

**EVERLIGHT Electronics Co., Ltd.**

Attn: No.6-8, Zhonghua Road, Shulin Dist., New  
Taipei City, 23860, Taiwan  
PHONE:  
FAX: ---

- PRODUCT/PROCESS CHANGE NOTIFICATION**  
 **PRODUCT TERMINATION NOTIFICATION**

**PCN tracking number: PCN20250926-02 - CN25090006****DATE: 09/09/2025****Contact:****Title:** PM**E-mail:** \_\_\_\_\_**Phone:****Fax:** + \_\_\_\_\_Product influenced:  Major change  Minor change

Product Identification: (e.g., affected supplier part number(s), affected product lines including specific package types, product family):

**Please see enclosed list**

Customer part number(s) (optional, if not required per agreed to customer criteria):

**N/A**

Method, if applicable, of identifying changed product:

**N/A**

Reason for change(s):

- Products Package Outline Dimension  
 Electrical/Optical Specification  
 Material: Raw Material  
 Equipment  
 Data Sheet  
 Packing:  
 Other:

Detailed description:

**Due to the ESG policy, electroplating processes have been gradually reduced and fully replaced with tin-plated lead frame incoming materials. The quality control stability of these incoming materials is superior to electroplating, and dimensions, electro specifications, reliability, and lifespan are not affected.**

Anticipated (positive and negative) impact on form, fit, function, quality, or reliability:

**Lead-frame appearance changed, dimensions, electro specifications, reliability, and lifespan are not affected.**

Supplier Qualification plan schedule and/or results, where applicable:

**N/A**

**EVERLIGHT Electronics Co., Ltd.**Attn: No.6-8, Zhonghua Road, Shulin Dist., New Taipei  
City, 23860, Taiwan

PHONE: +886 2 2685 6688

FAX: +886-2-2685-6699

| <b>Forecasted key milestones</b>  | <b>Date</b>  |
|---|--|
| <b>Date, if required, when qualification samples are available</b>                | --   |
| <b>Date, if required, when final qualification data are available</b>             | --   |
| <b>Proposed First Ship Date for change</b>  | --   |
| <b>Last buy date</b>  | --   |
| <b>Execution date</b>   | 09.03.2026   |
| <b>Customer acknowledgement of receipt within 30 days of delivery of the PCN:</b> |  |
| <b>Customer:</b>  | <input type="checkbox"/> <b>Approval for shipments before effective date</b> |
| <b>Name/Date:</b>   |  |
| <b>Title:</b>   |  |
|   |  |
| <b>Customer Comments:</b>   |  |
| <b>EVERLIGHT acknowledgement of receipt:</b>                                      |  |
| <b>RECORD BY:</b>   | <b>DATE:</b>   |

**The document of individual PCN information will be retained for a minimum of 5 years.**

# Lamp 支架變更說明（PIN腳霧錫）

Lamp Support Change Description (PIN PIN tin)

Reporter：蔡香妹

Date:2024/8/31

[www.everlight.com](http://www.everlight.com)

# EVERLIGHT

# 說明/Purpose of Change

根據下列考量，億光將委外鍍錫（亮錫）工藝變更為來料素材鍍錫（霧錫）

Due to the following reasons, Everlight will cancel outsourcing tin plating (Sn) process, and use plate(Sn) lead-frame from supplier as replacement:

- 現行高污染企業(如：電鍍廠)不允許在沿海或發達城市生產，往後自21年-23年起，企業會陸續往內陸遷廠，原億光6小時車程內電鍍廠8家，到2023年僅剩2家
  - High-polluting industries (e.g. plating factories) are not allowed to produce in coastal or developed cities, and encouraged to relocate inland starting from 2021-2023, according to the Chinese local policy.
  - 前幾年因疫情等因素影響，造成企業停工，運輸無法送出等不確定因素，故減少委外製程，有助克服此等影響，穩定生產鏈。自疫情億光已陸續減少半成品委外電鍍製程，改支架來料鍍錫製程。來料鍍錫製程，其來料品質管控穩定性較委外電鍍更優
- Since covid-19, multiple reasons had led to companies shutdown or difficult logistics, this change can help overcome these uncertainties and stabilize the production line.
- Since silver plate lead-frame is a unified and nonstop production of the supplier, with all production agent are added automatically, the product quality management will be easier and more effective.

# 說明/Purpose of Change

根據下列考量，億光將委外鍍錫（亮錫）工藝變更為來料素材鍍錫（霧錫）  
Due to the following reasons, Everlight will cancel outsourcing tin plating (Sn) process, and use plate(Sn) lead-frame from supplier as replacement:

- 委外電鍍製程（亮錫）：因支架外面有氧化層，電鍍時需先退氧化層後再鍍錫，當支架氧化程度不一時，電鍍去除氧化層穩定性不佳，會有脫錫風險；  
來料電鍍製程（霧錫）：來料鍍錫支架，支架電鍍穩定性和結合性佳，不需退氧化層再重鍍，故不會出現脫錫風險

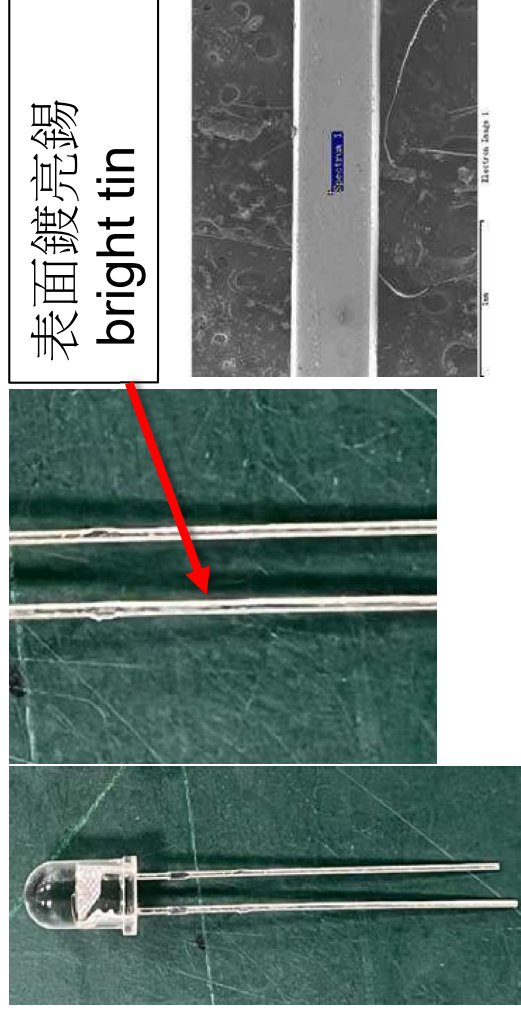
The current tin plating process requires a de-oxidation process before the plating, which has the possibility to cause low solder-ability if insufficient de-oxidation, or cause lead-frame damage if excess de-oxidation. Whereas using use silver plate (Ag) lead-frame provided from the supplier will not have this problem

# 支架外觀/鍍層結構

委外鍍錫 ( PIN腳鍍亮錫 )

PIN with bright tin

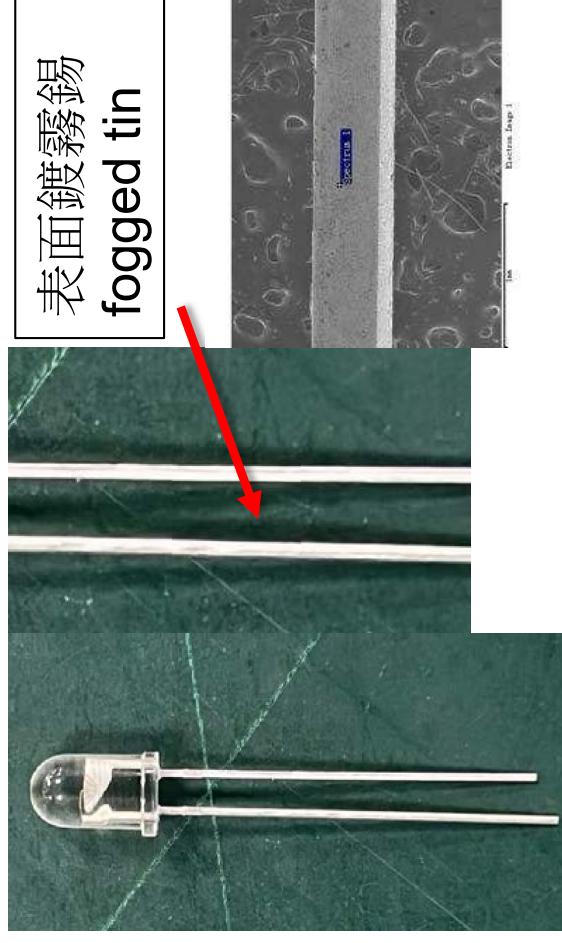
成品：鐵 + 亮錫



來料鍍錫 ( PIN腳鍍霧錫 )

PIN with fogged tin


成品：鐵 + 霧錫



成品僅PIN腳表面鍍層由亮錫改為霧錫，其他尺寸不做變更

Only the surface coating of PIN foot is changed from bright tin to mist tin, and other dimensions are not changed

# 霧錫支架吃錫 / 扭曲 / RA 實驗

| 霧錫支架吃錫 扭曲 RA 驗證                  |   |  |  |  |      |
|----------------------------------|---|--|--|--|------|
| 製程                               | 流程  | 判定規格   | 圖片   | 狀況   | 判定結果 |
| Wavesold                         | 噴助焊劑-><br>波峰焊260°10s持續<br>Spray flux->Wave crest<br>welding lasts for 260°10s | 吃錫面積>95%<br>Solderability<br>More than 95% area                                    |  | 吃錫良好<br>面積>95%<br>Good<br>Solderability<br>More than<br>95% area | OK   |
| 扭曲實驗<br>Distorting<br>experiment | 360°旋轉10圈<br>10 rotations of 360°   | 3M膠帶沾取<br>確認是否脫錫<br>3M adhesive tape dab<br>confirm whether to<br>take off the tin |  | 無脫錫<br>No to take off<br>the tin                                 | OK   |
| RA 實驗<br>Ra<br>experiment        | 實驗室投入1000H<br>1000H of laboratory input                                       |  |  | 1000H<br>無失效   | OK   |

吃錫、扭曲、RA 實驗確認無異常

Solderability&Distorting&RA experiment confirmed no abnormality

# 結論/conclusion

- ✓亮錫支架與霧錫支架尺寸不變；
- The new lead-frame has the same size as the original lead-frame
- ✓成品僅PIN腳表面鍍層由亮錫改為霧錫；
- Only the surface coating of PIN foot is changed from bright tin to mist tin, and other dimensions are not changed
- ✓吃錫驗證&扭曲實驗均OK不影響客戶使用；
- Solderability&Distorting&RA experiment confirmed no abnormality
- ✓信賴性1000H已PASS(如附件)  
RA 1000h pass
- ✓億光2019-2024年批量生產出貨2,700KK，客戶反饋無異常
- Everlight 2019-2024 batch production and shipment, no customer feedback abnormal

綜上所述，針對霧錫支架發生問題億光已完成改善，品質穩定性優於亮錫支架故霧錫支架可替代亮錫，建議Lamp全系列導入

The mist tin lead-frame can replace the bright tin, and it is recommended to import the whole Lamp series