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BASIC INFORMATION

Type of Product ARRAY LED 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: lindawang@everlight.com

Contact Person LI LING WANG

EVERLIGHT REPORT NO EVERLIGHT-ARRAY LED (LAMP) SERIES

Sampling Product: A203B/SYG/S530-E2-SGS-11-Jan-2021

PRODUCT INFORMATION
Product/component Sample

description

Quantity (numbers or weight)

ZS20120844HF

Country of Origin CHINA

TEST INFORMATION

Sample preparation CUTTING

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

MDL Cd, Pb, Hq: 2 mg/kq, PBBs/PBDEs: 5 mg/kq, Halogen: 50 mg/kq

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

:

PIN CODE: BDB31DBF

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新北市五股區新北產業園區五權七路 25 號 t+886(02)2299 3939 f+886(02)2299 3237 25, Wu Chyuan 7th Road, New Taipei Industrial Park, Wu Ku District, New Taipei City, Taiwan



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

(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) (A fPS) GS PAHs

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 : (BLACK PLASTIC)

No.3 : (PLATING LAYER OF SILVER COLORED METAL)

No.4 : (SILVER COLORED METAL (INCLUDING THE PLATING LAYER))
No.5 : (SILVER COLORED METAL (INCLUDING THE PLATING LAYER))



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(Test Results)

(Test Items) (Method)		(Unit)	MDL	(Result))	(Limit)	
,	, ,	` ′		No.1	No.2	No.3		
(Cd) (Cadmium (Cd)) (CAS No.: 7440-43-9)	IEC 62321-5: 2013 (With reference to IEC	mg/kg	2	n.d.	n.d.		100	
(Pb) (Lead (Pb)) (CAS No.: 7439-92-1)	62321-5: 2013, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	n.d.		1000	
(Hg) (Mercury (Hg)) (CAS No.: 7439-97-6)	IEC 62321-4: 2013+ AMD1: 2017 (With reference to IEC 62321-4: 2013+ AMD1: 2017, analysis was performed by ICP-OES.)		2	n.d.	n.d.		1000	
(Cd) (Cadmium (Cd)) (CAS No.: 7440-43-9)	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)) (CAS No.: 7439-92-1)			2			50.9	1000	
(Hg) (Mercury (Hg)) (CAS No.: 7439-97-6)	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	
Cr(VI) (Hexavalent Chromium Cr(VI)) (CAS No.: 18540-29-9)	IEC 62321-7-2: 2017 - (With reference to IEC 62321-7-2: 2017, analysis was performed by UV-VIS.)	mg/kg	8	n.d.	n.d.		1000	



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(Test Items)	(Method)		MDL	(Result)			(Limit)
(**************************************	((Unit)		No.1	No.2	No.3	(=,
(Hexavalent Chromium) Cr(VI) (CAS No.: 18540-29-9) (#2)	IEC 62321-7-1: 2015 - (With reference to	μg/cm²	0.1			n.d.	-
	IEC 62321-7-1: 2015, analysis was performed by UV-VIS.)						
(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.		-
(Octabromobiphenyl)		mg/kg	5	n.d.	n.d.		-
(Nonabromobiphenyl)		mg/kg	5	n.d.	n.d.		-
(Decabromobiphenyl)	IEC 62321-6: 2015 /	mg/kg	5	n.d.	n.d.		-
(Sum of PBBs)	(With reference to IEC 62321-	mg/kg	-	n.d.	n.d.		1000
(Monobromodiphenyl ether)	6: 2015, analysis was performed by	mg/kg	5	n.d.	n.d.		-
(Dibromodiphenyl ether)	GC/MS.)	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)	1	mg/kg	5	n.d.	n.d.		-
(Octabromodiphenyl ether)	1	mg/kg	5	n.d.	n.d.		-
(Nonabromodiphenyl ether)	1	mg/kg	5	n.d.	n.d.		-
(Decabromodiphenyl ether)	1	mg/kg	5	n.d.	n.d.		-
(Sum of PBDEs)	1	mg/kg	-	n.d.	n.d.		1000



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(Test Items)	(Method)	(Unit)	MDL		(Result))	(Limit)
	((=:,		No.1	No.2 No.3		(=)
(BBP) (Butyl benzyl phthalate (BBP)) (CAS No.: 85-68-7)	IEC 62321-8: 2017 / (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	n.d.		1000
(DBP) (Dibutyl phthalate (DBP)) (CAS No.: 84-74-2)	IEC 62321-8: 2017 / (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	n.d.		1000
(2-) (DEHP) (Di-(2-ethylhexyl) phthalate (DEHP)) (CAS No.: 117-81-7)	IEC 62321-8: 2017 / (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	n.d.		1000
(DIBP) (Diisobutyl phthalate (DIBP)) (CAS No.: 84-69-5)	IEC 62321-8: 2017 / (With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	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.	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.	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.	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.	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.	n.d.		-
(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.	n.d.		-



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(Test Items)	(Method)	(Unit)	MDL		(Result)	١	(Limit)
(Test Items)	(ivietriod)			<u>`</u>		No.3	(LIIIIII)
(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.	n.d.		-
(F) (Fluorine (F)) (CAS No.: 14762-94-8)	BS EN 14582: 2016 (With reference to BS EN 14582: 2016, analysis was performed by IC.)	mg/kg	50	n.d.	n.d.		-
(CI) (Chlorine (CI)) (CAS No.: 22537-15-1)	BS EN 14582: 2016 (With reference to BS EN 14582: 2016, analysis was performed by IC.)	mg/kg	50	644	239		-
(Br) (Bromine (Br)) (CAS No.: 10097-32-2)	BS EN 14582: 2016 (With reference to BS EN 14582: 2016, analysis was performed by IC.)	mg/kg	50	n.d.	n.d.		-
(I) (lodine (I)) (CAS No.: 14362- 44-8)	BS EN 14582: 2016 (With reference to BS EN 14582: 2016, analysis was performed by IC.)	mg/kg	50	n.d.	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.	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.	n.d.		-
(Be) (Beryllium (Be)) (CASNo.: 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.	n.d.		-



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(2.4. ·	/	MDL				/
(Method)	(Unit)		No.1	No.2	No.3	(Limit)
	mg/kg	0.2	n.d.	n.d.		-
	mg/kg	0.2	n.d.	n.d.		-
	mg/kg	0.2	n.d.	n.d.		-
	mg/kg	0.2	n.d.	n.d.		-
	mg/kg	0.2	n.d.	n.d.		



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(Test Items)	(Method)		MDL	(Res	sult)	(Limit)
				No.4	No.5	
(Cd) (Cadmium (Cd)) (CAS No.: 7440-43-9)	IEC 62321-5: 2013 (With reference to IEC	mg/kg	2	n.d.		100
(Pb) (Lead (Pb)) (CAS No.: 7439-92-1)	62321-5: 2013, analysis was performed by ICP-OES.)		2	n.d.		1000
(Hg) (Mercury (Hg)) (CAS No.: 7439-97-6)	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
(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.		-
(Be) (Beryllium (Be)) (CAS No.: 7440-41-7)	US EPA 3050B: 1996 (With reference to US EPA 3050B: 1996, analysis was performed by ICP-OES.)	mg/kg	2		n.d.	-

(Note)		
1.	mg/kg = ppm 0.1wt% = 1000pp	m	
2.	MDL = Method Detection Limit ()	
3.	n.d. = Not Detected ();	MDL/Less than MDL	
4.	"-" = Not Regulated ()		
5.	"" = Not Conducted ()	
6.	(#2) =		
	a. $0.13 \mu g/cm^2$		/The sample is positive for Cr(VI) if the Cr(VI)
	concentration is greater than 0.13	μg/cm ² . The sample coa	ting is considered to contain Cr(VI).
	b. n.d. (0.1)	0μg/cm²)	. / The sample is negative for Cr(VI) if Cr(VI) is
	n.d. (concentration less than 0.10 µ	μg /cm 2). The coating is c	onsidered a non-Cr(VI) based coating
	c. 0.10 0.13 µg	g∕cm²	. / The result between 0.10 μg /cm 2 and
	$0.13\mu g/cm^2$ is considered to be in	conclusive - unavoidable	e coating variations may influence the determination.
7.		(The stateme	nt of compliance conformity is based on comparison of
	testing results and limits.)		



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(AfPS): GSPAHs

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

1 (Category 1) 2 (Category 2) 3 (Category 3)

(30) 2009/48/EC

2 '

(Materials intended

to be placed in the

(Parameter) mouth, or materials in toys (Directive

2009/48/EC) or articles



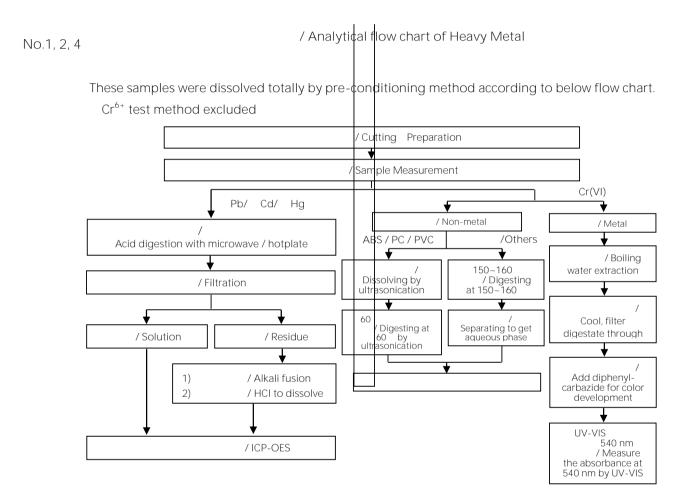
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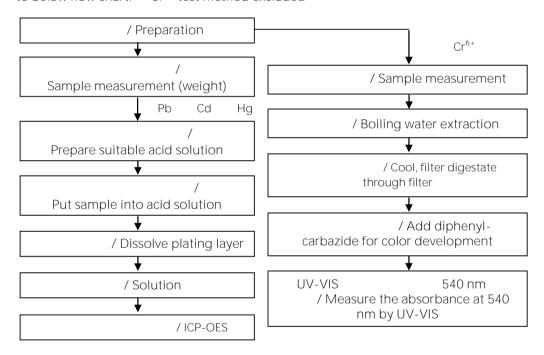
6-8 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

No.3

/ Flow Chart of Stripping method for metal analysis

/The

plating layer of samples were dissolved totally by pre-conditioning method according to below flow chart. Cr^{6+} test method excluded





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/ Analytical flow chart - PBBs/PBDEs

/ First testing process



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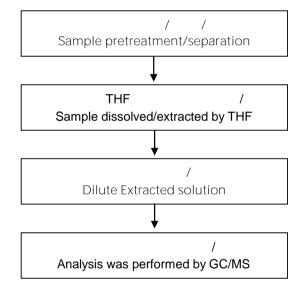
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/ Analytical flow chart - Phthalate

/Test method: IEC 62321-8





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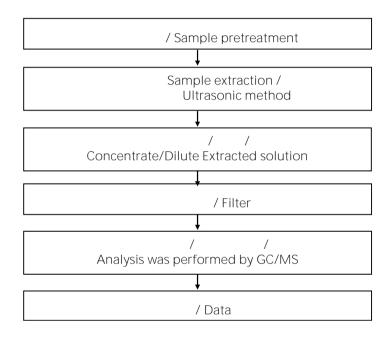
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/ Analytical flow chart - HBCDD





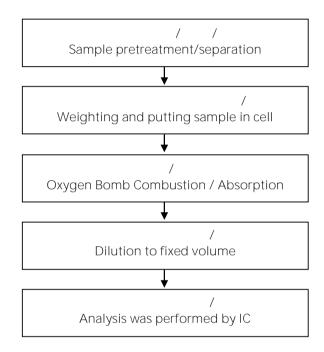
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/ Analytical flow chart - Halogen





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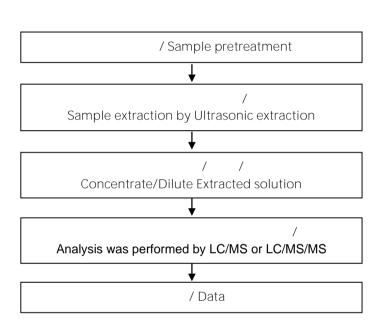
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/ Analytical flow chart - PFOA/PFOS

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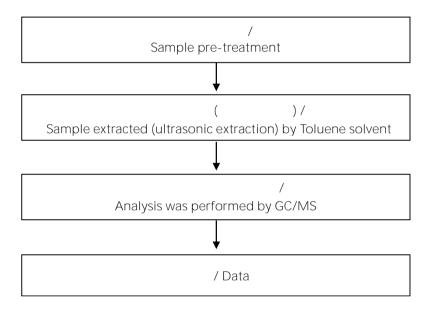
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Analytical flow chart - PAHs (Polycyclic Aromatic Hydrocarbons)





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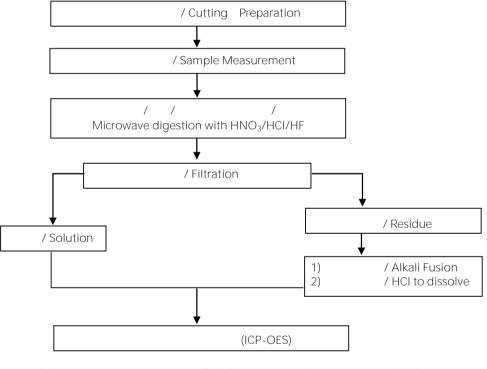
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/ Analytical flow chart of Heavy Metal

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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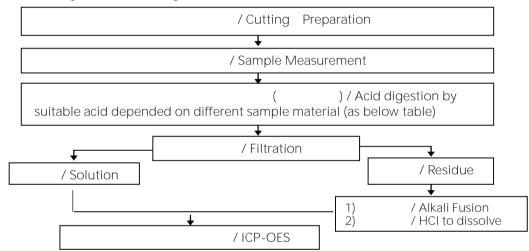
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ICP-OES

(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, 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	/ Added appropriate



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

ETR21100379 NO.1



ETR21100379 NO.2





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(End of Report) **