT-OLC2.0-C,BCT-OLC2.0-D,BCT-OLC2.0-AP,BCT-OLC2.0-BP,BCT-O  
LC2.0-CP,BCT-OLK1.0,BCT-OLK1.0-M,BCT-OLK2.0-A,BCT-OLK2.0-B,BCT-OLK2.0-C,  
BCT-OLK3.0-A,BCT-OLK3.0-B,BCT-OST1.0,BCT-OST2.0-A,BCT-OST2.0-B,BCT-OLF-80W,  
BCT-OLF-100W-A,BCT-OLF-100W-B,BCT-OLF-100W-PA,BCT-OLF-100W-PB,BCT-OLF-60W,  
BCT-OLF-120W,BCT-OLJ2.0-A,BCT-OLJ2.0-B,BCT-OLJ2.0-C,BCT-SLC1.0-A,BCT-SLC1.0-B,  
BCT-SLC1.0-C,BCT-SLG1.0-A,BCT-SLG1.0-B,BCT-SLG1.0-C,BCT-SLG1.0-D,BCT-OLS1.0-A,  
BCT-OLS1.0-B,BCT-OLS1.0-C,LD-S100W,BCT-OLJ1.0,BCT-OLC1.0,BCT-OLC1.0P,BCT-OLK2.0,BCT-O  
LK2.0P,BCT-OLK3.0,BCT-OLK3.0P,BCT-OLF-100W,BCT-OLJ2.0,  
BCT-OLJ2.0P,BCT-OLF-25W-A,BCT-OLF-25W-B,BCT-OLF-15W-B,BCT-OLG3.0,BCT-OLA1.0S,  
BCT-OLP1.0,BCT-OLG1.0,BCT-OLG1.0S,BCT-OLL1.0,BCT-SLL1.0,BCT-SCL1.0,BCT-OLF1.0S,  
BCT-OLF3.0,BCT-OLF-15W-A,BCT-OLF-140W,BCT-SLG2.0-A,BCT-SLG2.0-B,BCT-SLG2.0-C,BCT-OLF  
-15W,BCT-OLF-25W



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Verification Method :

1. According to IEC 62321-3-1:2013, Screening- Lead, mercury, cadmium total chromium and total bromine by X-ray fluorescence spectrometry.  
According to IEC 62321-8:2017, Screening - phthalates by GC-MS
2. Chemical test method:
  - (a) According to IEC 62321-5:2013, Cadmium, lead and chromium in polymers and electronics and cadmium and lead in metals by ICP-OES;
  - (b) According to IEC 62321-4:2013+A1:2017, Mercury in polymers, metals and electronics by ICP-OES;
  - (c) According to IEC 62321-7-2:2017 & IEC 62321-7-1:2015, determination of Hexavalent Chromium by Colorimetric method;
  - (d) According to IEC 62321-6:2015, determination of PBBs. PBDEs by GC-MS;
  - (e) With reference to IEC 62321-8.2017, and analysis was performed by GC-MS.



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Test Results:

Part No.	Part Description	Restricted Substances	Results of EDDRf (P/F/D)	Screening Result of PHTH	Result of Wet Chemical Testing (mg/kg)	Conclusion (P/F)	Sample Submitted /Resubmitted Date
1	Metal shell	Pb	P	/	/	P	Nov. 02, 2023
		Cd	P	/	/	P	
		Hg	P	/	/	P	
		Cr(VI)	P	/	/	P	
		PBBs	/	/	/	/	
		PBDs	/	/	/	/	
		DBP	/	/	/	/	
		BBP	/	/	/	/	
		DEHP	/	/	/	/	
		DIBP	/	/	/	/	
2	Black insulated wire	Pb	P	/	/	P	Nov. 02, 2023
		Cd	P	/	/	P	
		Hg	P	/	/	P	
		Cr(VI)	P	/	/	P	
		PBBs	P	/	/	P	
		PBDs	P	/	/	P	
		DBP	/	P	/	P	
		BBP	/	P	/	P	
		DEHP	/	P	/	P	
		DIBP	/	P	/	P	
3	White plastic waterproof cover	Pb	P	/	/	P	Nov. 02, 2023
		Cd	P	/	/	P	
		Hg	P	/	/	P	
		Cr(VI)	P	/	/	P	
		PBBs	P	/	/	P	
		PBDs	P	/	/	P	
		DBP	/	P	/	P	
		BBP	/	P	/	P	
		DEHP	/	P	/	P	
		DIBP	/	P	/	P	



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Part No.	Part Description	Restricted Substances	Results of EDDRf (P/F/D)	Screening Result of PHTH	Result of Wet Chemical Testing (mg/kg)	Conclusion (P/F)	Sample Submitted /Resubmitted Date
4	Lamp panel	Pb	P	/	/	P	Nov. 02, 2023
		Cd	P	/	/	P	
		Hg	P	/	/	P	
		Cr(VI)	P	/	/	P	
		PBBs	P	/	/	P	
		PBDs	P	/	/	P	
		DBP	/	P	/	P	
		BBP	/	P	/	P	
		DEHP	/	P	/	P	
		DIBP	/	P	/	P	
5	Screws	Pb	P	/	/	P	Nov. 02, 2023
		Cd	P	/	/	P	
		Hg	P	/	/	P	
		Cr(VI)	P	/	/	P	
		PBBs	/	/	/	/	
		PBDs	/	/	/	/	
		DBP	/	/	/	/	
		BBP	/	/	/	/	
		DEHP	/	/	/	/	
		DIBP	/	/	/	/	
6	Metal fixing plate	Pb	P	/	/	P	Nov. 02, 2023
		Cd	P	/	/	P	
		Hg	P	/	/	P	
		Cr(VI)	P	/	/	P	
		PBBs	/	/	/	/	
		PBDs	/	/	/	/	
		DBP	/	/	/	/	
		BBP	/	/	/	/	
		DEHP	/	/	/	/	
		DIBP	/	/	/	/	



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Part No.	Part Description	Restricted Substances	Results of EDDRf (P/F/D)	Screening Result of PHTH	Result of Wet Chemical Testing (mg/kg)	Conclusion (P/F)	Sample Submitted /Resubmitted Date
7	LED	Pb	P	/	/	P	Nov. 02, 2023
		Cd	P	/	/	P	
		Hg	P	/	/	P	
		Cr(VI)	P	/	/	P	
		PBBs	P	/	/	P	
		PBDs	P	/	/	P	
		DBP	/	P	/	P	
		BBP	/	P	/	P	
		DEHP	/	P	/	P	
		DIBP	/	P	/	P	
8	Red wire skin	Pb	P	/	/	P	Nov. 02, 2023
		Cd	P	/	/	P	
		Hg	P	/	/	P	
		Cr(VI)	P	/	/	P	
		PBBs	P	/	/	P	
		PBDs	P	/	/	P	
		DBP	/	P	/	P	
		BBP	/	P	/	P	
		DEHP	/	P	/	P	
		DIBP	/	P	/	P	
9	Blue wire cover	Pb	P	/	/	P	Nov. 02, 2023
		Cd	P	/	/	P	
		Hg	P	/	/	P	
		Cr(VI)	P	/	/	P	
		PBBs	P	/	/	P	
		PBDs	P	/	/	P	
		DBP	/	P	/	P	
		BBP	/	P	/	P	
		DEHP	/	P	/	P	
		DIBP	/	P	/	P	



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Part No.	Part Description	Restricted Substances	Results of EDDRf (P/F/D)	Screening Result of PHTH	Result of Wet Chemical Testing (mg/kg)	Conclusion (P/F)	Sample Submitted /Resubmitted Date
10	Soldering	Pb	P	/	/	P	Nov. 02, 2023
		Cd	P	/	/	P	
		Hg	P	/	/	P	
		Cr(VI)	P	/	/	P	
		PBBs	/	/	/	/	
		PBDs	/	/	/	/	
		DBP	/	/	/	/	
		BBP	/	/	/	/	
		DEHP	/	/	/	/	
		DIBP	/	/	/	/	
11	IC	Pb	P	/	/	P	Nov. 02, 2023
		Cd	P	/	/	P	
		Hg	P	/	/	P	
		Cr(VI)	P	/	/	P	
		PBBs	P	/	/	P	
		PBDs	P	/	/	P	
		DBP	/	P	/	P	
		BBP	/	P	/	P	
		DEHP	/	P	/	P	
		DIBP	/	P	/	P	
12	Resistance	Pb	P	/	/	P	Nov. 02, 2023
		Cd	P	/	/	P	
		Hg	P	/	/	P	
		Cr(VI)	P	/	/	P	
		PBBs	P	/	/	P	
		PBDs	P	/	/	P	
		DBP	/	P	/	P	
		BBP	/	P	/	P	
		DEHP	/	P	/	P	
		DIBP	/	P	/	P	



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Part No.	Part Description	Restricted Substances	Results of EDDRf (P/F/D)	Screening Result of PHTH	Result of Wet Chemical Testing (mg/kg)	Conclusion (P/F)	Sample Submitted /Resubmitted Date
13	Diode	Pb	P	/	/	P	Nov. 02, 2023
		Cd	P	/	/	P	
		Hg	P	/	/	P	
		Cr(VI)	P	/	/	P	
		PBBs	P	/	/	P	
		PBDs	P	/	/	P	
		DBP	/	P	/	P	
		BBP	/	P	/	P	
		DEHP	/	P	/	P	
		DIBP	/	P	/	P	
14	Capacitance	Pb	P	/	/	P	Nov. 02, 2023
		Cd	P	/	/	P	
		Hg	P	/	/	P	
		Cr(VI)	P	/	/	P	
		PBBs	P	/	/	P	
		PBDs	P	/	/	P	
		DBP	/	P	/	P	
		BBP	/	P	/	P	
		DEHP	/	P	/	P	
		DIBP	/	P	/	P	





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## Remark:

- (1) It is the result on total Br while test PBBs and PBDEs by EDDRF. It is the result on total Cr while test Hexavalent Chromium by EDDRF.
- (2) Results are obtained by EDDRF for primary screening, and chemical testing by ICP (for Cd, Pb, Hg), UV-VIS (Cr(VI)) and GCMS (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value (unit: mg/kg)

Element	Polymer	Metal	Composite Materials
Cd	$P \leq (70-3\sigma) < D < (130+3\sigma) \leq F$	$P \leq (70-3\sigma) < D < (130+3\sigma) \leq F$	$LOD < D < (150+3\sigma) \leq F$
Pb	$P \leq (700-3\sigma) < D < (1300+3\sigma) \leq F$	$P \leq (700-3\sigma) < D < (1300+3\sigma) \leq F$	$P \leq (500-3\sigma) < D < (1500+3\sigma) \leq F$
Hg	$P \leq (700-3\sigma) < D < (1300+3\sigma) \leq F$	$P \leq (700-3\sigma) < D < (1300+3\sigma) \leq F$	$P \leq (500-3\sigma) < D < (1500+3\sigma) \leq F$
Br	$P \leq (300-3\sigma) < D$	--	$P \leq (250-3\sigma) < D$
Cr	$P \leq (700-3\sigma) < D$	$P \leq (700-3\sigma) < D$	$P \leq (500-3\sigma) < D$

P=PASS; F=FAIL; D=DETECTED.

- (3) Screening results of PIHTH are for primary screening, and further chemical testing by GC-MS (for DBP, BBP, DEHP and DIBP) are recommended to be performed if the concentration exceeds the below warning value

Compound	Polymer
DBP	$P \leq 600 < D$
BBP	$P \leq 600 < D$
DEHP	$P \leq 600 < D$
DIBP	$P \leq 600 < D$

- (4) Chemical test

Test Item	Unit	MDL	Limit
Cd	mg/kg	2	100
Cr(VI)	mg/kg	Polymer and Composite Materials: 8	1000
	μg/cm <sup>2</sup>	Metal: 0.10**	----
Hg	mg/kg	2	1000
Pb	mg/kg	2	1000
PBBs	mg/kg	5	1000
PBDEs	mg/kg	5	1000
DEHP	mg/kg	30	1000
DBP	mg/kg	30	1000
BBP	mg/kg	30	1000
DIBP	mg/kg	30	1000

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(5) mg/kg = ppm; MDL= Method Detection Limit ;N.D. = Not Detected (<MDL)

- \*\*=a. The sample is positive for CrVI if the CrVI concentration is greater than  $0.13\mu\text{g}/\text{cm}^2$ . The sample coating is considered to contain CrVI
- b. The sample is negative for CrVI if CrVI is ND (concentration less than  $0.10\mu\text{g}/\text{cm}^2$ ). The coating is considered a non-CrVI based coating
- c. The result between  $0.10\mu\text{g}/\text{cm}^2$  and  $0.13\mu\text{g}/\text{cm}^2$  is considered to be inconclusive -unavoidable coating variations may influence the determination

(6) "Sample No.-C"=Resample for testing

SAMPLE PHOTO

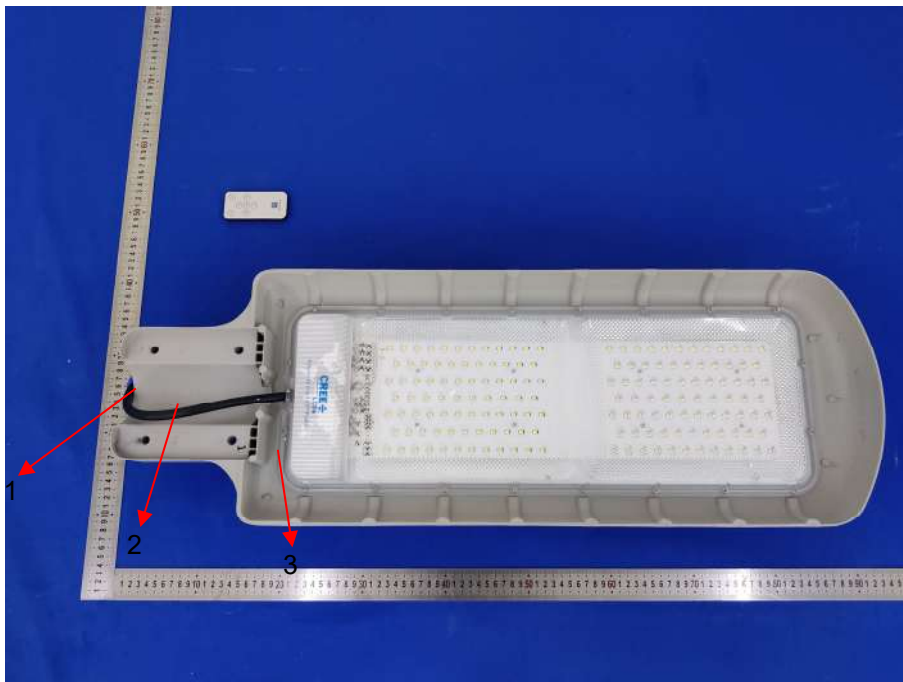


Fig. 1

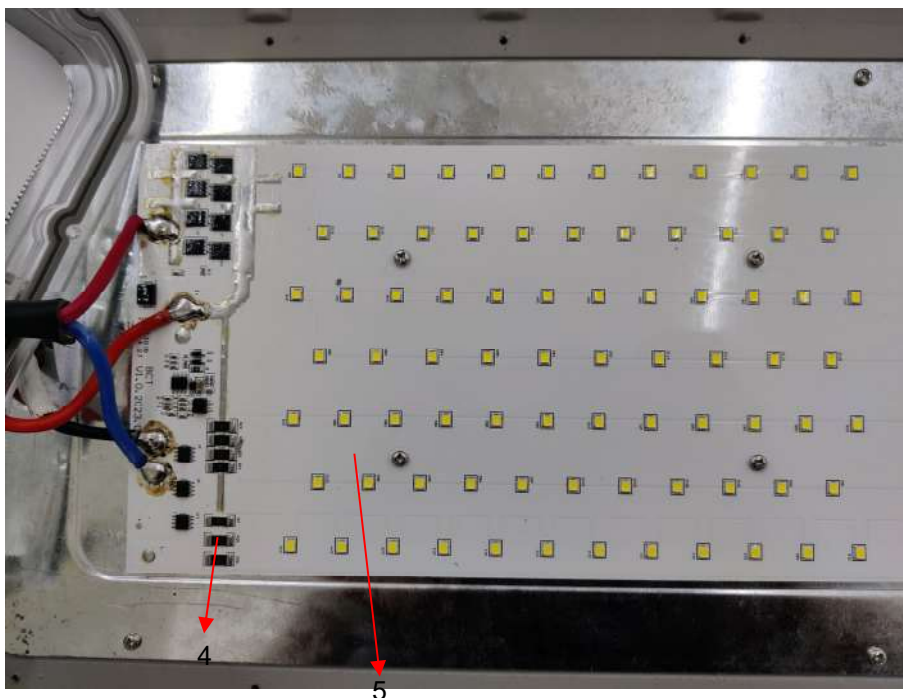


Fig. 2

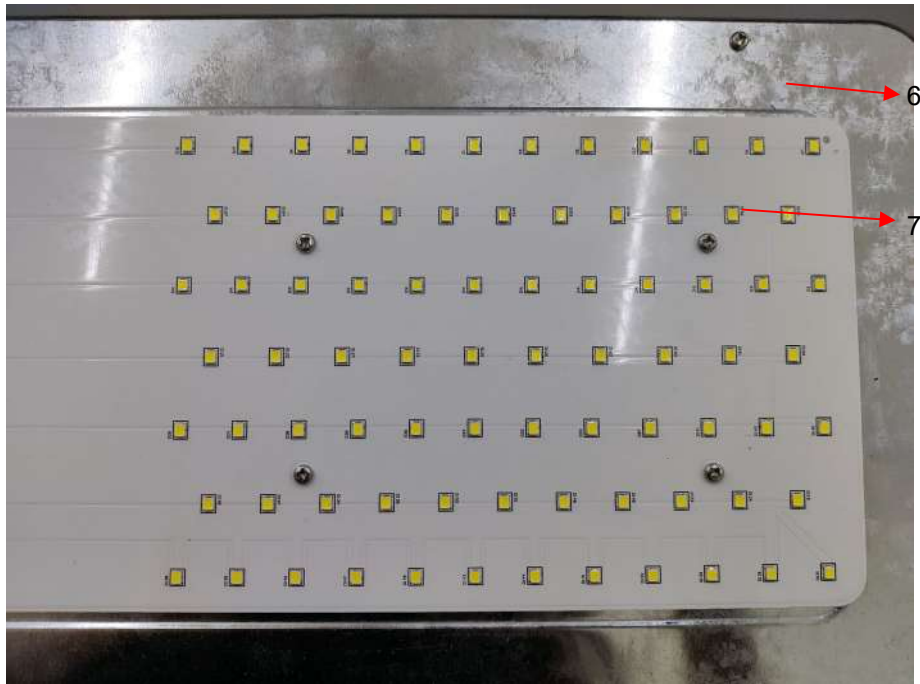


Fig. 3

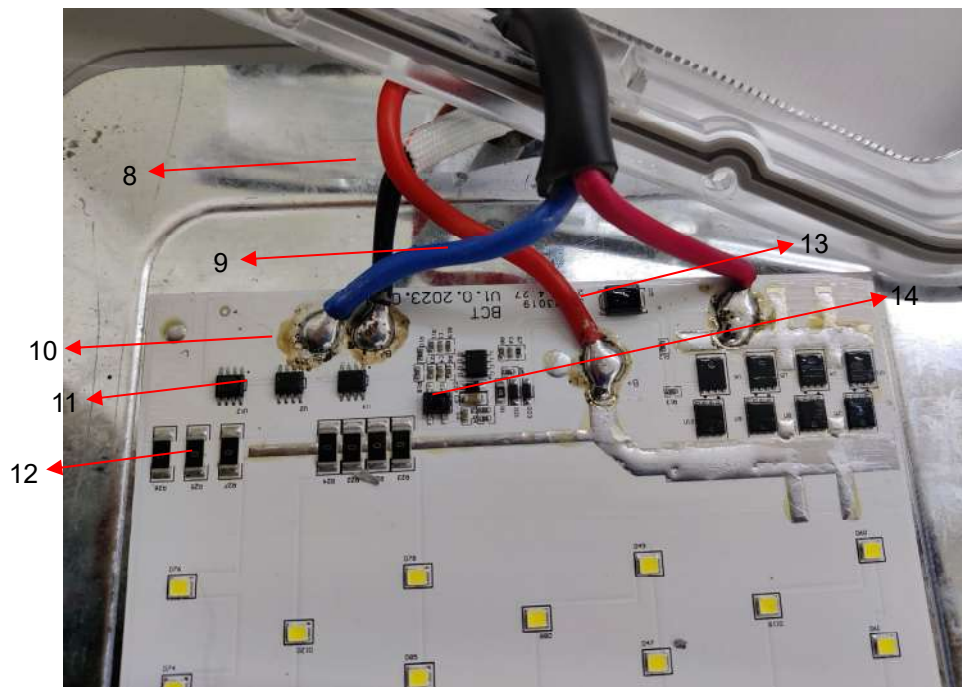


Fig. 4

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