

測試報告

Test Report

號碼(No.) : CE/2010/23586 日期(Date) : 2010/03/08 頁數(Page) : 1 of 12

億光電子工業股份有限公司

EVERLIGHT ELECTRONICS CO., LTD.

台北縣土城市中央路三段76巷25號

NO. 25, LANE 76, SEC. 3, CHUNG YANG ROAD, TUCHENG, TAIPEI, TAIWAN, R. O. C.

以下測試樣品係由客户送樣,且由客户聲稱並經客户確認如下 (The following samples was/were submitted and identified by/on behalf of the client as):

Divided Country Dr. D. D. Mr. A. F. # 10h 66 (Dr. o			
PHOTO COUPLER DIP 類-含鹵素機種 (EL81x, EL82x, 4Nxx, CNY17-x,			
CNY17F-x, H11x, EL30xx, 6Nxxx, TIL1xx, MCT2x)			
EVERLIGHT			
NO. 25, LANE 76, SEC. 3, CHUNG YANG ROAD, TUCHENG, TAIWAN, R. O. C.			
TEL:886-2-267-2000 EXT:1203			
FAX:886-2-267-9948			
E-MAIL: meelin@everlight.com			
LIN HSIAO HUA			
EVERLIGHT-EL81x, EL82x, 4Nxx, CNY17-x, CNY17F-x, H11x, EL30xx,			
6Nxxx, TIL1xx, MCT2x,EL81x-G, EL82x-G, 4Nxx-G, CNY17-x-G, CNY17F-			
x-G, H11x-G, EL30xx-G, 6Nxxx-G, TIL1xx-G, MCT2x-G-SGS-08/03/2010			
ISOLATION UNIT			
0.2254g			
EL81x, EL82x, 4Nxx, CNY17-x, CNY17F-x, H11x, EL30xx, 6Nxxx,			
TIL1xx, MCT2x,EL81x-G, EL82x-G, 4Nxx-G, CNY17-x-G, CNY17F-x-G,			
H11x-G, EL30xx-G, 6Nxxx-G, TIL1xx-G, MCT2x-G			
1X-HB-05			
TAIWAN			
JPG EMBEDDED IN EACH REPORT			
CUTTING			
Cd , Pb , Hg , Cr(VI), PBB/PBDE - IEC 62321			
Cd , Pb , Hg: < 2 mg/kg; PBB/PBDE: < 5 mg/kg			
Cd , Pb , Hg, Cr(VI): Climbgreat Yang; PBB/PBDE: Roman Wong			

收件日期(Sample Receiving Date) 2010/02/26

測試期間(Testing Period) 2010/02/26 TO 2010/03/08

測試結果(Test Results)

請見下一頁 (Please refer to next pages).

Chenyu Kung / Operation Manager Signed for and on behalf of

SGS TAIWAN LTD.

Chemical Laboratory - Taipei

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台灣檢驗科技股份有限公司 Chemical-Taipei 33 WuChyuan Road, Wuku Industrial Zone, Taipei County, Taiwan /台北縣五股工業區五權路33號 t + 886 (02)2299 3279 f + 886 (02)2299 3279 www.sgs.com



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測試結果(Test Results)

測試部位(PARTNAME)NO.1 本體 (BODY)

測試部位(PARTNAME)NO.2 銀色金屬腳鍍層 (PLATING LAYER OF SILVER COLORED METAL PIN) 測試部位(PARTNAME)NO.3 銀色金屬腳底材 (BASE MATERIAL OF SILVER COLORED METAL PIN)

測試項目 (Test Items)	單位 (Unit) (Method)	方法偵測	結果 (Result)			
			極限値 (MDL)	NO.1	NO.2	NO.3
鎬 / Cadmium (Cd)	mg/kg	参考IEC 62321: 2008方法,以 感應藕合電漿原子發射光譜儀檢 測./With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	n.d.	n.d.
鉛 / Lead (Pb)	mg/kg	参考IEC 62321: 2008方法,以 感應藕合電漿原子發射光譜儀檢 測./With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	34	n.d.
汞 / Mercury (Hg)	mg/kg	参考IEC 62321: 2008方法,以 感應藕合電漿原子發射光譜儀檢 測./With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	n.d.	n.d.
六價絡 / Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	参考IEC 62321: 2008方法,以 UV-VIS檢測. / With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.		
六價貉 / Hexavalent Chromium Cr(VI) by Spot test / boiling water extraction	**	参考IEC 62321: 2008方法,以 Spot test / boiling water extraction方法檢測. / With reference to IEC 62321: 2008 and performed by Spot test / boiling water extraction Method. (See Note 5)	0.02mg/kg with 50 cm ² surface area		Negative	Negative

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億光電子工業股份有限公司 EVERLIGHT ELECTRONICS CO., LTD. 台北縣土城市中央路三段76巷25號



NO. 25, LANE 76, SEC. 3, CHUNG YANG ROAD, TUCHENG, TAIPEI, TAIWAN, R. O. C.

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限値 (MDL)	結果 (Result)		
				NO.1	NO.2	NO.3
全氟辛烷磺酸 / Perfluorooctane sulfonates (PFOS) PFOS — Acid PFOS — Metal Salt PFOS — Amide	mg/kg	參考US EPA 3540C: 1996方法, 以液相層析質譜儀檢測全氟辛烷 磺酸含量. / With reference to US EPA 3540C: 1996 method for PFOS Content. Analysis was performed by LC/MS.	10	n.d.		
全氟辛酸(銨) / PFOA (CAS No.: 000335-67-1)	mg/kg	参考US EPA 3540C: 1996方法, 以液相層析質譜儀檢測全氟辛酸 (銨)含量. / With reference to US EPA 3540C: 1996 method for PFOA Content. Analysis was performed by LC/MS.	10	n.d.		
四溴雙酚-A / Tetrabromobisphenol A (TBBP-A) (CAS No.: 000079-94-7)	mg/kg	参考DIN 53313方法,以氣相層 析儀/質譜儀檢測. / With reference to DIN 53313 method. Analysis was performed by GC/MS.	10	n.d.		
多溴聯苯總和 / Sum of PBBs			-	n.d.		
一溴聯苯 / Monobromobiphenyl	1		5	n.d.		
二溴聯苯 / Dibromobiphenyl			5	n.d.		
三溴聯苯 / Tribromobiphenyl			5	n.d.		
四溴聯苯 / Tetrabromobiphenyl		参考IEC 62321: 2008方法,以	5	n.d.		
五溴聯苯 / Pentabromobiphenyl	mg/kg	氣相層析儀/質譜儀檢測./ With reference to IEC 62321:	5	n.d.		
六溴聯苯 / Hexabromobiphenyl		2008 and performed by GC/MS.	5	n.d.		
七溴聯苯 / Heptabromobiphenyl			5	n.d.		
八溴聯苯 / Octabromobiphenyl			5	n.d.		
九溴聯苯 / Nonabromobiphenyl			5	n.d.		
十溴聯苯 / Decabromobiphenyl			5	n.d.		

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NO. 25, LANE 76, SEC. 3, CHUNG YANG ROAD, TUCHENG, TAIPEI, TAIWAN, R. O. C.

測試項目 (Test Items)	單位 測試方法	方法偵測	結果 (Result)			
	(Unit)	(Unit) (Method)	極限値 (MDL)	NO.1	NO.2	NO.3
多溴聯苯醚總和 / Sum of PBDEs	mg/kg		-	n.d.		
一溴聯苯醚 / Monobromodiphenyl ether		參考US EPA 3540C: 1996方法, 以液相層析質譜儀檢測全氟辛酸	5	n.d.		
二溴聯苯醚 / Dibromodiphenyl ether			5	n.d.		
三溴聯苯醚 / Tribromodiphenyl ether			5	n.d.		
四溴聯苯醚 / Tetrabromodiphenyl ether			5	n.d.		
五溴聯苯醚 / Pentabromodiphenyl ether		mg/kg (鋑)含量. / With reference to US EPA 3540C: 1996 method	5	n.d.		
六溴聯苯醚 / Hexabromodiphenyl ether		for PFOA Content. Analysis was performed by LC/MS.	5	n.d.		
七溴聯苯醚 / Heptabromodiphenyl ether			5	n.d.		
八溴聯苯醚 / Octabromodiphenyl ether			5	n.d.		
九溴聯苯醚 / Nonabromodiphenyl ether			5	n.d.		
十溴聯苯醚 / Decabromodiphenyl ether			5	n.d.		

備註(Note):

- 1. mg/kg = ppm ; 0.1wt% = 1000ppm
- 2. n.d. = Not Detected (未檢出)
- 3. MDL = Method Detection Limit (方法偵測極限值)
- 4. "-" = Not Regulated (無規格值)
- 5. Spot-test:

Negative = Absence of Cr(VI) coating / surface layer(鍍層中偵測不到六價鉻),

Positive = Presence of Cr(VI) coating / surface layer(鍍層中偵測到六價鉻);

The tested sample should be further verified by boiling-water-extraction method if the spot test result cannot be confirmed. (當該測項無法確認時,測試樣品可藉由boiling-water-extraction測試方法進一步確認)

Boiling-water-extraction:

Negative = Absence of Cr(VI) coating / surface layer(鍍層中偵測不到六價鉻),

Positive = Presence of Cr(VI) coating / surface layer(鍍層中偵測到六價鉻);

The detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area. (該溶液濃度≧0.02 mg/kg with 50 cm² (sample surface area))

- 6. "---" = Not Conducted (未測項目)
- 7. **= Qualitative analysis (No Unit) 定性分析(無單位)

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NO. 25, LANE 76, SEC. 3, CHUNG YANG ROAD, TUCHENG, TAIPEI, TAIWAN, R. O. C.

PFOS参考資訊(Reference Information): 指令 2006/122/EC (Directive 2006/122/EC)

- (1) 該物質不可置於市場上或使用於特殊物質或配置成分重量濃度等於或大於0.005%.

 (May not be placed on the market or used as a substance or constituent of preparations in a concentration equal to or higher than 0.005% by mass.)
- (2) 該物質不可置於市場上的半成品或商品或其物件;假若零件上明顯地具有PFOS並參照結構上及微細構造上計算PFOS重量濃度等於或大於0.1%,而紡織品或其他覆蓋物質,如果PFOS在覆蓋物質中含量等於或大於1ug/m².

(May not be placed on the market in semi-finished products or articles, or parts thereof, if the concentration of PFOS is equal to or higher than 0.1% by mass calculated with reference to the mass of structurally or microstructurally distinct parts that contain PFOS or, for textiles or other coated materials, if the amount of PFOS is equal to or higher than $1\mu g/m^2$ of the coated material.)

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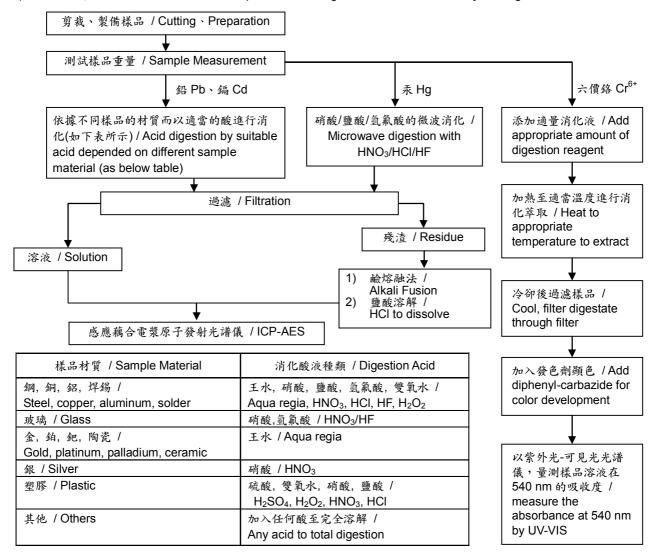
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NO. 25, LANE 76, SEC. 3, CHUNG YANG ROAD, TUCHENG, TAIPEI, TAIWAN, R. O. C.

測試部位(PARTNAME)NO.1, 3

- 1) 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. (Cr⁶⁺ test method excluded)
- 2) 測試人員:楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 3) 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang



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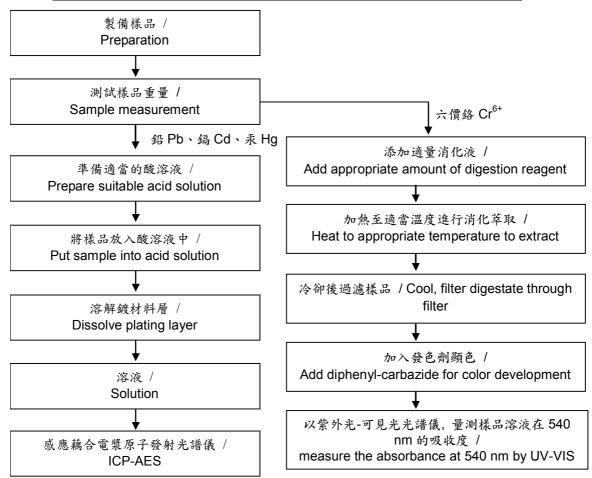
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NO. 25, LANE 76, SEC. 3, CHUNG YANG ROAD, TUCHENG, TAIPEI, TAIWAN, R. O. C.

測試部位(PARTNAME)NO.2

- 1) 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. (Cr⁶⁺ test method excluded)
- 2) 測試人員:楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 3) 測試負責人:張啓興 / Name of the person in charge of measurement: Troy Chang

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



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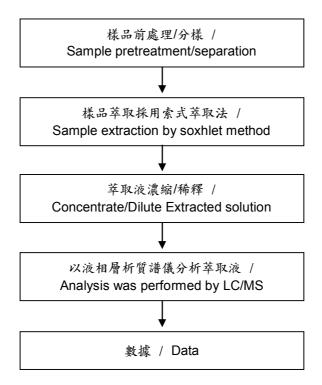
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索式萃取(LC/MS)分析流程圖 /

Analytical flow chart of Soxhlet extraction (LC/MS) procedure

- 1) 測試人員:傅莉雅 / Name of the person who made measurement: Lydia Fu
- 2) 測試負責人: 陳新智 / Name of the person in charge of measurement: Shinjyh Chen
- 測試項目(Test Items): 全氟辛烷磺酸/全氟辛酸(銨)、苯並三唑類化合物 / PFOS/PFOA、Benzotriazole



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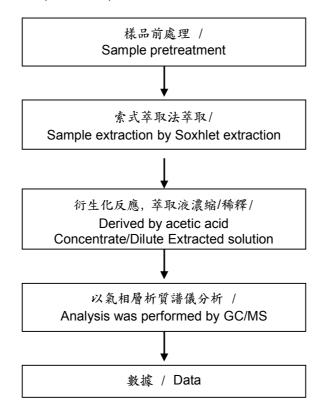
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分析流程圖 /

Analytical flow chart

- 1) 測試人員: 傅舒萱 / Name of the person who made measurement: Amanda Fu
- 2) 測試負責人: 陳新智 / Name of the person in charge of measurement: Shinjyh Chen
 - 測試項目(Test Items):四溴雙酚-A、雙酚 A / TBBP-A、Bisphenol A



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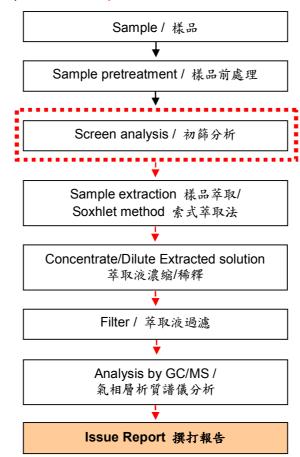
多溴聯苯/多溴聯苯醚分析流程圖 / PBB/PBDE analytical FLOW CHART

- 1) 測試人員: 翁賜彬 / Name of the person who made measurement: Roman Wong
- 2) 測試負責人: 陳新智 / Name of the person in charge of measurement: Shinjyh Chen

初次測試程序 / First testing process ——→

選擇性篩檢程序 / Optional screen process

確認程序 / Confirmation process _ . _ ▶



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