

**Test Report** 

號碼(No.): ETR21901827 日期(Date): 16-Sep-2021 頁數(Page): 1 of 21

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):

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BASIC INFORMATION	
Type of Product	SMD ITR
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-SMD ITR SERIES: ITR 8xxx/TR8 \ ITR2xxxx/TR8 SERIES
	Sampling Product: ITR8307/S18/TR8-SGS-16-Sep-2021
PRODUCT INFORMATION	·
Product/component Sample	Opto–Sensor
description	
Quantity (numbers or weight)	0.0241 g
EVERLIGHT P/N	SMD ITR SERIES: ITR 8xxx/TR8 \ ITR2xxxx/TR8 SERIES
	Sampling Product: ITR8307/S18/TR8
Product Lot No	Y210706R093602WG-R
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) : 07-Sep-2021

測試期間(Testing Period) : 07-Sep-2021 to 16-Sep-2021

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





PIN CODE: 48B84A



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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) 依據客戶指定‧測試 PAHs 及其他測項。 (As specified by client, to test PAHs and other item(s).)

#### 結 論(Conclusion)

- (1) 根據客戶所提供的樣品·其鎘、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.)
- (2) 根據客戶所提供的樣品·多環芳香烴測試結果符合德國產品安全委員會(AfPS) GS PAHs 第 3 類「其它產品」之限值要求。(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.)

#### 測試部位敘述 (Test Part Description)

No.1 : 本體 (BODY)

No.2 : 銀色金屬接腳鍍層 (PLATING LAYER OF SILVER COLORED METAL PIN)
No.3 : 銀色金屬接腳底材 (BASE MATERIAL OF SILVER COLORED METAL PIN)

No.4 : 銀色金屬接腳 (含鍍層) (SILVER COLORED METAL PIN (INCLUDING THE PLATING LAYER))

#### 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	No.3	
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.			100
鉛 (Pb) (Lead (Pb)) (CAS No.: 7439- 92-1)	62321-5: 2013, analysis was performed by ICP-OES.)	mg/kg	2	4.28			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	No.3	
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.	-	-	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.			1000
鎘 (Cd) (Cadmium (Cd)) (CAS No.: 7440-43-9)	酸洗脫鍍層·參考IEC 62321-5: 2013·以感應耦合電漿發射光譜儀分析。(IEC 62321-5: 2013 application of modified digestion by	mg/kg	2		n.d.		100
鉛 (Pb) (Lead (Pb)) (CAS No.: 7439- 92-1)	surface etching, analysis was performed by ICP-OES.)	mg/kg	2		15.1		1000
汞 (Hg) (Mercury (Hg)) (CAS No.: 7439-97-6)	酸洗脫鍍層·參考IEC 62321-4: 2013+AMD1: 2017·以感應耦合電漿發射光譜儀分析。(IEC 62321-4: 2013+AMD1: 2017 application of modified digestion by surface etching, analysis was performed by ICP-OES.)	mg/kg	2		n.d.	-	1000
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.	100
鉛 (Pb) (Lead (Pb)) (CAS No.: 7439- 92-1)	62321-5: 2013, analysis was performed by ICP-OES.)	mg/kg	2	1		12.1	1000
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.	1000



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測試項目	測試方法	單位	MDL	1 1 1			限值
(Test Items)	(Method)	(Unit)		(Result)			(Limit)
→ 傳教 (Hayayalant Chranainna)	   参考IEC 62321-7-1: 2015·以紫外光-可見	a./ana?	0.1	No.1	No.2	No.3	
六價鉻 (Hexavalent Chromium) Cr(VI) (CAS No.: 18540-29-9) (#2)	多名IEC 02321-7-1. 2015 · 以系外元-可見   光分光光度計分析。(With reference to IEC	μg/cm²	0.1		n.d.	n.d.	-
CI(VI) (CAS No.: 18340-29-9) (#2)	62321-7-1: 2015, analysis was performed						
	by UV-VIS.)						
一溴聯苯 (Monobromobiphenyl)		mg/kg	5	n.d.			-
二溴聯苯 (Dibromobiphenyl)		mg/kg	5	n.d.			-
三溴聯苯 (Tribromobiphenyl)		mg/kg	5	n.d.			-
四溴聯苯 (Tetrabromobiphenyl)		mg/kg	5	n.d.			-
五溴聯苯 (Pentabromobiphenyl)		mg/kg	5	n.d.			-
六溴聯苯 (Hexabromobiphenyl)		mg/kg	5	n.d.			-
七溴聯苯 (Heptabromobiphenyl)		mg/kg	5	n.d.			-
八溴聯苯 (Octabromobiphenyl)		mg/kg	5	n.d.			-
九溴聯苯 (Nonabromobiphenyl)		mg/kg	5	n.d.			-
十溴聯苯 (Decabromobiphenyl)	A 老 I C C 2 2 2 1	mg/kg	5	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	-	n.d.		-	1000
一溴聯苯醚 (Monobromodiphenyl ether)	2015, analysis was performed by GC/MS.)	mg/kg	5	n.d.		-	-
二溴聯苯醚 (Dibromodiphenyl ether)		mg/kg	5	n.d.			-
三溴聯苯醚 (Tribromodiphenyl ether)		mg/kg	5	n.d.			-
四溴聯苯醚 (Tetrabromodiphenyl ether)		mg/kg	5	n.d.			-
五溴聯苯醚 (Pentabromodiphenyl ether)		mg/kg	5	n.d.			-
六溴聯苯醚 (Hexabromodiphenyl ether)		mg/kg	5	n.d.			-
七溴聯苯醚 (Heptabromodiphenyl ether)		mg/kg	5	n.d.			-
八溴聯苯醚 (Octabromodiphenyl ether)		mg/kg	5	n.d.			-
九溴聯苯醚 (Nonabromodiphenyl ether)		mg/kg	5	n.d.			-
十溴聯苯醚 (Decabromodiphenyl ether)		mg/kg	5	n.d.			_
多溴聯苯醚總和 (Sum of PBDEs)		mg/kg	-	n.d.			1000



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測試項目	測試方法	單位	MDL	DL 結果			限值	
(Test Items)	(Method)	(Unit)		(Result)		)	(Limit)	
				No.1	No.2	No.3		
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.			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.			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.			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.			1000	
鄰苯二甲酸二異癸酯 (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.			-	
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.			-	
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.			-	
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.			-	
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.			-	
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.			-	



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測試項目	測試方法	單位	MDL	L 結果			限值
(Test Items)	(Method)	(Unit)		(Result)		)	(Limit)
				No.1	No.2	No.3	
六溴環十二烷及所有主要被辨別出的異構物 (HBCDD) ( $\alpha$ - HBCDD, $\beta$ - HBCDD, $\gamma$ - HBCDD) (Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified ( $\alpha$ - HBCDD, $\beta$ - HBCDD, $\gamma$ - 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.			-
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	n.d.			-
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	86.2			-
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.			-
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	1160			-
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.		1	-
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.			-
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.			-



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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	No.3	
多環芳香烴 (Polycyclic Aromatic Hydrocarbons) (PAHs)							
苯駢(a)芘 (Benzo[a]pyrene) (CAS No.: 50-32-8)		mg/kg	0.2	n.d.			Δ
苯駢(e)芘 (Benzo[e]pyrene) (CAS No.: 192-97-2)		mg/kg	0.2	n.d.			Δ
苯駢蒽 (Benzo[a]anthracene) (CAS No.: 56-55-3)		mg/kg	0.2	n.d.			Δ
苯(b)苯駢芴 (Benzo[b]fluoranthene) (CAS No.: 205-99-2)		mg/kg	0.2	n.d.			Δ
苯(j)苯駢芴 (Benzo[j]fluoranthene) (CAS No.: 205-82-3)		mg/kg	0.2	n.d.			Δ
苯(k)苯駢芴 (Benzo[k]fluoranthene) (CAS No.: 207-08-9)		mg/kg	0.2	n.d.			Δ
蒀 (Chrysene) (CAS No.: 218-01-9)	參考AfPS GS 2019:01 PAK · 以氣相層析儀/	mg/kg	0.2	n.d.			Δ
二苯駢蒽 (Dibenzo[a,h]anthracene) (CAS No.: 53-70-3)	質譜儀分析。(With reference to AfPS GS 2019:01 PAK, analysis was performed by GC/MS.)	mg/kg	0.2	n.d.			Δ
苯駢菲 (Benzo[g,h,i]perylene) (CAS No.: 191-24-2)	GC/ IVI3.)	mg/kg	0.2	n.d.			Δ
茚酮芘 (Indeno[1,2,3-c,d]pyrene) (CAS No.: 193-39-5)		mg/kg	0.2	n.d.			Δ
蒽 (Anthracene) (CAS No.: 120-12-7)		mg/kg	0.2	n.d.			Δ
苯駢芴 (Fluoranthene) (CAS No.: 206-44-0)		mg/kg	0.2	n.d.			Δ
菲 (Phenanthrene) (CAS No.: 85-01-8)		mg/kg	0.2	n.d.			Δ
芘 (Pyrene) (CAS No.: 129-00-0)		mg/kg	0.2	n.d.			Δ
萘 (Naphthalene) (CAS No.: 91-20-3)		mg/kg	0.2	n.d.			Δ
多環芳香烴15項總和 (Sum of 15 PAHs)		mg/kg	-	n.d.			Δ



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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.4	限值 (Limit)
鈹 (Be) (Beryllium (Be)) (CAS No.: 7440-41-7)	参考US EPA 3050B: 1996 · 以感應耦合電漿發射光譜儀分析。(With reference to US EPA 3050B: 1996, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	-

#### 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. "---" = Not Conducted (未測試項目)
- 6. (#2) =
  - a. 當六價鉻結果大於0.13 μg/cm²·表示樣品表層含有六價鉻. / 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).
  - b. 當六價鉻結果為n.d. (濃度小於 $0.10~\mu g/cm^2$ )·表示表層不含六價鉻. / The sample is negative for Cr(VI) if Cr(VI) is n.d. (concentration less than  $0.10~\mu g/cm^2$ ). The coating is considered a non-Cr(VI) based coating
  - c. 當六價鉻結果介於 0.10 及 0.13  $\mu$ g/cm² 時,無法確定塗層是否含有六價鉻. / The result between 0.10  $\mu$ g/cm² and 0.13  $\mu$ g/cm² is considered to be inconclusive unavoidable coating variations may influence the determination.
- 7. 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.)



### **Test Report**

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#### Remark:

#### △ 德國產品安全委員會(AfPS): GS PAHs 要求

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

	第 1 類(Category 1)	第 2 類(Cat	egory 2)	第 3 類(Cat	egory 3)	
項目 (Parameter)	意圖放入口中的材料或者長時間接 觸皮膚(超過 30 秒)的 2009/48/EC 定義的玩具材料和 3 歲以下兒童使用的產品(Materials intended to be placed in the			項 不屬於第1類或第2類的材料·並意 蜀) 圖或可預見與皮膚接觸不超過 30 秒 t (短期皮膚接觸)(Materials not covered by Category 1 or 2, with m intended or foreseeable short- term skin contact (≤ 30 seconds))		
	years of age with intended long-term skin contact (> 30 seconds))	a. 供 14 歲以下兒童使 用的產品(Use by children under 14)	consumer	a. 供 14 歲以下兒童使 用的產品(Use by children under 14)	consumer	
Naphthalene	< 1	< 2		< 10	0	
Phenanthrene						
Anthracene	< 1 Sum	< 5 Sum	< 10 Sum	< 20 Sum	< 50 Sum	
Fluoranthene	\ I Sulli	< 3 3um	< 10 3um	< 20 Julii	\ 30 3uiii	
Pyrene						
Benzo[a]anthracene	< 0.2	< 0.2	< 0.5	< 0.5	< 1	
Chrysene	< 0.2	< 0.2	< 0.5	< 0.5	< 1	
Benzo[b]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1	
Benzo[j]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1	
Benzo[k]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1	
Benzo[a]pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1	
Benzo[e]pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1	
Indeno[1,2,3-c,d] pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1	
Dibenzo[a,h]anthracene	< 0.2	< 0.2	< 0.5	< 0.5	< 1	
Benzo[g,h,i]perylene	< 0.2	< 0.2	< 0.5	< 0.5	< 1	
15 項 PAH 總濃度 (Sum of 15 PAH)	< 1	< 5	< 10	< 20	< 50	

單位(Unit): mg/kg



### **Test Report**

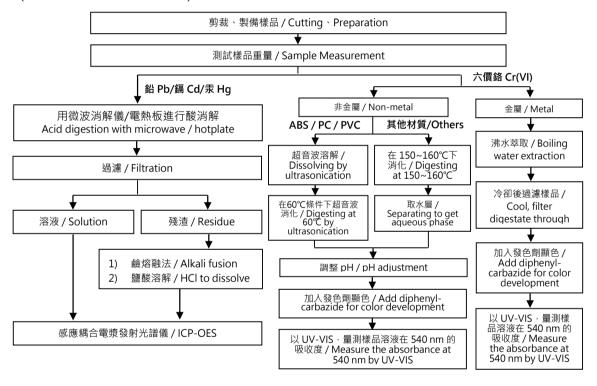
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#### 重金屬流程圖 / Analytical flow chart of Heavy Metal

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)





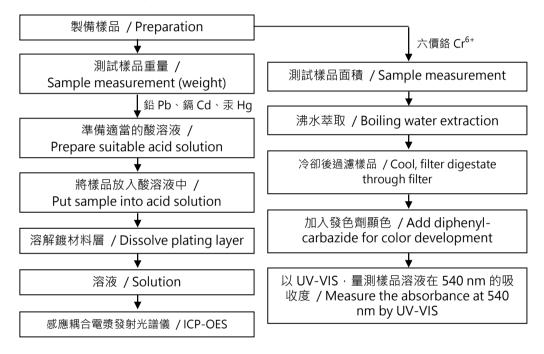
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#### 鍍層重金屬測試流程圖 / Flow Chart of Stripping method for metal analysis

根據以下的流程圖之條件,樣品之外部鍍層已完全溶解。( 六價銘測試方法除外 ) / The plating layer of samples were dissolved totally by pre-conditioning method according to below flow chart. ( $Cr^{6+}$  test method excluded)



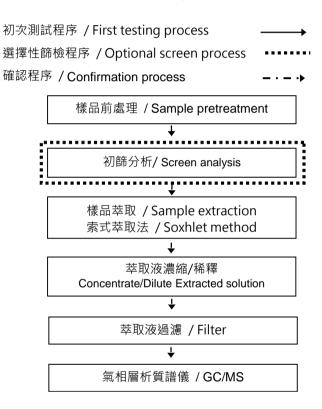


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#### 多溴聯苯/多溴聯苯醚分析流程圖 / Analytical flow chart - PBBs/PBDEs





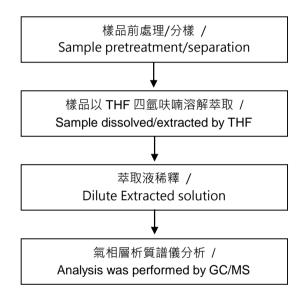
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#### 可塑劑分析流程圖 / Analytical flow chart - Phthalate

#### 【測試方法/Test method: IEC 62321-8】



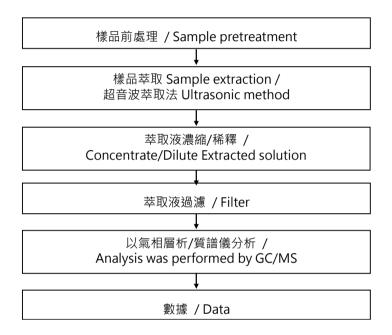


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#### 六溴環十二烷分析流程圖 / Analytical flow chart - HBCDD



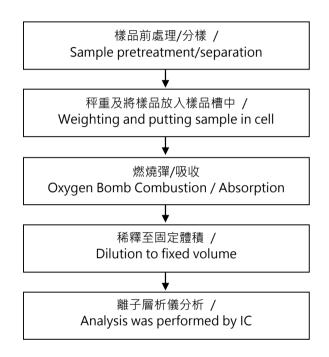


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#### 鹵素分析流程圖 / Analytical flow chart - Halogen



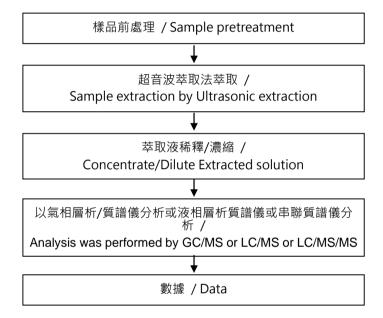


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全氟化合物(包含全氟辛酸/全氟辛烷磺酸/其相關化合物等等)分析流程圖 / Analytical flow chart – PFAS (including PFOA/PFOS/its related compound, etc.)



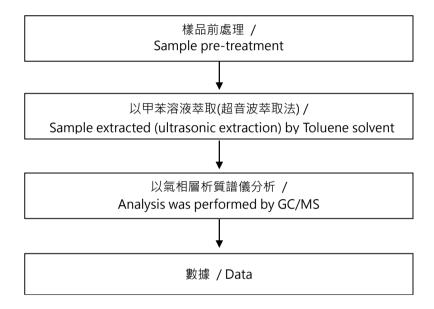


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# 多環芳香烴分析流程圖 / Analytical flow chart - PAHs (Polycyclic Aromatic Hydrocarbons)





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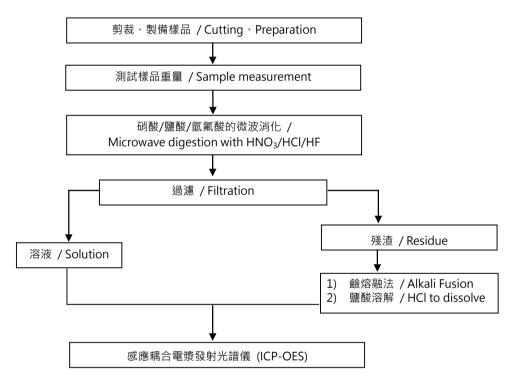
億光電子工業股份有限公司 (EVERLIGHT ELECTRONICS CO., LTD.) 新北市樹林區中華路6-8號 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

#### 元素(含重金屬)分析流程圖 / Analytical flow chart of Elements (Heavy metal included)

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.

【参考方法/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.



### **Test Report**

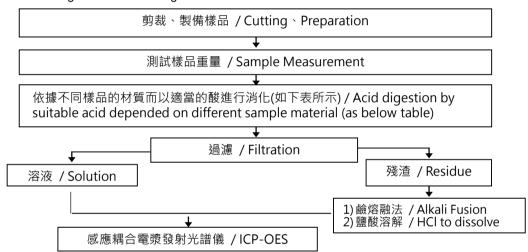
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#### 元素以 ICP-OES 分析的消化流程圖

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

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.



鋼,銅,鋁,焊錫 / Steel, copper, aluminum, solder	王水,硝酸,鹽酸,氫氟酸,雙氧水 /
	Aqua regia, HNO <sub>3</sub> , HCl, HF, H <sub>2</sub> O <sub>2</sub>
玻璃 / Glass	硝酸,氫氟酸 / HNO₃/HF
金,鉑,鈀,陶瓷 / Gold, platinum, palladium, ceramic	王水 / Aqua regia
銀 / Silver	硝酸 / HNO₃
塑膠 / Plastic	硫酸,雙氧水,硝酸,鹽酸 / H <sub>2</sub> SO <sub>4</sub> , H <sub>2</sub> O <sub>2</sub> , HNO <sub>3</sub> , HCl
其他 / Others	加入適當的試劑至完全溶解 / Added appropriate reagent to total digestion



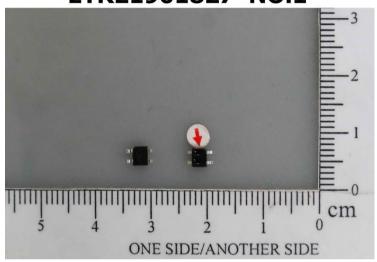
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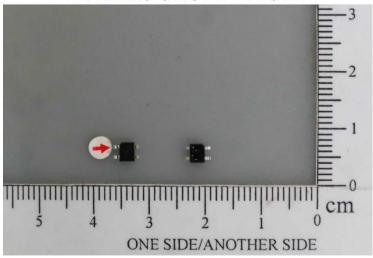
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\* 照片中如有箭頭標示,則表示為實際檢測之樣品/部位. \* (The tested sample / part is marked by an arrow if it's shown on the photo.)

#### ETR21901827 NO.1



#### ETR21901827 NO.2



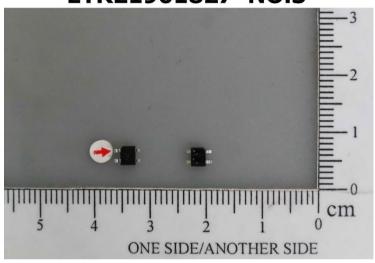


## **Test Report**

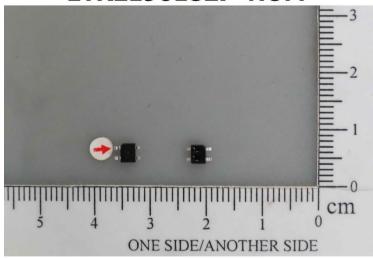
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#### ETR21901827 NO.3



#### ETR21901827 NO.4



\*\* 報告結尾 (End of Report) \*\*