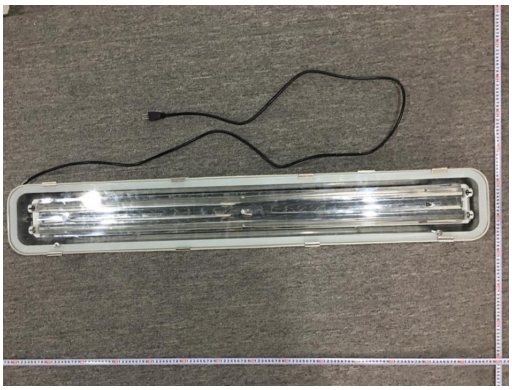
XRF Screening and Chemical Confirmation Test Report Number: ETA24010007C-001

Applicant: Hangzhou Longlux Electronic Technology Co.,ltd
The Western Science Park, Hangzhou City, China
Date: January 23, 2024

Sample Description:

One(1) piece of submitted sample said to be

Item Name	:	Fixed luminaire with LED
Tested Model	:	LLX-TriProof-SS-258-XX
Referenced Model	:	LLX-TriProof-SS-118-XX, LLX-TriProof-SS-218-XX, LLX-TriProof-SS-136-XX, LLX-TriProof-SS-236-XX, LLX-TriProof-SS-158-XX



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Tests Conducted:

As Requested By The Applicant, For Details Refer To Attached Page(S).

Remark:

The tested samples were confirmed by client and reference models were based on the self declaration supplied by clients. **ETA** takes no responsibility for any issues of product consistency caused by inaccurate and/or invalid information submitted by the client.

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Conclusion:

Tested sample	Standard	Result
Tested component of Submitted sample	Screening by XRF spectroscopy and chemical confirmation test for RoHS Directive 2011/65/EU and amendment (EU)2015/863	Pass

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To be continued

Authorized By:
For Hangzhou ETA Testing Technology Co., Ltd

Lionel Zha
Manager

XRF Screening and Chemical Confirmation Test Report Number: ETA24010007C-001

Tests Conducted

Determination of levels of regulated substances in electrotechnical products, elements of Cadmium (Cd), Lead (Pb), Mercury (Hg), Chromium (Cr) and Bromine (Br) contents were measured by XRF Spectroscopy and chemical confirmation test for RoHS restricted substances.

(A) Results:

Part No.	Tested Components	Refer information	Restricted Substance	XRF Result	Chemical Confirmation Result	Conclusion on RoHS
1	SHELL	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	P	/	
2	SHELL	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	P	/	
3	LAMPSHADE (TRANSPARENT PLASTIC)	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	P	/	
4	SHELL (WHITE PLASTIC)	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	P	/	
5	WHITE NONMETAL	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	X	PBBs=ND; PBDEs=ND	
6	LED PCB	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	NA	/	

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XRF Screening and Chemical Confirmation Test Report Number: ETA24010007C-001

Part No.	Tested Components	Refer information	Restricted Substance	XRF Result	Chemical Confirmation Result	Conclusion on RoHS
7	LED	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	P	/	
8	SILVER METAL	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	NA	/	
9	SCREW (SILVER METAL)	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	NA	/	
10	BLACK NONMETAL	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	X	PBBs=ND; PBDEs=ND	
11	WHITE NONMETAL	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	X	PBBs=ND; PBDEs=ND	
12	SILVER METAL	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	NA	/	

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To be continued

Part No.	Tested Components	Refer information	Restricted Substance	XRF Result	Chemical Confirmation Result	Conclusion on RoHS
13	PCB	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	X	PBBs=ND; PBDEs=ND	
14	RESISTOR	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	P	/	
15	WIRE					
15-1	WHITE WIRE SKIN	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	X	PBBs=ND; PBDEs=ND	
15-2	GREEN LEAD	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	NA	/	
15-3	RED LEAD	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	NA	/	

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To be continued

Part No.	Tested Components	Refer information	Restricted Substance	XRF Result	Chemical Confirmation Result	Conclusion on RoHS
15-4	GOLDEN LEAD	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	NA	/	
16	U2	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	X	PBBs=ND; PBDEs=ND	
17	RESISTOR	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	X	PBBs=ND; PBDEs=ND	
18	CAPACITOR	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	X	PBBs=ND; PBDEs=ND	
19	CAPACITOR					
19-1	SHELL (BLACK NONMETAL)	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	X	PBBs=ND; PBDEs=ND	
19-2	ENCLOSURE (SILVER METAL)	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	NA	/	

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To be continued

Part No.	Tested Components	Refer information	Restricted Substance	XRF Result	Chemical Confirmation Result	Conclusion on RoHS
19-3	ELECTROLYTE	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	X	PBBs=ND; PBDEs=ND	
20	BLACK WIRE					
20-1	BLACK WIRE SKIN	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	X	PBBs=ND; PBDEs=ND	
20-2	LEAD	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	NA	/	
21	RED WIRE					
21-1	RED WIRE SKIN	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	X	PBBs=ND; PBDEs=ND	
21-2	LEAD	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	NA	/	

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To be continued

XRF Screening and Chemical Confirmation Test Report Number: ETA24010007C-001

Part No.	Tested Components	Refer information	Restricted Substance	XRF Result	Chemical Confirmation Result	Conclusion on RoHS
22	PCB	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	X	PBBs=ND; PBDEs=ND	
23	BLACK PLASTIC	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	X	PBBs=ND; PBDEs=ND	
24	SCREW (SILVER METAL)	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	NA	/	
25	WHITE LINE	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	X	PBBs=ND; PBDEs=ND	
26	SILVER METAL	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	NA	/	
27	WHITE NONMETAL	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	X	PBBs=ND; PBDEs=ND	
28	WHITE WIRE					

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To be continued

XRF Screening and Chemical Confirmation Test Report Number: ETA24010007C-001

Part No.	Tested Components	Refer information	Restricted Substance	XRF Result	Chemical Confirmation Result	Conclusion on RoHS
28-1	WHITE WIRE SKIN	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	X	PBBs=ND; PBDEs=ND	
28-2	LEAD	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	NA	/	
29	SILVER METAL	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	NA	/	
30	WHITE PLASTIC	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	P	/	
31	BLACK NONMETAL	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	X	PBBs=ND; PBDEs=ND	
32	WHITE PLASTIC	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	P	/	

****

To be continued

Part No.	Tested Components	Refer information	Restricted Substance	XRF Result	Chemical Confirmation Result	Conclusion on RoHS
33	SILVER METAL	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	NA	/	
34	SILVER METAL	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	NA	/	
35	WHITE PLASTIC	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	P	/	
36	CAPACITOR					
36-1	SHELL (GREEN NONMETAL)	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	X	PBBs=ND; PBDEs=ND	
36-2	ENCLOSURE (SILVER METAL)	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	NA	/	
36-3	ELECTROLYTE	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	X	PBBs=ND; PBDEs=ND	

****

To be continued

Part No.	Tested Components	Refer information	Restricted Substance	XRF Result	Chemical Confirmation Result	Conclusion on RoHS
37	BLACK NONMETAL	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	P	/	
38	YELLOW TAP	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	P	/	
40	GOLDEN LEAD	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	NA	/	
41	CAPACITOR					
41-1	SHELL (BLACK NONMETAL)	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	X	PBBs=ND; PBDEs=ND	
41-2	ENCLOSURE (SILVER METAL)	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	NA	/	
41-3	ELECTROLYTE	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	X	PBBs=ND; PBDEs=ND	

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To be continued

XRF Screening and Chemical Confirmation Test Report Number: ETA24010007C-001

Part No.	Tested Components	Refer information	Restricted Substance	XRF Result	Chemical Confirmation Result	Conclusion on RoHS
42	PCB	/	Cd	P	/	PASS
			Pb	P	/	
			Hg	P	/	
			Cr	P	/	
			Br	X	PBBs=ND; PBDEs=ND	

****

Remark: P = Pass (Below the lower screening limit of table (B))
X = Inconclusive result (Further chemical test was suggested (see table (B).)
NA = Not applicable
ND = Not detected
ppm = Parts per million = mg/kg
μg/cm$_2$ = Microgram per square centimetre
Negative = A negative test result indicated the absorbance value of testing sample solution for Cr(VI) testing is less than the absorbance value of the 0.10μg/cm2 equivalent comparison standard solution, the Cr(VI) concentration is below the limit of quantification, then the sample is considered to be negative for Cr(VI).
The related expanded uncertainty (U$_{95}$) of the Lead (Pb) / Cadmium (Cd) test is 10%.

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(B) XRF screening limits in mg/kg for regulated elements in various matrices.

Element	Polymer materials	Metallic materials	Composite materials
Cd	P ≤70 < X < 130 ≤ F	P ≤ 70 < X < 130 ≤ F	P ≤ 70 < X < 150 ≤ F
Pb	P ≤ 700 < X < 1300≤ F	P ≤ 700 < X < 1300 ≤ F	P ≤ 500< X < 1500 ≤ F
Hg	P ≤ 700< X < 1300 ≤ F	P ≤ 700 < X < 1300 ≤ F	P ≤ 500 < X < 1500 ≤ F
Cr	P ≤ 700< X	P ≤ 700 < F	P ≤ 500 < X
Br	P ≤ 300< X	Not applicable	P ≤ 250 < X

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(C) Estimated detection limits in mg/kg for regulated elements in various matrices.

Element	Polymer materials	Metallic materials	Composite materials
Cd	50	70	70
Pb	100	200	200
Hg	100	200	200
Cr	100	200	200
Br	200	Not applicable	200

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To be continued

XRF Screening and Chemical Confirmation Test Report Number: ETA24010007C-001

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 is required to obtain quantitative data.

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(D) Chemical confirmation test methods：

Testing item	Testing method	Reporting limit
Cadmium (Cd) content	With reference to IEC 62321-5 Edition 1.0:2013, by acid digestion until the tested sample was totally dissolved, and determined by ICP - OES	2 mg/kg
Lead (Pb) content	With reference to IEC 62321-5 Edition 1.0:2013, by acid digestion until the tested sample was totally dissolved, and determined by ICP - OES	2 mg/kg
Mercury (Hg) content	With reference to IEC 62321-4 Edition 1.0:2013, by acid digestion until the tested sample was totally dissolved, and determined by ICP - OES	2 mg/kg
Chromium (VI) (Cr^{6+}) content	With reference to IEC 62321 edition 1.0:2008, by alkaline digestion and determined by UV-VIS spectrophotometer	1 mg/kg
Chromium (VI) (Cr^{6+}) content	With reference to IEC 62321-7-1 Edition 1.0:2015, by boiling water extraction and determined by UV-VIS Spectrophotometer.	Positive(>0.13 g/cm_2) / Negative(<0.10 g/cm_2) / Inconclusive(0.10 g/cm_2 -- 0.13 g/cm_2)
Polybrominated Biphenyls (PBBs)& Polybrominated Diphenyl Ethers (PBDEs) Content	With reference to IEC 62321-6 Edition 1.0:2015, by solvent extraction and determined by GC/MS and further HPLC confirmation when necessary.	5 mg/kg

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(E) RoHS requirement

Restricted substances	Limits
Cadmium (Cd)	0.01% (100 ppm)
Lead (Pb)	0.1% (1000 ppm)
Mercury (Hg)	0.1% (1000 ppm)
Chromium (VI) (Cr^{6+})	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 RoHS Directive 2011/65/EU.

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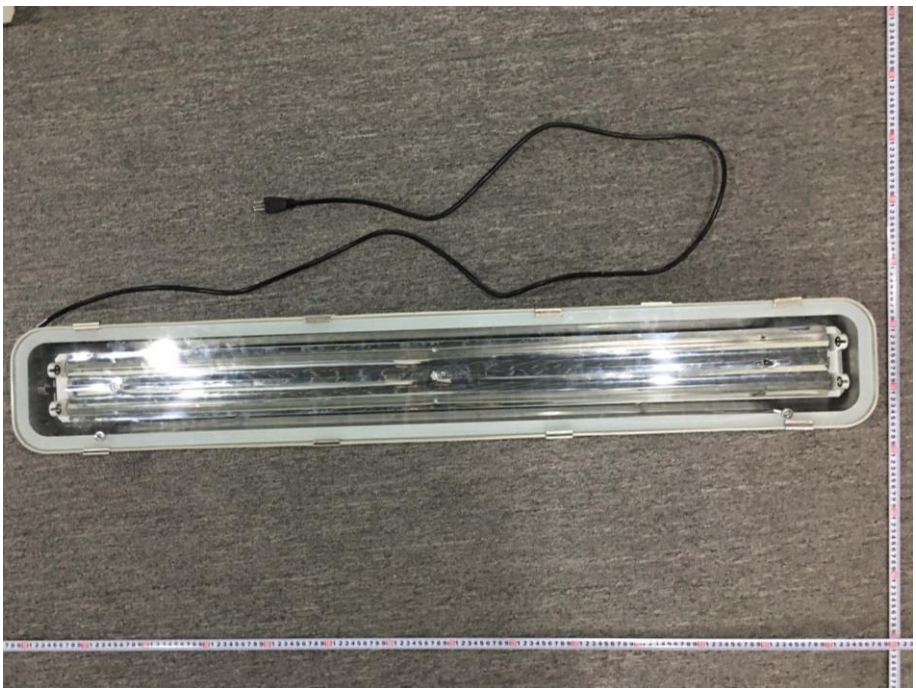
Date sample received: January 13, 2024
Testing period: January 13, 2024to January 23, 2024

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To be continued

XRF Screening and Chemical Confirmation Test Report Number: ETA24010007C-001

For LLX-TriProof-SS-118-XX；LLX-TriProof-SS-218-XX；LLX-TriProof-SS-136-XX；LLX-TriProof-SS-236-XX；LLX-TriProof-SS-158-XX；LLX-TriProof-SS-258-XX



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End of this report

This report is made solely on the basis of your instructions and/or information and materials supplied by you. It is not intended to be a recommendation for any particular course of action. ETA does not accept a duty of care or any other responsibility to any person other than the Client in respect of this report and only accepts liability to the Client insofar as is expressly contained in the terms and conditions governing ETA's provision of services to you. ETA makes no warranties or representations either express or implied with respect to this report save as provided for in those terms and conditions. We have aimed to conduct the Review on a diligent and careful basis and we do not accept any liability to you for any loss arising out of or in connection with this report, in contract, tort, by statute or otherwise, except in the event of our gross negligence or wilful misconduct.

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