

(No.): ETR23605632

(Date): 12-Jul-2023

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(EVERLIGHT ELECTRONICS CO., LTD.)

6-8 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

(The following sample(s) was/were submitted and identified by the applicant

as)

BASIC INFORMATION

Type of Product DISPLAY
Supplier Company Name EVERLIGHT

Address NO.6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN

Tel / Fax / Email TEL:886-2685-6688

FAX:886-2685-6699

E-MAIL: allenchiang@everlight.com

Contact Person Aller

EVERLIGHT REPORT NO EVERLIGHT-DISPLAY SERIES (PCB Display)

Sampling Product: D306SURWA/S530-A3/S451-SGS-12-Jul-2023

PRODUCT INFORMATION

Product/component Sample Instrument panels

description Digital readout displays

Quantity (numbers or weight) 1.9234 a

ZS23041311

Country of Origin China

TEST INFORMATION

Sample preparation CUTTING

Test Method RoHS: IEC 62321, Halogen: BS EN 14582

MDL Cd, Pb, Hg: 2 mg/kg, PBBs/PBDEs: 5 mg/kg, Halogen: 50 mg/kg

(Sample Submitted By) : (EVERLIGHT ELECTRONICS CO., LTD.)

(Sample Receiving Date) : 30-Jun-2023

(Testing Period) : 30-Jun-2023 to 12-Jul-2023

(Test Results) : (Please refer to following pages).

PIN CODE: 1A705984



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(Test Requested : (1)

RoHS 2011/65/EU Annex II

(EU) 2015/863

, DBP, BBP, DEHP, DIBP (As specified by

client, with reference to RoHS 2011/65/EU Annex II and amending Directive (EU) 2015/863 to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP,

DEHP, DIBP contents in the submitted sample(s).)

(2) PAHs

(As specified by client, to test PAHs and

other item(s).)

(Conclusion) : (1)

, DBP, BBP,

DEHP, DIBP

RoHS 2011/65/EU Annex II

(EU) 2015/863

(Based on the performed tests on submitted sample(s), the test results of Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive

2011/65/EU.)

(2)

(AfPS) GSPAHs

3 (Based upon the performed tests on the submitted sample(s), the test results of PAHs (15 items) comply with the limits of PAHs requirement (Category 3) Other consumer products as set by German

Committee on Product Safety (AfPS) GS PAHs.)

(Test Part Description)

No.1 : (BODY)

No.2 : (PLATING LAYER OF SILVER COLORED METAL PIN)
No.3 : (BASE MATERIAL OF SILVER COLORED METAL PIN)

No.4 : () (SILVER COLORED METAL PIN (INCLUDING THE PLATING LAYER))

(Test Results)

(Test Items)	(Method)	(Unit)	MDL		(Result)		(Limit)
				No.1	No.2	No.3	
(Cd) (Cadmium (Cd))	IEC 62321-5: 2013 (With reference to IEC	mg/kg	2	n.d.			100
. , , , ,	62321-5: 2013, analysis was performed by ICP-OES.)	mg/kg	2	n.d.			1000



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			MDL				
(Test Items)	(Method)	(Unit)		(Result))	(Limit)
				No.1	No.2	No.3	
(Hg) (Mercury (Hg))	IEC 62321-4: 2013+ AMD1: 2017	mg/kg	2	n.d.			1000
	(With reference to IEC 62321-4: 2013+ AMD1: 2017, analysis was performed by ICP-OES.)						
Cr(VI) (Hexavalent	IEC 62321-7-2: 2017 -	mg/kg	8	n.d.			1000
Chromium Cr(VI))	(With reference to IEC 62321-7-2: 2017, analysis was performed by UV-VIS.)						
(Cd) (Cadmium (Cd))	IEC 62321-5: 2013 (IEC 62321-5: 2013 application of modified digestion by surface etching, analysis was performed by ICP-OES.)		2		n.d.		100
(Pb) (Lead (Pb))			2		49.1		1000
(Hg) (Mercury (Hg))	IEC 62321-4: 2013+ AMD 1: 2017 (IEC 62321-4: 2013+ AMD 1: 2017 application of modified digestion by surface etching, analysis was performed by ICP-OES.)	mg/kg	2		n.d.		1000
(Cd) (Cadmium (Cd))	IEC 62321-5: 2013 (With reference to IEC	mg/kg	2			n.d.	100
(Pb) (Lead (Pb))	62321-5: 2013, analysis was performed by ICP-OES.)	mg/kg	2			n.d.	1000
(Hg) (Mercury (Hg))	IEC 62321-4: 2013+ AMD1: 2017 (With reference to IEC 62321-4: 2013+ AMD1: 2017, analysis was performed by ICP- OES.)	mg/kg	2			n.d.	1000



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(Test Items)	(Method)	(Unit)	MDL		(Result))	(Limit)
				No.1	No.2	No.3	Ī
(Hexavalent Chromium) Cr(VI) (CAS No.: 18540-29-9) (#2)	IEC 62321-7-1: 2015 - (With reference to IEC 62321-7-1: 2015, analysis was performed by UV-VIS.)	μg/cm²	0.1		n.d.	n.d.	-
(Monobromobiphenyl)		mg/kg	5	n.d.			-
(Dibromobiphenyl)	1	mg/kg	5	n.d.			-
(Tribromobiphenyl)	1	mg/kg	5	n.d.			-
(Tetrabromobiphenyl)]	mg/kg	5	n.d.			-
(Pentabromobiphenyl)		mg/kg	5	n.d.			-
(Hexabromobiphenyl)		mg/kg	5	n.d.			-
(Heptabromobiphenyl)		mg/kg	5	n.d.			-
(Octabromobiphenyl)		mg/kg	5	n.d.			-
(Nonabromobiphenyl)		mg/kg	5	n.d.			-
(Decabromobiphenyl)	150 40004 4 0045	mg/kg	5	n.d.			-
(Sum of PBBs)	IEC 62321-6: 2015 / (With reference to IEC 62321-6:	mg/kg	-	n.d.			1000
(Monobromodiphenyl ether)	2015, analysis was performed by GC/MS.)	mg/kg	5	n.d.			-
(Dibromodiphenyl ether)	2010, dridiysis was performed by Go/Wis.,	mg/kg	5	n.d.			-
(Tribromodiphenyl ether)		mg/kg	5	n.d.			-
(Tetrabromodiphenyl ether)		mg/kg	5	n.d.			-
(Pentabromodiphenyl ether)		mg/kg	5	n.d.			-
(Hexabromodiphenyl ether)		mg/kg	5	n.d.			-
(Heptabromodiphenyl ether)		mg/kg	5	n.d.			-
(Octabromodiphenyl ether)		mg/kg	5	n.d.			-
(Nonabromodiphenyl ether)		mg/kg	5	n.d.			-
(Decabromodiphenyl ether)		mg/kg	5	n.d.			-
(Sum of PBDEs)		mg/kg	-	n.d.			1000



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-			MDL	(D H)			(Limit)
(Test Items)	(Method)	(Unit)	(Unit)		(Result) No.2 No.3		
(BBP) (Butyl benzyl phthalate (BBP))	IEC 62321-8: 2017 / (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	No.1 n.d.			1000
(DBP) (Dibutyl phthalate (DBP))	IEC 62321-8: 2017 / (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.			1000
(2-) (DEHP) (Di-(2-ethylhexyl) phthalate (DEHP))	IEC 62321-8: 2017 / (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.			1000
(DIBP) (Diisobutyl phthalate (DIBP))	IEC 62321-8: 2017 / (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.			1000
(DIDP) (Diisodecyl phthalate (DIDP)) (CAS No.: 26761-40-0, 68515-49-1)	IEC 62321-8: 2017 / (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.			-
(DINP) (Diisononyl phthalate (DINP)) (CAS No.: 28553-12-0, 68515-48-0)	IEC 62321-8: 2017 / (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.			-
(DNOP) (Di-n- octyl phthalate (DNOP)) (CAS No.: 117-84-0)	IEC 62321-8: 2017 / (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.			-
(DNPP) (Di-n- pentyl phthalate (DNPP)) (CAS No.: 131-18-0)	IEC 62321-8: 2017 / (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.			-
(DNHP) (Di-n-hexyl phthalate (DNHP)) (CAS No.: 84-75-3)	IEC 62321-8: 2017 / (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.		1	-
(2-) (DMEP) (Bis(2-methoxyethyl) phthalate (DMEP)) (CAS No.: 117-82-8)	IEC 62321-8: 2017 / (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.			-
(DMP) (Dimethyl phthalate (DMP)) (CAS No.: 131-11-3)	IEC 62321-8: 2017 / (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.			-



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(T + 14)	(2.4.11.1)	(11.11)	MDL		(Daa. 14)		(1.1
(Test Items)	(Method)	(Unit)		No.1	(Result) No.2	No.3	(Limit)
(DIOP) (Diisooctyl phthalate (DIOP)) (CAS No.: 27554-26-3)	IEC 62321-8: 2017 / (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.			-
(DNNP) (Di-n- nonyl phthalate (DNNP)) (CAS No.: 84-76-4)	IEC 62321-8: 2017 / (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.			-
(HBCDD) (- HBCDD, - HBCDD, - HBCDD) (Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (- HBCDD, - HBCDD, - HBCDD)) (CAS No.: 25637-99-4, 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	IEC 62321: 2008 / (With reference to IEC 62321: 2008, analysis was performed by GC/MS.)	mg/kg	5	n.d.			-
(F) (Fluorine (F)) (CAS No.: 14762- 94-8)		mg/kg	50	124			-
(CI) (Chlorine (CI)) (CAS No.: 22537-15-1)	BS EN 14582: 2016		50	315			-
(Br) (Bromine (Br)) (CAS No.: 10097-32-2)	(With reference to BS EN 14582: 2016, analysis was performed by IC.)	mg/kg	50	5760			-
(I) (lodine (I)) (CAS No.: 14362- 44-8)		mg/kg	50	n.d.			-
(PFOS and its salts) (CAS No.: 1763-23-1 and its salts)	CEN/TS 15968: 2010 (With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.)	mg/kg	0.01	n.d.			-
(PFOA and its salts) (CAS No.: 335-67-1 and its salts)	CEN/TS 15968: 2010 (With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.)	mg/kg	0.01	n.d.			-
(Be) (Beryllium (Be)) (CAS No.: 7440-41-7)	US EPA 3052: 1996 (With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.)	mg/kg	2	n.d.			-



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			MDI				
(Test Items)	(Method)	(Unit)	MDL		(Result))	(Limit)
(Test items)	(Methed)	(Ormit)		No.1	No.2	No.3	(2)
(Polycyclic Aromatic Hydrocarbons) (PAHs)							
(a) (Benzo[a]pyrene) (CAS No.: 50-32-8)		mg/kg	0.2	n.d.			
(e) (Benzo[e]pyrene) (CAS No.: 192-97-2)		mg/kg	0.2	n.d.			
(Benzo[a]anthracene) (CAS No.: 56-55-3)		mg/kg	0.2	n.d.			
(b) (Benzo[b]fluoranthene) (CAS No.: 205-99-2)		mg/kg	0.2	n.d.			
(j) (Benzo[j]fluoranthene) (CAS No.: 205-82-3)		mg/kg	0.2	n.d.			
(k) (Benzo[k]fluoranthene) (CAS No.: 207-08-9)		mg/kg	0.2	n.d.			
(Chrysene) (CAS No.: 218-01-9)	A fPS GS 2019:01 PAK /	mg/kg	0.2	n.d.			
(Dibenzo[a,h]anthracene) (CAS No.: 53-70-3)	(With reference to AfPS GS 2019:01 PAK, analysis was performed by	mg/kg	0.2	n.d.			
(Benzo[g,h,i]perylene) (CAS No.: 191-24-2)	GC/MS.)	mg/kg	0.2	n.d.			
(Indeno[1,2,3-c,d]pyrene) (CAS No.: 193-39-5)		mg/kg	0.2	n.d.			
(Anthracene) (CAS No.: 120-12-7)		mg/kg	0.2	n.d.			
(Fluoranthene) (CAS No.: 206-44-0)		mg/kg	0.2	n.d.			
(Phenanthrene) (CAS No.: 85-01-8)		mg/kg	0.2	n.d.			
(Pyrene) (CAS No.: 129-00-0)		mg/kg	0.2	n.d.			
(Naphthalene) (CAS No.: 91-20-3)		mg/kg	0.2	n.d.			
15 (Sum of 15 PAHs)		mg/kg	-	n.d.			



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MDL (Result) (Limit) (Test Items) (Method) (Unit) No.4 US FPA 3050B: 1996 mg/kg n.d. (With reference to US EPA 3050B: 1996, analysis was performed by ICP-OES.) (Note) 1. mg/kg = ppm 0.1wt% = 0.1% = 1000ppm2. MDL = Method Detection Limit (3. n.d. = Not Detected (); MDL / Less than MDL 4. "-" = Not Regulated (5. "---" = Not Conducted ((PFOS and its salts including): CAS No.: 1763-23-1, 2795-39-3, 29457-72-5, 29081-56-9, 70225-14-8, 56773-42-3, 251099-16-8, 307-35-7, 91036-71-4, 4021-47-0 and others. 7. (PFOA and its salts including): CAS No.: 335-67-1, 335-95-5, 2395-00-8, 335-93-3, 335-66-0, 3825-26-1 and others. 8. (#2) = $0.13 \, \mu g / cm^2$. / The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than 0.13 µg/cm². The sample coating is considered to contain Cr(VI). . / The sample is negative for Cr(VI) if Cr(VI) is $0.10 \,\mu g/cm^2$ n.d. (n.d. (concentration less than 0.10 µg/cm²). The coating is considered a non-Cr(VI) based coating $0.13 \, \mu g / cm^2$. / The result between $0.10 \,\mu g/cm^2$ and 9.



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Remark

(AfPS): GSPAHs

AfPS (German commission for Product Safety): GS PAHs requirements

	1 (Category 1)	2 (Category 2)	3 (Category 3)
(Parameter)	(30) 2009/48/EC 3 (Materials intended to be placed in the mouth, or materials in toys (Directive 2009/48/EC) or articles for children up to 3 years of age with intended	1 30 ((Materials that are not in Category 1, with intended or foreseeable long-term skin contact (> 30 seconds) or short-term repetitive contact with the skin) a. b.	1 2) (Materials not covered by Category 1 or 2, with intended or foreseeable short-term skin contact (30 seconds))
	long-term skin contact (> 30 seconds))	14 (Othe (Use by consumer children under 14) products)	r 14 (Other (Use by consumer children under 14) products)



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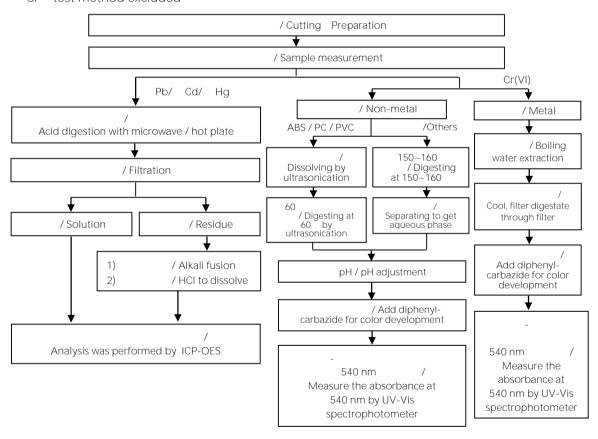
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(NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

/ Analytical flow chart of heavy metal

These samples were dissolved totally by pre-conditioning method according to below flow chart. Cr⁶⁺ test method excluded





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/ Flow chart of s



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/ Analytical flow chart - PBBs/PBDEs

/ First testing process
/ Optional screen process
/ Confirmation process
/ Sample pretreatment

/ Screen analysis

/ Sample extraction
/ Soxhlet method

/
Concentrate/Dilute extracted solution

/ Filter
/ GC/MS



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/ Analytical flow chart - Phthalate

/Test method: IEC 62321-8

/ /

Sample pretreatment/separation



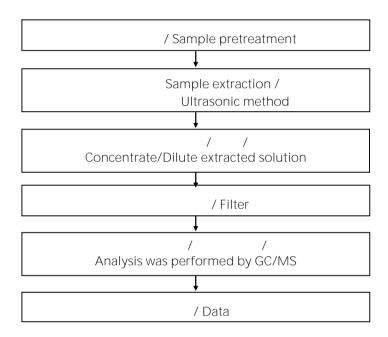
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/ Analytical flow chart - HBCDD





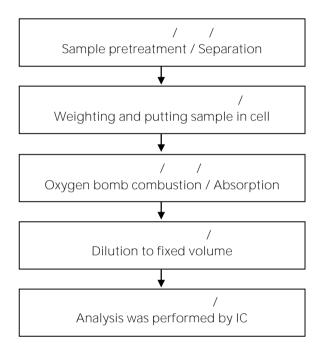
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/ Analytical flow chart - Halogen

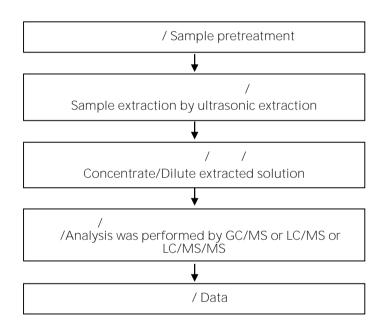




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(/ / /) / Analytical flow chart - PFAS (including PFOA/PFOS/its related compound, etc.)





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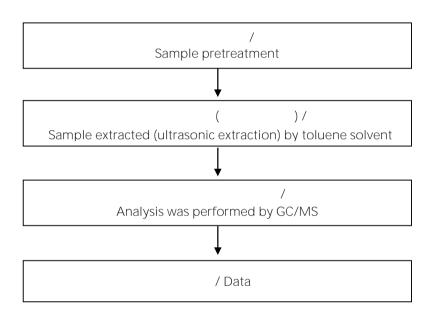
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Analytical flow chart - PAHs (Polycyclic Aromatic Hydrocarbons)





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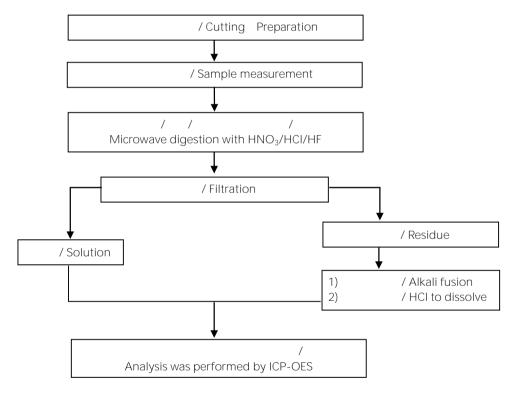
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() / Analytical flow chart of elements (Heavy metal included)

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

/Reference method US EPA 3051A US EPA 3052



* US EPA 3051A

/ US EPA 3051A method does not add HF.



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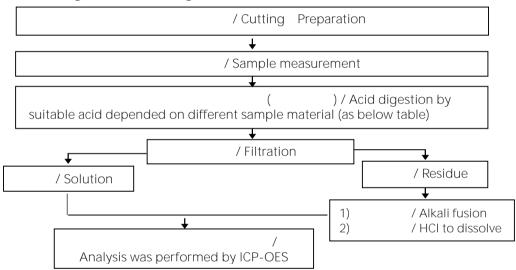
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ICP-OFS

(Flow chart of digestion for the elements analysis performed by ICP-OES)

/ These samples were dissolved totally by

pre-conditioning method according to below flow chart.



, , , / Steel, copper, aluminum, solder	, , , , Aqua regia, $\rm HNO_3$, $\rm HCI$, $\rm HF$, $\rm H_2O_2$
/ 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	/ Added appropriate reagent to total digestion



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* / . *
(The tested sample / part is marked by an arrow if it's shown on the photo.)







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ETR23605632 NO.4



(End of Report) **