

Test Report

號碼(No.): ETR21308343M01 日期(Date): 15-Apr-2021 頁數(Page): 1 of 14

億光電子工業股份有限公司 (EVERLIGHT ELECTRONICS CO., LTD.) 新北市樹林區中華路6-8號 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

以下測試樣品係由申請廠商所提供及確認 (The following sample(s) was/were submitted and identified by/on behalf of the applicant as):

BASIC INFORMATION				
Type of Product	HIGH POWER			
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	HIGH POWER ELSWD SERIES,			
	Sampling Product: ELSWD-J21C1-0LPGC-C5700-SGS-15-Apr-2021			
PRODUCT INFORMATION				
Product/component Sample	LIGHTING			
Quantity (numbers or weight)	0.0416 g			
EVERLIGHT P/N	HIGH POWER ELSWD SERIES,			
	Sampling Product: ELSWD-J21C1-0LPGC-C5700			
Product Lot No	Y210123A0901GP21A			
Country of Origin	TAIWAN			
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			
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送樣廠商(Sample Submitted By) : 億光電子工業股份有限公司 (EVERLIGHT ELECTRONICS CO., LTD.)

收件日(Sample Receiving Date) : 15-Apr-2021

測試期間(Testing Period) : 31-Mar-2021 to 13-Apr-2021

測試結果(Test Results) : 請參閱下一頁 (Please refer to following pages).





PIN CODE: 476259



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測試需求(Test Requested) : (1) 依據客戶指定,參考RoHS 2011/65/EU Annex II及其修訂指令(EU) 2015/863測試鎘、

鉛、汞、六價鉻、多溴聯苯 、多溴聯苯醚, 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) 其他測試項目請見下一頁。 (Please refer to next pages for the other item(s).)

結 論(Conclusion) : (1) 根據客戶所提供的樣品,其錦、鉛、汞、六價鉻、多溴聯苯、多溴聯苯醚, DBP, BBP,

DEHP, DIBP的測試結果符合RoHS 2011/65/EU Annex II暨其修訂指令(EU) 2015/863 之限值要求。 (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.)

測試部位敘述 (Test Part Description)

No.1 : 透明膠體 (TRANSPARENT GLUE)

No.2 : 銀白色片狀 (SILVER-WHITE COLORED SHEET)

測試結果 (Test Results)

測試項目	測試方法	單位	MDL	結果		限值
(Test Items)	(Method)	(Unit)		(Result)		(Limit)
				No.1	No.2	
鎘 (Cd) (Cadmium (Cd)) (CAS No.: 7440-43-9)	參考IEC 62321-5: 2013·以感應耦合電漿發射光譜儀分析。(With reference to IEC	mg/kg	2	n.d.	n.d.	100
鉛 (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



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測試項目	測試方法	單位	MDL	結果		限值
(Test Items)	(Method)	(Unit)		(Result)		(Limit)
				No.1	No.2	
汞 (Hg) (Mercury (Hg)) (CAS No.: 7439-97-6)	參考IEC 62321-4: 2013 + AMD1: 2017·以感應 耦合電漿發射光譜儀分析。(With reference to IEC 62321-4: 2013 + AMD1: 2017, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	n.d.	1000
六價鉻 Cr(VI) (Hexavalent Chromium Cr(VI)) (CAS No.: 18540-29-9)	參考IEC 62321-7-2: 2017·以紫外光-可見 光分光光度計分析。(With reference to IEC 62321-7-2: 2017, analysis was performed by UV-VIS.)	mg/kg	8	n.d.	n.d.	1000
一溴聯苯 (Monobromobiphenyl)		mg/kg	5	n.d.	n.d.	-
二溴聯苯 (Dibromobiphenyl)		mg/kg	5	n.d.	n.d.	-
三溴聯苯 (Tribromobiphenyl)		mg/kg	5	n.d.	n.d.	-
四溴聯苯 (Tetrabromobiphenyl)		mg/kg	5	n.d.	n.d.	-
五溴聯苯 (Pentabromobiphenyl)		mg/kg	5	n.d.	n.d.	-
六溴聯苯 (Hexabromobiphenyl)		mg/kg	5	n.d.	n.d.	-
七溴聯苯 (Heptabromobiphenyl)		mg/kg	5	n.d.	n.d.	-
八溴聯苯 (Octabromobiphenyl)		mg/kg	5	n.d.	n.d.	-
九溴聯苯 (Nonabromobiphenyl)		mg/kg	5	n.d.	n.d.	-
十溴聯苯 (Decabromobiphenyl)	<u> </u>	mg/kg	5	n.d.	n.d.	-
多溴聯苯總和 (Sum of PBBs)	參考IEC 62321-6: 2015 · 以氣相層析儀/質譜 儀分析。(With reference to IEC 62321-6:	mg/kg	1	n.d.	n.d.	1000
一溴聯苯醚 (Monobromodiphenyl ether)	2015, analysis was performed by GC/MS.)	mg/kg	5	n.d.	n.d.	-
二溴聯苯醚 (Dibromodiphenyl ether)	2013, analysis was performed by Ce, me.,	mg/kg	5	n.d.	n.d.	-
三溴聯苯醚 (Tribromodiphenyl ether)		mg/kg	5	n.d.	n.d.	-
四溴聯苯醚 (Tetrabromodiphenyl ether)		mg/kg	5	n.d.	n.d.	-
五溴聯苯醚 (Pentabromodiphenyl ether)		mg/kg	5	n.d.	n.d.	-
六溴聯苯醚 (Hexabromodiphenyl ether)		mg/kg	5	n.d.	n.d.	-
七溴聯苯醚 (Heptabromodiphenyl ether)		mg/kg	5	n.d.	n.d.	_
八溴聯苯醚 (Octabromodiphenyl ether)		mg/kg	5	n.d.	n.d.	-
九溴聯苯醚 (Nonabromodiphenyl ether)		mg/kg	5	n.d.	n.d.	-
十溴聯苯醚 (Decabromodiphenyl ether)		mg/kg	5	n.d.	n.d.	-
多溴聯苯醚總和 (Sum of PBDEs)		mg/kg	-	n.d.	n.d.	1000



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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)		限值 (Limit)
	, ,	, ,		No.1	No.2	
鄰苯二甲酸丁苯甲酯 (BBP) (Butyl benzyl phthalate (BBP)) (CAS No.: 85- 68-7)	參考IEC 62321-8: 2017·以氣相層析儀/質譜 儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	n.d.	1000
鄰苯二甲酸二丁酯 (DBP) (Dibutyl phthalate (DBP)) (CAS No.: 84-74-2)	參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	n.d.	1000
鄰苯二甲酸二(2-乙基己基)酯 (DEHP) (Di-(2-ethylhexyl) phthalate (DEHP)) (CAS No.: 117-81-7)	參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	n.d.	1000
鄰苯二甲酸二異丁酯 (DIBP) (Diisobutyl phthalate (DIBP)) (CAS No.: 84-69-5)	參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	n.d.	1000
娜苯二甲酸二異癸酯 (DIDP) (Diisodecyl phthalate (DIDP)) (CAS No.: 26761-40-0, 68515-49-1)	參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	n.d.	-
鄰苯二甲酸二異壬酯 (DINP) (Diisononyl phthalate (DINP)) (CAS No.: 28553-12-0, 68515-48-0)	參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	n.d.	-
鄰苯二甲酸二正辛酯 (DNOP) (Di-n-octyl phthalate (DNOP)) (CAS No.: 117-84-0)	參考IEC 62321-8: 2017 · 以氣相層析儀/質譜 儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	n.d.	-
鄰苯二甲酸二正戊酯 (DNPP) (Di-n-pentyl phthalate (DNPP)) (CAS No.: 131-18-0)	參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	n.d.	-
鄰苯二甲酸二正己酯 (DNHP) (Di-n-hexyl phthalate (DNHP)) (CAS No.: 84-75-3)	參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	n.d.	-
鄰苯二甲酸雙(2-甲氧基乙基)酯 (DMEP) (Bis(2-methoxyethyl) phthalate (DMEP)) (CAS No.: 117-82-8)	參考IEC 62321-8: 2017·以氣相層析儀/質譜 儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.	n.d.	-



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測試項目	測試方法	單位	MDL	結果		限值
(Test Items)	(Method)	(Unit)		(Result)		(Limit)
				No.1	No.2	
六溴環十二烷及所有主要被辨別出的異構物 (HBCDD) (α - HBCDD, β - HBCDD, γ - HBCDD) (Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α - HBCDD, β - HBCDD, γ - HBCDD)) (CAS No.: 25637-99-4, 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	參考IEC 62321: 2008·以氣相層析儀/質譜儀分析。(With reference to IEC 62321: 2008, analysis was performed by GC/MS.)	mg/kg	5	n.d.	n.d.	-
氟 (F) (Fluorine (F)) (CAS No.: 14762-94-8)	參考BS EN 14582: 2016·以離子層析儀分析。(With reference to BS EN 14582: 2016, analysis was performed by IC.)	mg/kg	50	390	77.6	-
氯 (CI) (Chlorine (CI)) (CAS No.: 22537- 15-1)	參考BS EN 14582: 2016·以離子層析儀分析。(With reference to BS EN 14582: 2016, analysis was performed by IC.)	mg/kg	50	63.8	n.d.	-
溴 (Br) (Bromine (Br)) (CAS No.: 10097-32-2)	參考BS EN 14582: 2016·以離子層析儀分析。(With reference to BS EN 14582: 2016, analysis was performed by IC.)	mg/kg	50	n.d.	n.d.	-
碘 (I) (Iodine (I)) (CAS No.: 14362-44-8)	參考BS EN 14582: 2016·以離子層析儀分析。(With reference to BS EN 14582: 2016, analysis was performed by IC.)	mg/kg	50	n.d.	n.d.	-
全氟辛烷磺酸及其鹽類 (PFOS and its salts) (CAS No.: 1763-23-1 and its salts)	參考CEN/TS 15968: 2010 · 以液相層析串聯質譜儀分析。(With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.)	mg/kg	0.01	n.d.	n.d.	-
全氟辛酸及其鹽類 (PFOA and its salts) (CAS No.: 335-67-1 and its salts)	參考CEN/TS 15968: 2010 · 以液相層析串聯質譜儀分析。(With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.)	mg/kg	0.01	n.d.	n.d.	-
鈹 (Be) (Beryllium (Be)) (CAS No.: 7440-41-7)	參考US EPA 3052: 1996·以感應耦合電漿發射光譜儀分析。(With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	n.d.	-



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備註(Note):

- 1. mg/kg = ppm; 0.1wt% = 1000ppm
- 2. MDL = Method Detection Limit (方法偵測極限值)
- 3. n.d. = Not Detected (未檢出); 小於MDL / Less than MDL
- 4. "-" = Not Regulated (無規格值)
- 5. 符合性結果之判定係以測試結果與限值做比較。(The statement of compliance conformity is based on comparison of testing results and limits.)
- 6. 本報告為 ETR21308343 之異動報告。(This is the additional test report of ETR21308343.)



Test Report

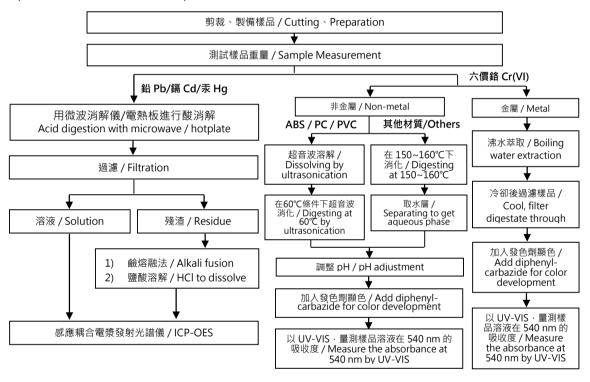
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重金屬流程圖 / Analytical flow chart of Heavy Metal

根據以下的流程圖之條件,樣品已完全溶解。(六價鉻測試方法除外)

These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr^{6+} test method excluded)



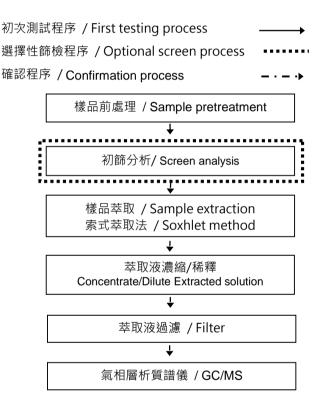


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多溴聯苯/多溴聯苯醚分析流程圖 / Analytical flow chart - PBBs/PBDEs





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可塑劑分析流程圖 / Analytical flow chart - Phthalate

【測試方法/Test method: IEC 62321-8】

樣品前處理/分樣 / Sample pretreatment/separation

樣品以 THF 四氫呋喃溶解萃取 / Sample dissolved/extracted by THF

萃取液稀釋 / Dilute Extracted solution

氣相層析質譜儀分析 / Analysis was performed by GC/MS

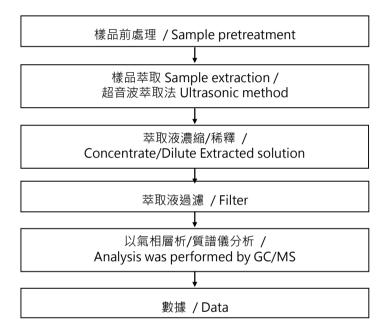


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六溴環十二烷分析流程圖 / Analytical flow chart - HBCDD



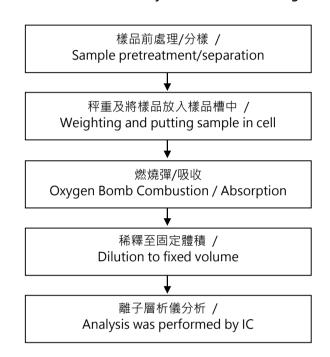


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鹵素分析流程圖 / Analytical flow chart - Halogen



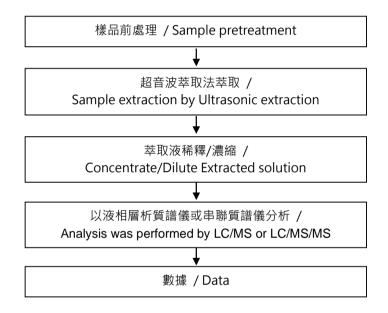


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全氟辛酸/全氟辛烷磺酸分析流程圖 / Analytical flow chart - PFOA/PFOS





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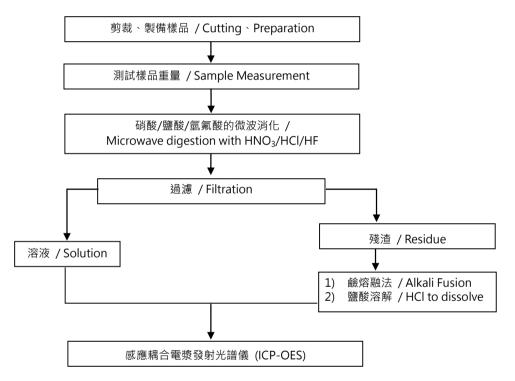
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重金屬流程圖 / Analytical flow chart of Heavy Metal

根據以下的流程圖之條件,樣品已完全溶解。

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

【參考方法/Reference method: US EPA 3051A、US EPA 3052】



* US EPA 3051A 方法未添加氫氟酸 / US EPA 3051A method does not add HF.



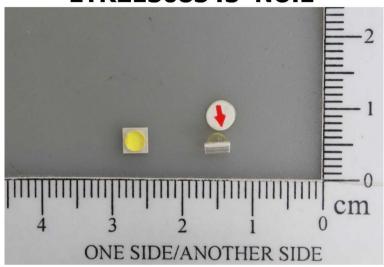
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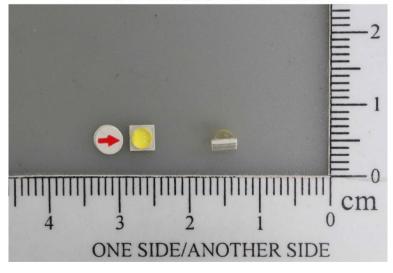
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* 照片中如有箭頭標示,則表示為實際檢測之樣品/部位. * (The tested sample / part is marked by an arrow if it's shown on the photo.)

ETR21308343 NO.1



ETR21308343 NO.2



** 報告結尾 (End of Report) **