



ROHS TEST REPORT

Report Reference No : DER090323006109
Applicant : Shenzhen Shiji Lighting Co.,Ltd
Address : 3F, Building A, Chuangfu Science and Technology Park, 202 Shihuan Road,
Shiyan Street, Baoan District, Shenzhen, Guangdong, China

Report on the submitted sample said to be:

Sample Name : Led Point Light/Led module
Trade Mark : N/A
Model No. : See model list on the page 2
Sample Received Date : May 05, 2022
Testing Period : May 09, 2022 to May 10, 2022
Test location : Shenzhen DE Certification Lab Co., Ltd.
Room 202, Building 3, Xinnantian Industrial Area, No.106, Danzi Road,
Laokeng Community, Longtian Street, Pingshan District, Shenzhen,
Guangdong, China

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)*****

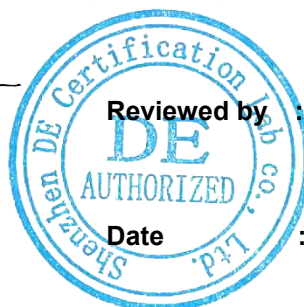
Tested by :

Reviewed by :

Approved by :

Date :

Aug 28, 2023





Model list:

Model	Input voltage	Input power
SJ-12IC-2811	5V/12V	0.3w/0.6w
SJ-12IC-1903	5V/12V	0.3w/0.6w
SJ-12IC-8208	12V	0.2w
SJ-12IC-1908	12V	0.2w
SJ-12IC-2801	5V	0.3w
SJ-12IC-DMX512	5V/12V	0.3w/0.6w
SJ-20IC	5V/12V	0.3w/0.6w
SJ-1515IC	5V	0.3w
SJ-10IC	5V	0.3w
SJ-171IC	5V	0.3w
SJ-1818IC	5V/12V	0.3w/0.6w
SJ-219IC	12V	0.72w
SJ-30IC	12V	0.72w
SJ-3D	12V	0.72w
SJ-3015IC	12V	0.72w
SJ-354IC	12V/24V	1.44w
SJ-356IC	12V/24V	1.44w
SJ-359IC	12V/24V	2.16w/2.88w
SJ-387/3812IC	12V/24V	1.44w/2.88w
SJ-456IC	12V/24V	1.44w
SJ-459IC	12V/24V	2.16w/2.88w
SJ-406IC	24V	1.44w
SJ-409IC	12V/24V	2.16w/2.88w
SJ-4512IC	24V	2.88w
SJ-6018IC	24V	4.32w
SJ-6016IC	24V	4.32w
SJ-504IC	12V/24V	1.44w
SJ-506IC	12V/24V	1.44w
SJ-507	24V	1.44w
SJ-5012	24V	2.88w
SJ-28045IC	24V	8.64w
SJ-G40	5V/12V	0.3w/0.6w
SJ-C9	5V/12V	0.3w/0.6w
SJ-C6	5V/12V	0.3w/0.6w
SJ-S14	5V/12V	0.72w
SJ-80IC	24V	4.32w
SJ-100IC	24V	4.32w
SJ-120IC	24V	4.32w



SJ-E14-2835	DC24V/AC60V/AC110V/AC220V	2w
SJ-E14-3528	DC24V/AC60V/AC110V/AC220V	2w
SJ-AC45IC	AC24V	2.88w
SJ-AC6018IC	AC24V	4.32w
SJ-7515-2811	12V	0.72w
SJ-7515-1903	12V	0.72w
SJ-7515-2801	12V	0.72w
SJ-7515-DMX	12V	0.72w
SJ-3535-DMX	12V/24V	1.44w
SJ-3535-2801	12V	1.44w
SJ-7512	12V	0.72w

Remark:

All models have the same mechanical constructure, the model uses SJ-3561C (24V) isselected to perform the tests



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	silicon	BL	BL	BL	BL	BL
2	tin	BL	BL	BL	BL	BL
3	PCB	BL	BL	BL	BL	BL
4	White wire	BL	BL	BL	BL	BL
5	Green wire	BL	BL	BL	BL	BL
6	Black wires	BL	BL	BL	BL	BL
7	PPS	BL	BL	BL	BL	BL
8	Red wire	BL	BL	BL	BL	BL
9	Yellow wire	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	silicon	ND	ND	ND	ND
2	tin	ND	ND	ND	ND
3	PCB	ND	ND	ND	ND
4	White wire	ND	ND	ND	ND
5	Green wire	ND	ND	ND	ND
6	Black wires	ND	ND	ND	ND
7	PPS	ND	ND	ND	ND
8	Red wire	ND	ND	ND	ND
9	Yellow wire	ND	ND	ND	ND
MDL		0.005%	0.005%	0.005%	0.005%
Permissible Limit		0.1%	0.1%	0.1%	0.1%

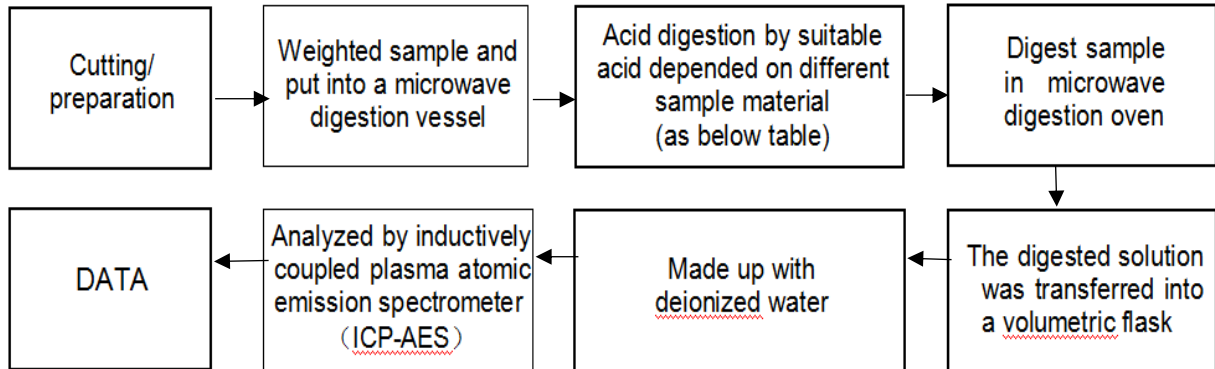
Note:	-	% = percentage by weight
	-	MDL = Method Detection Limit
	-	ND = Not Detected (lower than MDL)
	-	1% = 10000 mg/kg = 10000 ppm
	-	The maximum permissible limit is quoted from the EU Directive 2011/65/EU Annex II



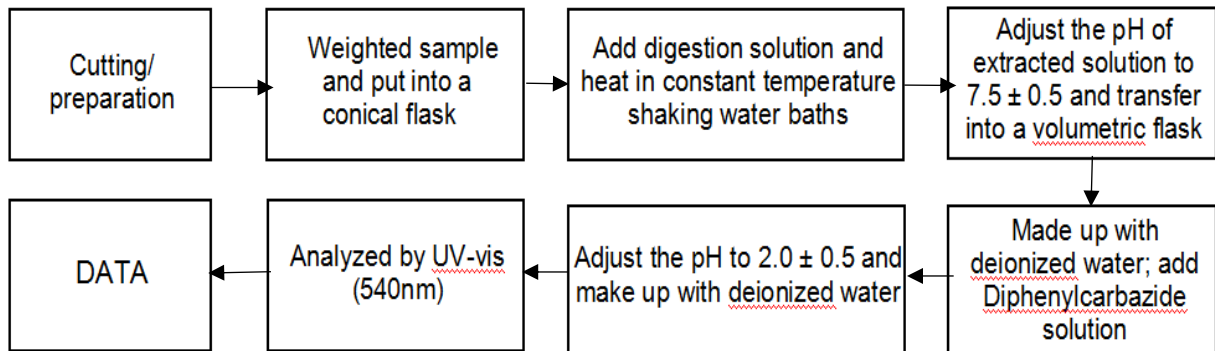
Test Flow chart

1. Test Flowchart for Cd / Pb /Hg content

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

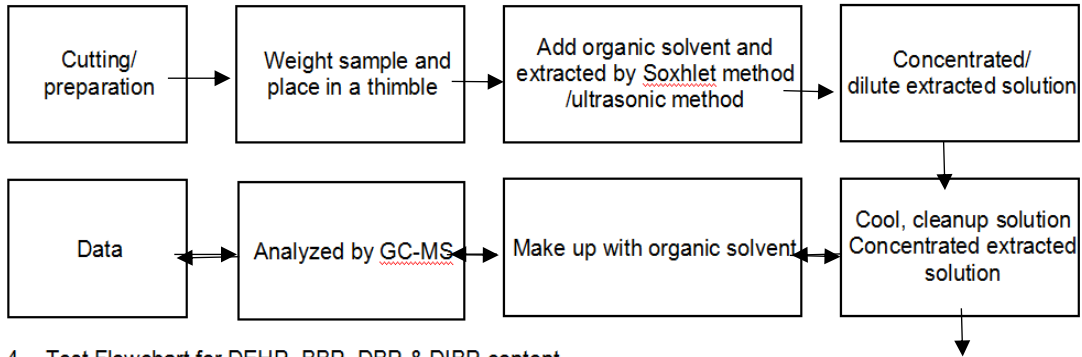


2. Test Flowchart for Cr⁶⁺ content





3. Test Flowchart for PBBs & PBDEs content



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

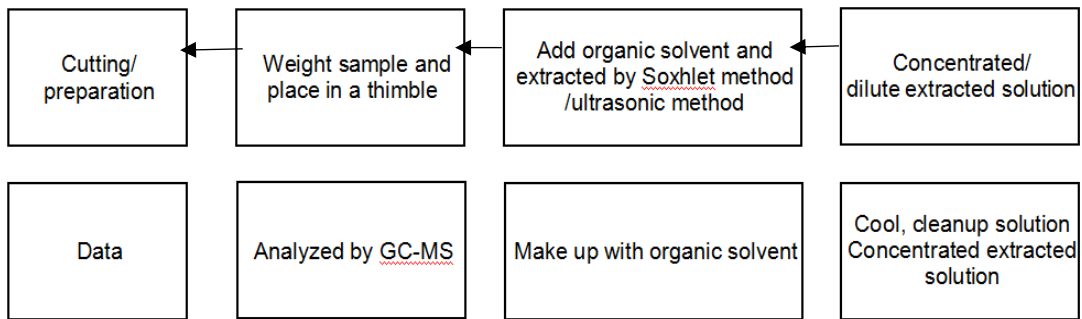


Table:

	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

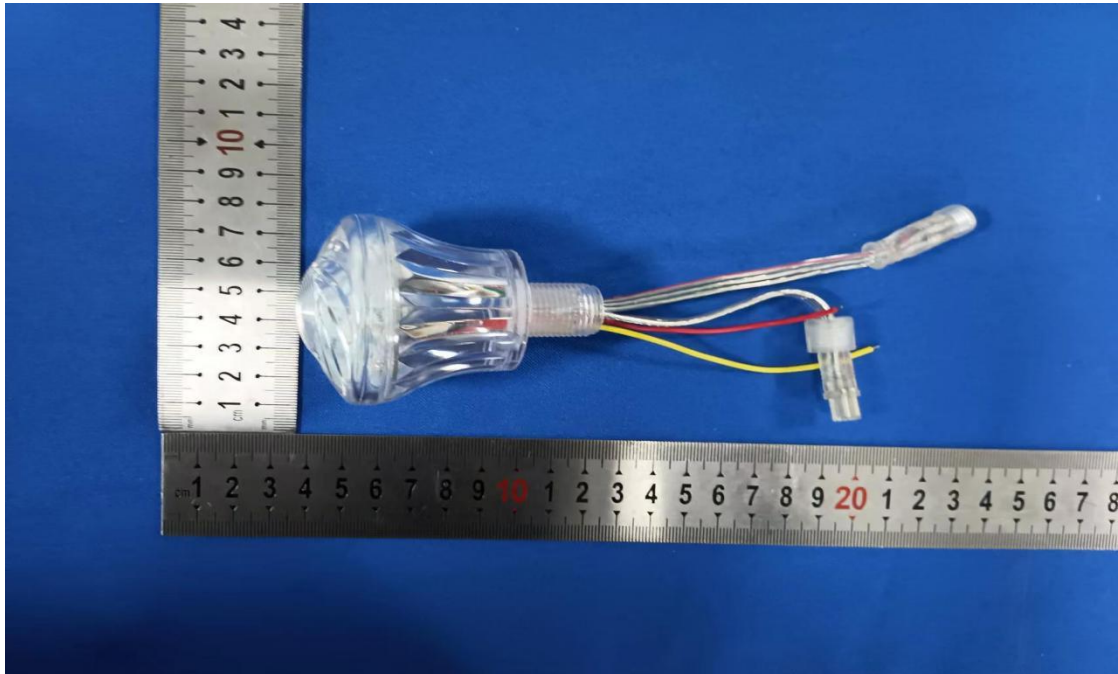


Fig. 1 - Front view

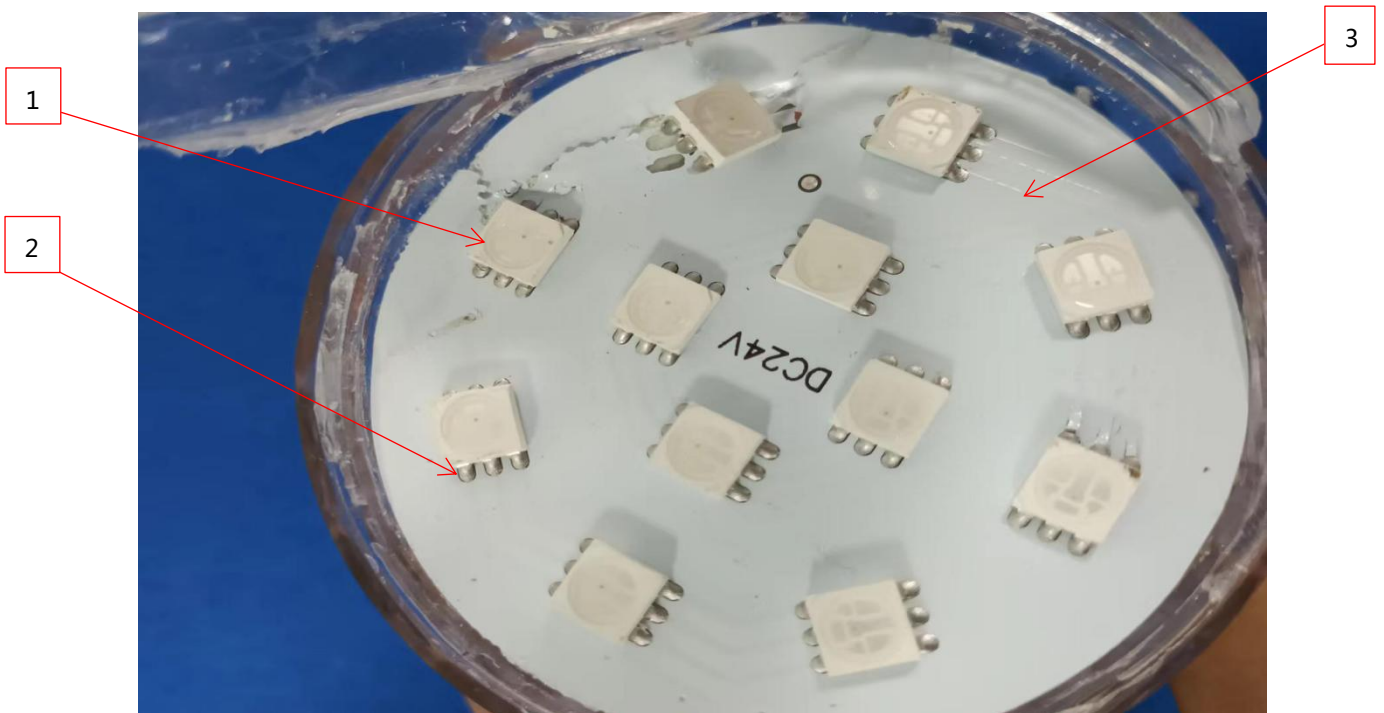


Fig. 2 - Rear view

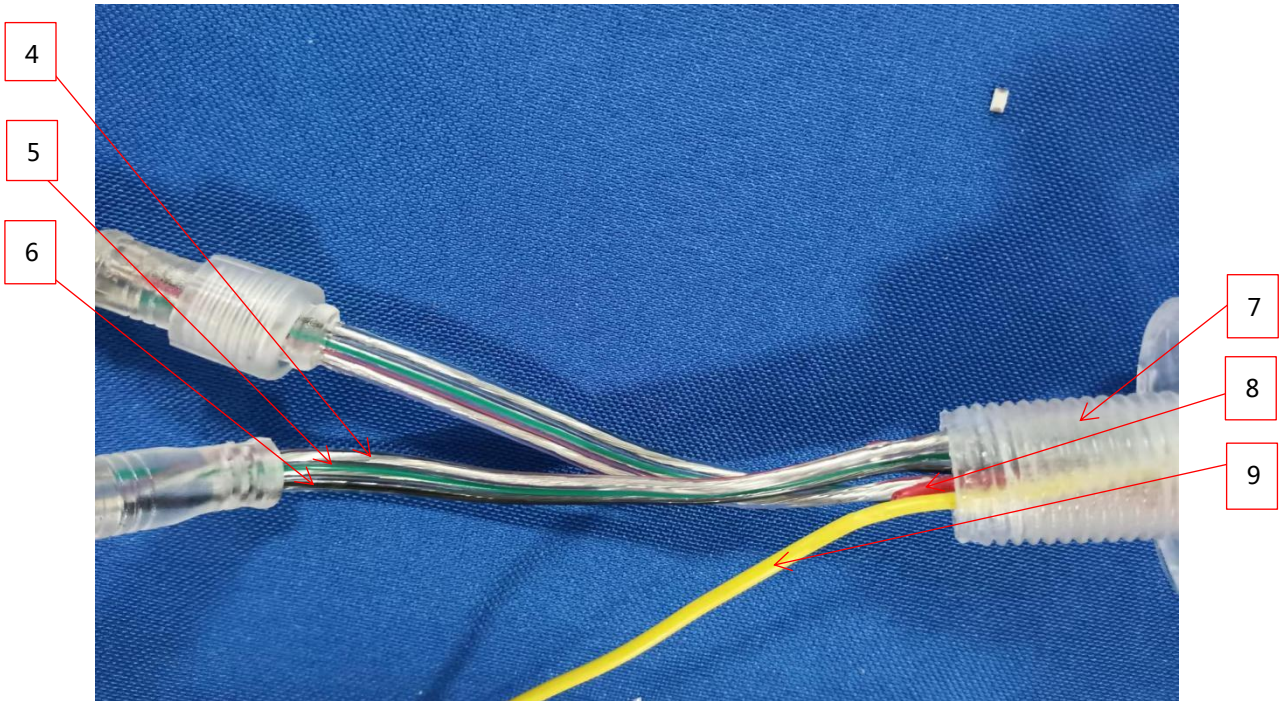


Fig. 3 - Front view

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