

# **Test Report**

號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 1 of 24

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 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: lindawang@everlight.com                                   |
| Contact Person               | LI LING WANG  |
| EVERLIGHT REPORT NO          | DISPLAY SERIES ( PCB Display )                                    |
|                              | Sampling Product: S315SURWB/A3/P60-SGS-12-Jul-2024                |
| PRODUCT INFORMATION          | •   |
| Product/component Sample     | · Instrument panels   |
| description                  | Digital readout displays  |
| Quantity (numbers or weight) | 1.0475 g  |
| EVERLIGHT P/N                | DISPLAY SERIES ( PCB Display )                                    |
|                              | Sampling Product: S315SURWB/A3/P60                                |
| Product Lot No               | ZS24041411  |
| 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       |
| <b>兴华∝辛(C</b>                | ・ 度火電フ工光肌の大胆ハヨ (EVERTICAL ELECTRONICS CO. LTD.)                   |

\_\_\_\_\_\_

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) : 03-Jul-2024

測試期間(Testing Period) : 03-Jul-2024 to 12-Jul-2024

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

IN CODF: 21C6414

SĞS TAIWAN LTD. Chemical Laboratory - Taipei

Signed for and on behalf



## **Test Report**

號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 2 of 24

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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 編、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)) | 參考IEC 62321-5: 2013 · 以感<br>應耦合電漿發射光譜儀分析。  | mg/kg  | 2   | n.d. |          |      | 100     |
| 鉛 (Pb) (Lead (Pb))    | (With reference to IEC 62321-<br>5: 2013, analysis was<br>performed by ICP-OES.) | mg/kg  | 2   | n.d. |          |      | 1000    |



# **Test Report**

號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 3 of 24

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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))                   | 參考IEC 62321-4: 2013+ AMD1: 2017 · 以感應耦合電漿發射光譜<br>儀分析。(With reference to IEC 62321-4: 2013+ AMD1: 2017, analysis was performed by ICP- | mg/kg  | 2   | n.d.     |      |      | 1000    |
|   | OES.)   |        |     |          |      |      |         |
| 六價鉻 Cr(VI) (Hexavalent Chromium Cr(VI)) | 參考IEC 62321-7-2: 2017·以<br>紫外光-可見光分光光度計分<br>析。(With reference to IEC<br>62321-7-2: 2017, analysis was<br>performed by UV-VIS.)        | mg/kg  | ∞   | n.d.     |      |      | 1000    |
| 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)                | <b>会老にC C2221 C: 201</b> 5 以信   | mg/kg  | 5   | n.d.     |      |      | -       |
| 十溴聯苯 (Decabromobiphenyl)                | 參考IEC 62321-6: 2015,以氣  | mg/kg  | 5   | n.d.     |      |      | -       |
| 多溴聯苯總和 (Sum of PBBs)                    | 相層析儀/質譜儀分析。(With<br>reference to IEC 62321-6:   | mg/kg  | -   | n.d.     |      |      | 1000    |
| 一溴聯苯醚 (Monobromodiphenyl ether)         | 2015, analysis was performed  | mg/kg  | 5   | n.d.     |      |      | -       |
| 二溴聯苯醚 (Dibromodiphenyl ether)           | by GC/MS.)  | mg/kg  | 5   | n.d.     |      |      | -       |
| 三溴聯苯醚 (Tribromodiphenyl ether)          | by GC/M3.)  | 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    |



# **Test Report**

號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 4 of 24

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| 測試項目<br>(Test Items)   | 測試方法<br>(Method)  | 單位 MDL<br>(Unit) |    |      | 結果<br>(Result) |      | 限值<br>(Limit) |
|--|---|------------------|----|------|----------------|------|---------------|
| (Test items)   | (Method)  | (Unit)           |    | No.1 | No.2           | No.3 | (Limit)       |
| 鄰苯二甲酸丁苯甲酯 (BBP) (Butyl<br>benzyl phthalate (BBP))  |   | mg/kg            | 50 | n.d. |                |      | 1000          |
| 郷苯二甲酸二丁酯 (DBP) (Dibutyl phthalate (DBP))   |   | mg/kg            | 50 | n.d. |                |      | 1000          |
| 鄰苯二甲酸二(2-乙基己基)酯 (DEHP) (Di-<br>(2-ethylhexyl) phthalate (DEHP))                          |   | mg/kg            | 50 | n.d. |                |      | 1000          |
| 鄰苯二甲酸二異丁酯 (DIBP) (Diisobutyl<br>phthalate (DIBP))  |   | mg/kg            | 50 | n.d. |                |      | 1000          |
| 鄰苯二甲酸二異癸酯 (DIDP)<br>(Diisodecyl phthalate (DIDP)) (CAS<br>No.: 26761-40-0, 68515-49-1)   |   | mg/kg            | 50 | n.d. |                |      | -             |
| 鄰苯二甲酸二異壬酯 (DINP)<br>(Diisononyl phthalate (DINP)) (CAS<br>No.: 28553-12-0, 68515-48-0)   | <b>公共IFC C2221 0. 2017 - N/年</b>  | mg/kg            | 50 | n.d. |                |      | 1             |
| 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 | 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)                      | 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)                        |   | mg/kg            | 50 | n.d. |                |      | -             |
| 鄰苯二甲酸雙(2-甲氧基乙基)酯 (DMEP)<br>(Bis(2-methoxyethyl) phthalate<br>(DMEP)) (CAS No.: 117-82-8) |   | mg/kg            | 50 | n.d. |                |      | -             |
| 鄰苯二甲酸二甲酯 (DMP) (Dimethyl phthalate (DMP)) (CAS No.: 131-11-3)                            |   | mg/kg            | 50 | n.d. |                |      | -             |
| 鄰苯二甲酸二異辛酯 (DIOP)<br>(Diisooctyl phthalate (DIOP)) (CAS<br>No.: 27554-26-3)               |   | mg/kg            | 50 | n.d. |                |      | -             |



# **Test Report**

號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 5 of 24

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| 測試項目   | 測試方法  | 單位     | MDL  |      | 結果               |      | 限值      |
|--|---|--------|------|------|------------------|------|---------|
| (Test Items)   | (Method)  | (Unit) |      | No.1 | (Result)<br>No.2 | No.3 | (Limit) |
| 鄰苯二甲酸二正壬酯 (DNNP) (Di-n-nonyl phthalate (DNNP)) (CAS No.: 84-76-4)  | 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. |                  |      | -       |
| 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. |                  |      | -       |
| 氟 (F) (Fluorine (F)) (CAS No.: 14762-<br>94-8)   |   | mg/kg  | 50   | 335  |                  |      | -       |
| 氯 (Cl) (Chlorine (Cl)) (CAS No.:<br>22537-15-1)  | 參考BS EN 14582: 2016 · 以離子層析儀分析。(With reference  | mg/kg  | 50   | 322  |                  |      | -       |
| 溴 (Br) (Bromine (Br)) (CAS No.:<br>10097-32-2)   | to BS EN 14582: 2016, analysis was performed by IC.)  | mg/kg  | 50   | 9320 |                  |      | -       |
| 碘 (I) (Iodine (I)) (CAS No.: 14362-44-<br>8)   |   | mg/kg  | 50   | 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<br>液相層析串聯質譜儀分析。<br>(With reference to CEN/TS<br>15968: 2010, analysis was<br>performed by LC/MS/MS.) | mg/kg  | 0.01 | 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<br>液相層析串聯質譜儀分析。<br>(With reference to CEN/TS<br>15968: 2010, analysis was<br>performed by LC/MS/MS.) | mg/kg  | 0.01 | n.d. |                  |      | -       |



## **Test Report**

號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 6 of 24

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| 測試項目<br>(Test Items)               | 測試方法<br>(Method)                               | 單位<br>(Unit) | MDL |      | 結果<br>(Result) |      | 限值<br>(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.:  |  | mg/kg        | 0.2 | n.d. |                |      | Δ             |
| 50-32-8)                           |  |              |     |      |                |      |               |
| 苯駢(e)芘 (Benzo[e]pyrene) (CAS No.:  |  | mg/kg        | 0.2 | n.d. |                |      | Δ             |
| 192-97-2)                          |  |              |     |      |                |      |               |
| 苯駢蒽 (Benzo[a]anthracene) (CAS      |  | mg/kg        | 0.2 | n.d. |                |      | Δ             |
| No.: 56-55-3)                      |  |              |     |      |                |      |               |
| 苯(b)苯駢芴 (Benzo[b]fluoranthene)     |  | mg/kg        | 0.2 | n.d. |                |      | Δ             |
| (CAS No.: 205-99-2)                |  |              |     |      |                |      |               |
| 苯(j)苯駢芴 (Benzo[j]fluoranthene)     |  | mg/kg        | 0.2 | n.d. |                |      | Δ             |
| (CAS No.: 205-82-3)                |  |              |     |      |                |      |               |
| 苯(k)苯駢芴 (Benzo[k]fluoranthene)     |  | mg/kg        | 0.2 | n.d. |                |      | Δ             |
| (CAS No.: 207-08-9)                | A # A {DC CC 2010:01 DAK   \\                  |              |     |      |                |      |               |
| 葸 (Chrysene) (CAS No.: 218-01-9)   | 參考AfPS GS 2019:01 PAK,以<br>氣相層析儀/質譜儀分析。(With   | mg/kg        | 0.2 | n.d. |                |      | Δ             |
| 二苯駢蒽 (Dibenzo[a,h]anthracene)      | 来相層が嵌/具譜展力が。(With reference to AfPS GS 2019:01 | mg/kg        | 0.2 | n.d. |                |      | Δ             |
| (CAS No.: 53-70-3)                 | PAK, analysis was performed                    |              |     |      |                |      |               |
| 苯駢菲 (Benzo[g,h,i]perylene) (CAS    | by GC/MS.)                                     | mg/kg        | 0.2 | n.d. |                |      | Δ             |
| No.: 191-24-2)                     | by GC/M3.)                                     |              |     |      |                |      |               |
| 茚酮芘 (Indeno[1,2,3-c,d]pyrene)      |  | mg/kg        | 0.2 | n.d. |                |      | Δ             |
| (CAS No.: 193-39-5)                |  |              |     |      |                |      |               |
| 蒽 (Anthracene) (CAS No.: 120-12-7) |  | mg/kg        | 0.2 | n.d. |                |      | Δ             |
| 苯駢芴 (Fluoranthene) (CAS No.: 206-  |  | mg/kg        | 0.2 | n.d. |                |      | Δ             |
| 44-0)                              |  |              |     |      |                |      |               |
| 菲 (Phenanthrene) (CAS No.: 85-01-  |  | mg/kg        | 0.2 | n.d. |                |      | Δ             |
| 8)                                 |  |              |     |      |                |      |               |
| 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              |  | mg/kg        | -   | n.d. |                |      | Δ             |
| PAHs)                              |  |              |     |      |                |      |               |



# **Test Report**

號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 7 of 24

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| 測試項目<br>(Test Items)                            | 測試方法<br>(Method)  | 單位<br>(Unit) | MDL |      | 結果<br>(Result) |      | 限值<br>(Limit) |
|---|---|--------------|-----|------|----------------|------|---------------|
| (10001101110)                                   | (,  | (0,          |     | No.1 | No.2           | No.3 | ,,            |
| 鈹 (Be) (Beryllium (Be)) (CAS No.:<br>7440-41-7) | 參考US EPA 3052: 1996 · 以感應<br>耦合電漿發射光譜儀分析。(With<br>reference to US EPA 3052: 1996,<br>analysis was performed by ICP-<br>OES.)  | mg/kg        | 2   | n.d. |                |      | -             |
| 鎘 (Cd) (Cadmium (Cd))                           | 酸洗脫鍍層·參考IEC 62321-5:<br>2013·以感應耦合電漿發射光譜<br>儀分析。(IEC 62321-5: 2013<br>application of modified   | mg/kg        | 2   |      | n.d.           |      | 100           |
| 鉛 (Pb) (Lead (Pb))                              | digestion by surface etching,<br>analysis was performed by ICP-<br>OES.)  | mg/kg        | 2   |      | 45.2           |      | 1000          |
| 汞 (Hg) (Mercury (Hg))                           | 酸洗脫鍍層·參考IEC 62321-4:<br>2013+ AMD1: 2017·以感應耦合<br>電漿發射光譜儀分析。(IEC<br>62321-4: 2013+AMD1: 2017<br>application of modified<br>digestion by surface etching,<br>analysis was performed by ICP-<br>OES.) | mg/kg        | 2   |      | n.d.           |      | 1000          |
| 鎘 (Cd) (Cadmium (Cd))                           | 參考IEC 62321-5: 2013 · 以感應<br>耦合電漿發射光譜儀分析。(With<br>reference to IEC 62321-5: 2013,   | mg/kg        | 2   |      |                | n.d. | 100           |
| 鉛 (Pb) (Lead (Pb))                              | analysis was performed by ICP-OES.)   | mg/kg        | 2   |      |                | n.d. | 1000          |
| 汞 (Hg) (Mercury (Hg))                           | 參考IEC 62321-4: 2013+ AMD1: 2017 · 以感應耦合電漿發射光譜<br>儀分析。(With reference to IEC 62321-4: 2013+ AMD1: 2017, analysis was performed by ICP-OES.)  | mg/kg        | 2   |      |                | n.d. | 1000          |



## **Test Report**

號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 8 of 24

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)

| 測試項目<br>(Test Items) | 測試方法<br>(Method)  | 單位<br>(Unit) | MDL |      | 結果<br>(Result) |      | 限值<br>(Limit) |
|----------------------|---|--------------|-----|------|----------------|------|---------------|
| (rest items)         | (Wethou)  | (OIIII)      |     | No.1 | No.2           | No.3 |               |
|                      | 參考IEC 62321-7-1: 2015 · 以紫<br>外光-可見光分光光度計分析。<br>(With reference to IEC 62321-7-<br>1: 2015, analysis was performed<br>by UV-VIS.) | μg/cm²       | 0.1 |      | n.d.           | n.d. | -             |

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

#### 備註(Note):

- 1. mg/kg = ppm; 0.1wt% = 0.1% = 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 μg/cm²)·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 μg/cm²). The coating is considered a non-Cr(VI) based coating
  - c. 當六價鉻結果介於 0.10 及 0.13  $\mu g/cm^2$  時,無法確定塗層是否含有六價鉻. / The result between 0.10  $\mu g/cm^2$  and 0.13  $\mu g/cm^2$  is considered to be inconclusive unavoidable coating variations may influence the determination.
- 7. 除非另有說明,參照ILAC-G8:09/2019,採用簡單二元(w=0)允收規則進行符合性判定;根據此規則,符合性結果之判定係以測試結果與限值做比較。(Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019. According to this rule, the judgement of conformity is based on the comparing test results with limits.)



## **Test Report**

號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 9 of 24

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)

#### PAHs 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(Cate                                | egory 2)   | 第 3 類(Cate   | egory 3)   |
|---------------------------------|--|---|--|--|--|
| 項目<br>(Parameter)               | 意圖放入口中的材料或者長時間接觸皮膚(超過 30 秒)的<br>2009/48/EC 定義的玩具材料和 3<br>歲以下兒童使用的產品(Materials<br>intended to be placed in the<br>mouth, or materials in toys<br>(Directive 2009/48/EC) or<br>articles for children up to 3 | 見與皮膚接觸逾 30 利或重複的短時間接觸 are not in Category | 妙(長期皮膚接觸)<br>(Materials that<br>r 1, with<br>eable long-term<br>seconds) or<br>re contact with | 不屬於第 1 類或第 2<br>圖或可預見與皮膚接<br>(短期皮膚接觸)(Mat<br>covered by Catego<br>intended or forese<br>term skin contact (s | 觸不超過 30 秒<br>erials not<br>ry 1 or 2, with<br>eable short-<br>≦ 30 seconds)) |
|                                 | years of age with intended<br>long-term skin contact (> 30<br>seconds))  |   | consumer   | 供 14 歲以下兒童使  | consumer   |
| Naphthalene                     | < 1  | < 2                                       |  | < 10   | )  |
| Phenanthrene                    |  |   |  |  |  |
| Anthracene                      | < 1 Sum  | < 5 Sum                                   | < 10 Sum   | < 20 Sum   | < 50 Sum   |
| Fluoranthene                    | \ 1 3dili  | \ 3 3uiii                                 | < 10 3uiii   | < 20 Julii   | \ 50 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<br>(Sum of 15 PAH) | < 1  | < 5                                       | < 10   | < 20   | < 50   |

單位(Unit):mg/kg



## **Test Report**

號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 10 of 24

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)

#### PFAS Remark:

現有PFAS定量技術是分析PFAS物質的特定結構,但同碳數族群之PFAS酸及鹽類物質,其可被辨識的特定結構相同,因此無法區別所分析的特定結構是來自酸或者鹽類,故測試結果為同碳數族群之PFAS之酸及鹽類物質的濃度總合。下表PFAS物質濃度皆已包含在測試結果中,相關資訊請參見下表:(下表列舉PFAS物質僅為範例,並不包含所有同碳數族群之PFAS鹽類。)

(The quantitative technology of PFAS is to analyze the specific structure of PFAS substances. However, PFAS acid and its salts with the same carbon number group have the same specific structure that can be identified. The tested results of the analyzed specific structure cannot be distinguished to identify the contribution from PFAS acid or its salts. Therefore, the tested results display the sum of concentrations of PFAS acids and its salts with the same carbon number group. The concentration of PFAS substances in the below table have been included in the tested results, please refer to the table for relevant information: (The listed PFAS substances are examples only, it do not include all PFAS salts with the same carbon number group.))

| 群組名稱<br>(Group Name)                             | 物質名稱<br>(Substance Name)  | CAS No.     |
|--|---|-------------|
|  | 全氟辛烷磺酸 (Perfluorooctane sulfonates)<br>(PFOS)   | 1763-23-1   |
|  | 全氟辛基磺酸鉀 (PFOS-K)<br>Potassium perfluorooctanesulfonate (PFOS-K)   | 2795-39-3   |
|  | 全氟辛基磺酸鋰 (PFOS-Li)<br>Perfluorooctanesulfonic acid, lithium salt<br>(PFOS-Li)  | 29457-72-5  |
|  | 全氟辛基磺酸銨 (PFOS-NH <sub>4</sub> )<br>Perfluorooctanesulfonic acid, ammonium salt<br>(PFOS-NH <sub>4</sub> )                                   | 29081-56-9  |
| PFOS, 及其鹽&衍生物<br>(PFOS, its salts & derivatives) | 全氟辛基磺酸二乙醇銨 (PFOS-NH(OH) $_2$ ) Perfluorooctane sulfonate diethanolamine salt (PFOS-NH(OH) $_2$ )  | 70225-14-8  |
|  | 全氟辛基磺酸四乙基銨 (PFOS-N( $C_2H_5$ ) <sub>4</sub> ) Perfluorooctanesulfonic acid,tetraethylammonium salt (PFOS-N( $C_2H_5$ ) <sub>4</sub> )       | 56773-42-3  |
|  | 全氟辛基磺酸二癸二甲基銨 (PFOS-DDA) N-decyl-N,N-dimethyldecan-1-aminium 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8- heptadecafluorooctane-1-sulfonate (PFOS-DDA) | 251099-16-8 |



## **Test Report**

號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 11 of 24

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)

| 群組名稱<br>(Group Name)                             | 物質名稱<br>(Substance Name)   | CAS No.     |
|--|--|-------------|
|  | 全氟辛基磺酸四丁基銨 (PFOS-N(C <sub>4</sub> H <sub>9</sub> ) <sub>4</sub> )<br>TetrabutylAmmonium<br>perfluorooctanesulfonate (PFOS-N(C <sub>4</sub> H <sub>9</sub> ) <sub>4</sub> ) | 111873-33-7 |
|  | 全氟辛基磺醯氟 (POSF)<br>Perfluorooctane sulfonyl fluoride (POSF)   | 307-35-7    |
| PFOS, 及其鹽&衍生物<br>(PFOS, its salts & derivatives) | 全氟辛基磺酸鎂 (PFOS-Mg)<br>Perfluorooctanesulfonic acid, magnesium salt<br>(PFOS-Mg)   | 91036-71-4  |
|  | 全氟辛基磺酸鈉 (PFOS-Na) Perfluorooctanesulfonic acid, sodium salt (PFOS-Na)  | 4021-47-0   |
|  | 全氟辛烷磺酸哌啶<br>Piperidine 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-<br>heptadecafluorooctanesulfonate  | 71463-74-6  |
|  | 全氟辛酸 (Perfluorooctanoic acid) (PFOA)   | 335-67-1    |
|  | 全氟辛酸鈉 (PFOA-Na)<br>Sodium perfluorooctanoate (PFOA-Na)   | 335-95-5    |
|  | 全氟辛酸鉀 (PFOA-K)<br>Potassium perfluorooctanoate (PFOA-K)  | 2395-00-8   |
|  | 全氟辛酸銀 (PFOA-Ag)<br>Silver perfluorooctanote (PFOA-Ag)  | 335-93-3    |
|  | 全氟辛氟 (PFOA-F)<br>Perfluorooctanoyl fluoride (PFOA-F)   | 335-66-0    |
| PFOA, 及其鹽&衍生物<br>(PFOA, its salts & derivatives) | 全氟辛酸銨 (APFO)<br>Ammonium pentadecafluorooctanoate<br>(APFO)  | 3825-26-1   |
|  | 全氟辛酸鋰 (PFOA-Li)<br>Lithium perfluorooctanoate (PFOA-Li)  | 17125-58-5  |
|  | 全氟辛酸鈷 (PFOA-Co)<br>Cobalt perfluorooctanoate (PFOA-Co)   | 35965-01-6  |
|  | 全氟辛酸銫 (PFOA-Cs)<br>Cesium perfluorooctanoate (PFOA-Cs)   | 17125-60-9  |
|  | 全氟辛酸鉻 (PFOA-Cr(3 <sup>+</sup> ))<br>Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-<br>pentadecafluoro-,<br>chromium(3+) (PFOA-Cr(3 <sup>+</sup> ))                          | 68141-02-6  |



## **Test Report**

號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 12 of 24

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)

| 群組名稱<br>(Group Name) | 物質名稱<br>(Substance Name)   | CAS No.    |
|----------------------|--|------------|
| PFOA, 及其鹽&衍生物        | 全氟辛酸-哌嗪(2:1) PFOA-NH( $C_4H_{10}N$ ) Pentadecafluorooctanoic acidpiperazine (2/1)PFOA-NH( $C_4H_{10}N$ ) | 423-52-9   |
|                      | 全氟辛酸鹽<br>Pentadecafluorooctanoate (anion)  | 45285-51-6 |
|                      | 全氟辛酸酐<br>Perfluorooctanoic Anhydride   | 33496-48-9 |



## **Test Report**

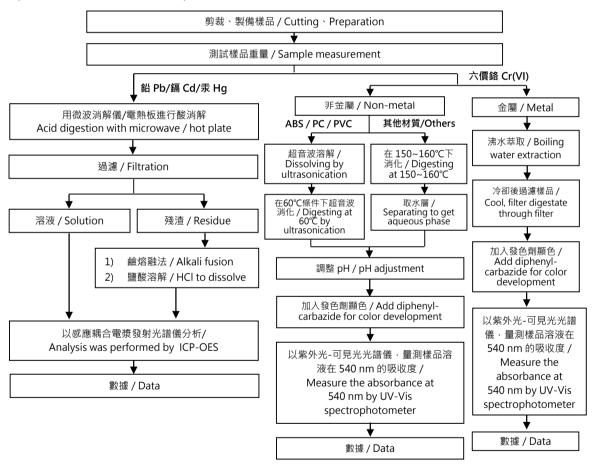
號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 13 of 24

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)

#### 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)





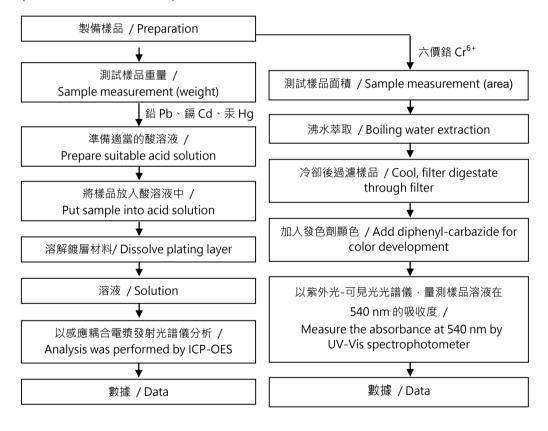
## **Test Report**

號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 14 of 24

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)

#### 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。( 六價鉻測試方法除外 ) / The plating layer of samples were dissolved totally by pre-conditioning method according to below flow chart. (  $Cr^{6+}$  test method excluded )



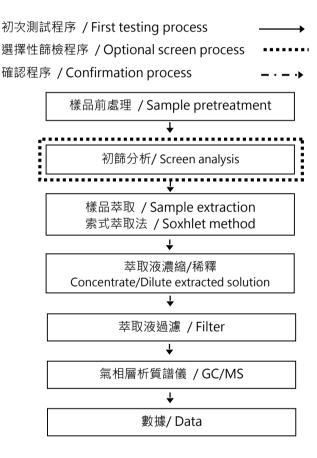


## **Test Report**

號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 15 of 24

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)

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





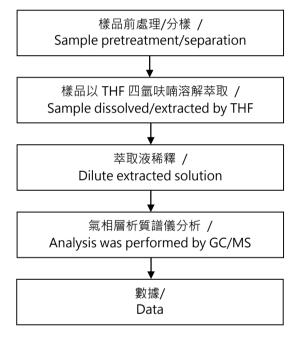
# **Test Report**

號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 16 of 24

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)

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

【測試方法/Test method: IEC 62321-8】



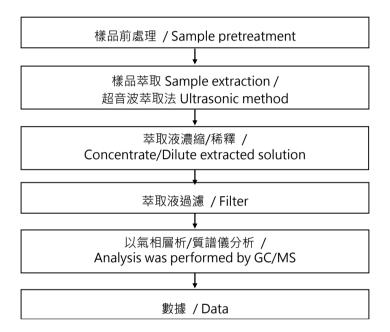


## **Test Report**

號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 17 of 24

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)

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



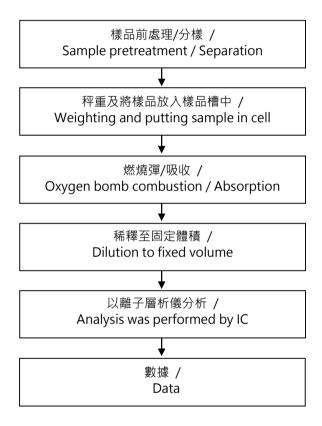


## **Test Report**

號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 18 of 24

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)

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



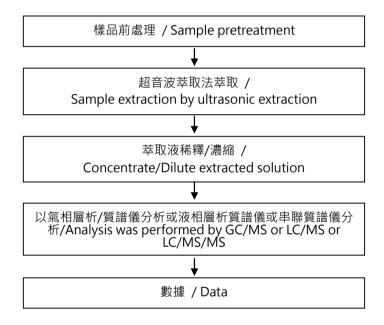


# **Test Report**

號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 19 of 24

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)

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.)



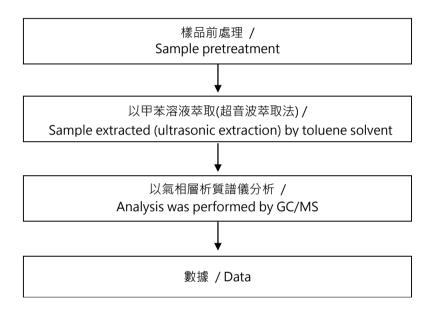


## **Test Report**

號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 20 of 24

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)

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





## **Test Report**

號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 21 of 24

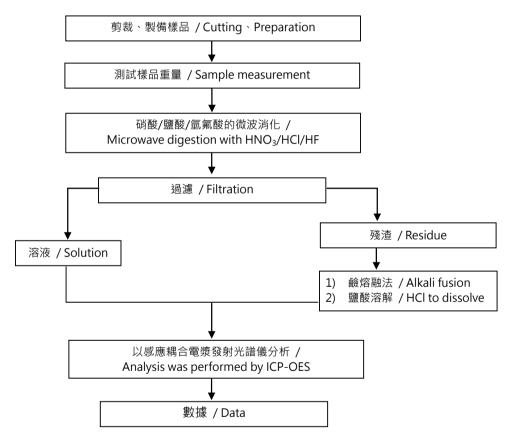
億光電子工業股份有限公司 (EVERLIGHT ELECTRONICS CO., LTD.) 新北市樹林區中華路6-8號 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

#### 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**

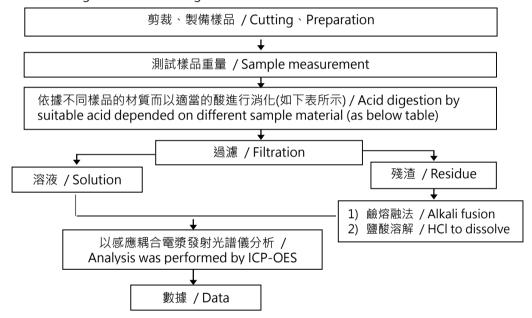
號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 22 of 24

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> ,<br>HCl, HF, H <sub>2</sub> O <sub>2</sub>            |
|---|--|
| 玻璃 / Glass                                    | 硝酸,氫氟酸 / HNO <sub>3</sub> ,HF  |
| 金,鉑,鈀,陶瓷 / Gold, platinum, palladium, ceramic | 王水 / Aqua regia  |
| 銀 / Silver                                    | 硝酸 / HNO <sub>3</sub>  |
| 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  |



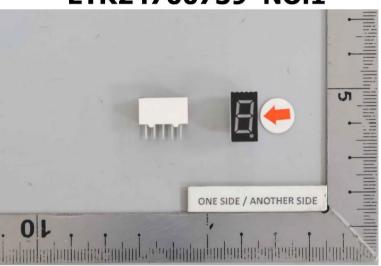
## **Test Report**

號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 23 of 24

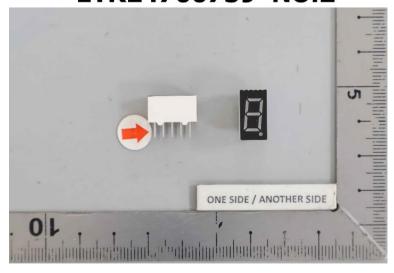
億光電子工業股份有限公司 (EVERLIGHT ELECTRONICS CO., LTD.) 新北市樹林區中華路6-8號 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

\* 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.)

### ETR24700759 NO.1



### ETR24700759 NO.2



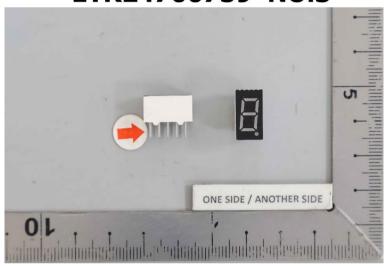


## **Test Report**

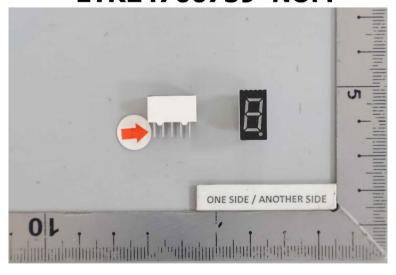
號碼(No.): ETR24700759 日期(Date): 12-Jul-2024 頁數(Page): 24 of 24

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### ETR24700759 NO.3



### ETR24700759 NO.4



\*\* 報告結尾 (End of Report) \*\*