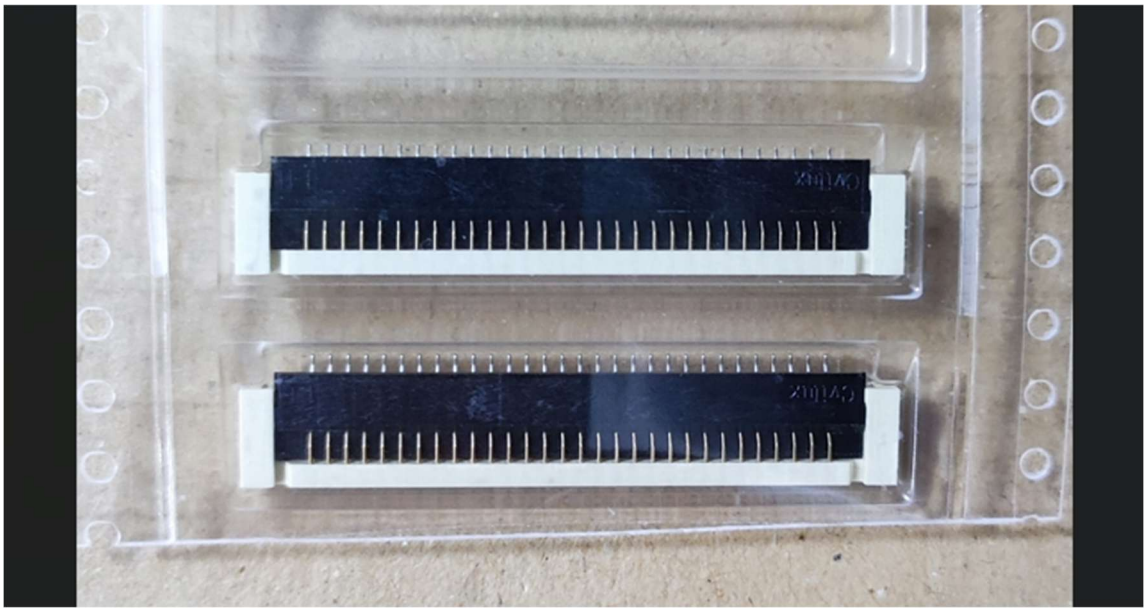
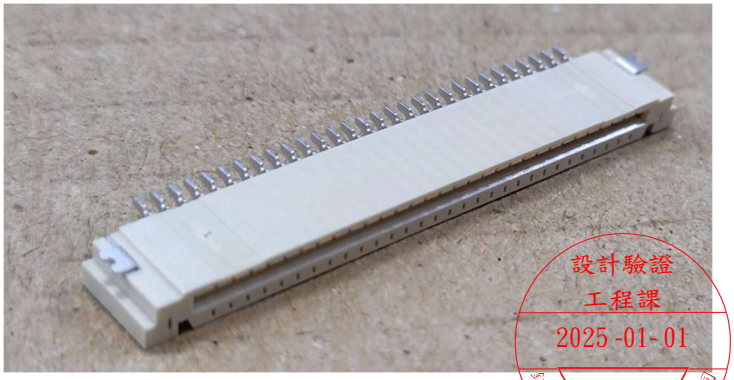
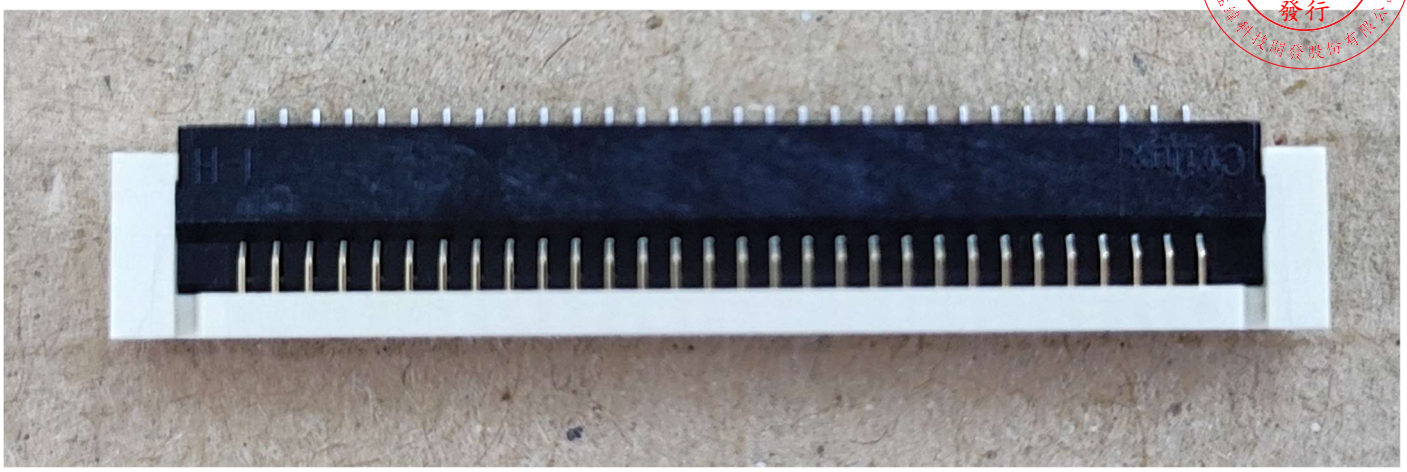
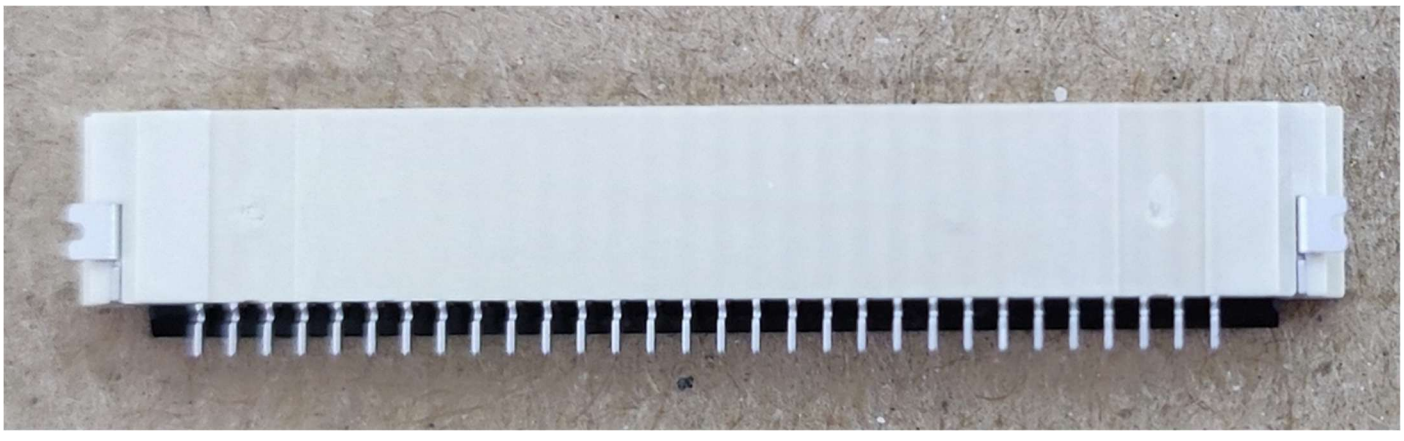






設計驗證
工程課
2025-01-01
發行





瀚荃集團
CviLux Group

SPECIFICATION FOR APPROVAL

Customer : 鈺緯科技開發股份有限公司 Date : 2024.04.15

Customer Part No. : 3FM03017610(F0310)

CviLux Part No. : CF1130AD0R0-NH

Description : 1.0mm SMT ZIF FFC/FPC ONE-TOUCH CONN.

HF:30P;DOWNSIDE;S/G;NATURE;REEL PACKING

PREPARED:	CHECKED:	APPROVED:
Sunny	Zoey	Chris

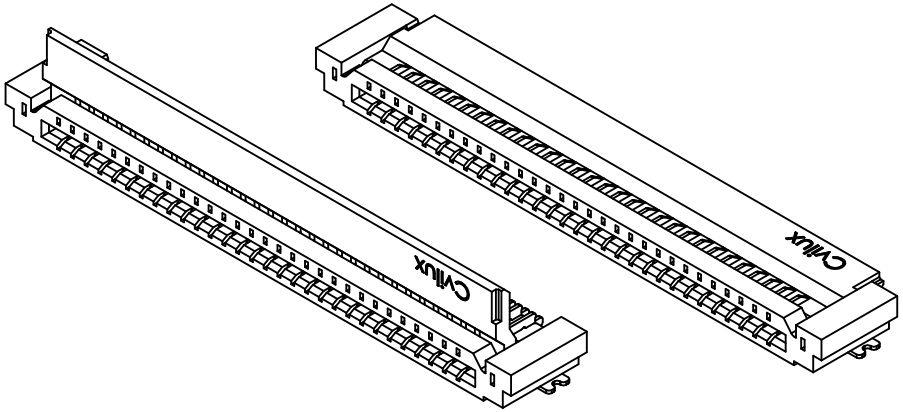
設計驗證
工程課
2025-01-01
發行
鈺緯科技開發股份有限公司

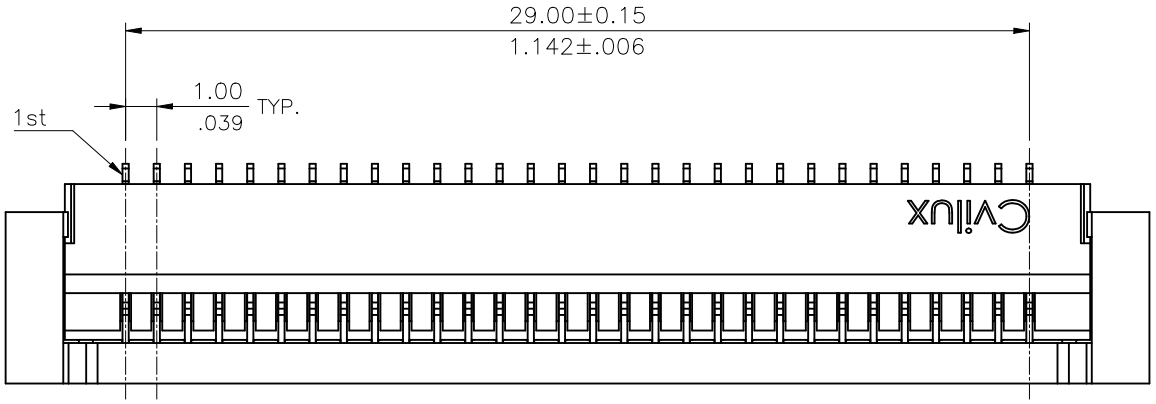
From:

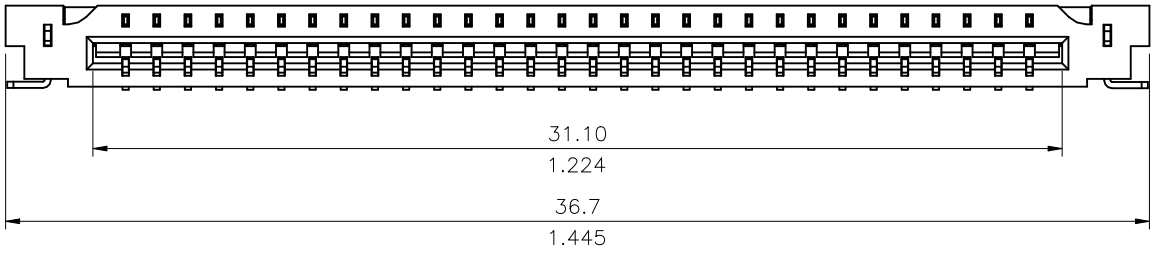
- [x] 瀚荃股份有限公司 CviLux Corporation
- [ ] 瀚荃科技(深圳)有限公司 CviLux Technology (Shenzhen) Corporation
- [ ] 瀚荃電子(東莞)有限公司 CviLux Electronics (Dongguan) Co., Ltd.
- [ ] 東莞群翰電子有限公司 Dongguan Qunhan Electronics Co., Ltd.
- [ ] 瀚荃電子科技(蘇州)有限公司 CviLux Technology (Suzhou) Co., Ltd.
- [ ] 瀚荃電子科技(重慶)有限公司 CviLux Technology (Chongqing) Co., Ltd.
- [ ] 瀚荃寮國有限公司 CviLux Lao Co., Ltd.

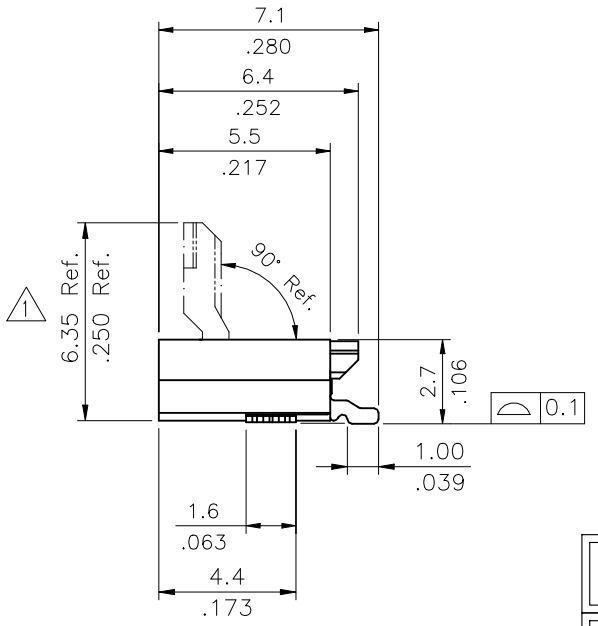
IATF
BUREAU VERITAS ISO 14064
DQP MANAGEMENT SYSTEMS SOLUTIONS
IECQ ECCC IECQ QC 080000
nqa OHSAS 18001 Registered
TÜVRheinland
www.cvilux.com











Halogen-Free

Lead Free Process

RoHS Compliant

3FM03017610(F0310)

設計驗證
工程課
2025-01-01
發行
紘華科技開發股份有限公司

SYM	NAME	DATE	REVISIONS			DATE
4						
3				DRAWN BY:	Eric	2/24-21'
2	Eric	2/24-21'	ECNT121060/ECRH121005	ENGINEER:	Sun	2/24-21'
1	Yushu	5/19-20'	ECNT120129	CHECKED BY:	Eisley	2/24-21'
				APPROVED BY:	Eisley	2/24-21'

UNIT: mm / inch

TOLERANCE UNLESS OTHERWISE SPECIFIED

.X ± 0.20/.008	X° ± 1°
.XX ± 0.10/.004	.X° ±
.XXX ± 0.05/.002	.XX° ±

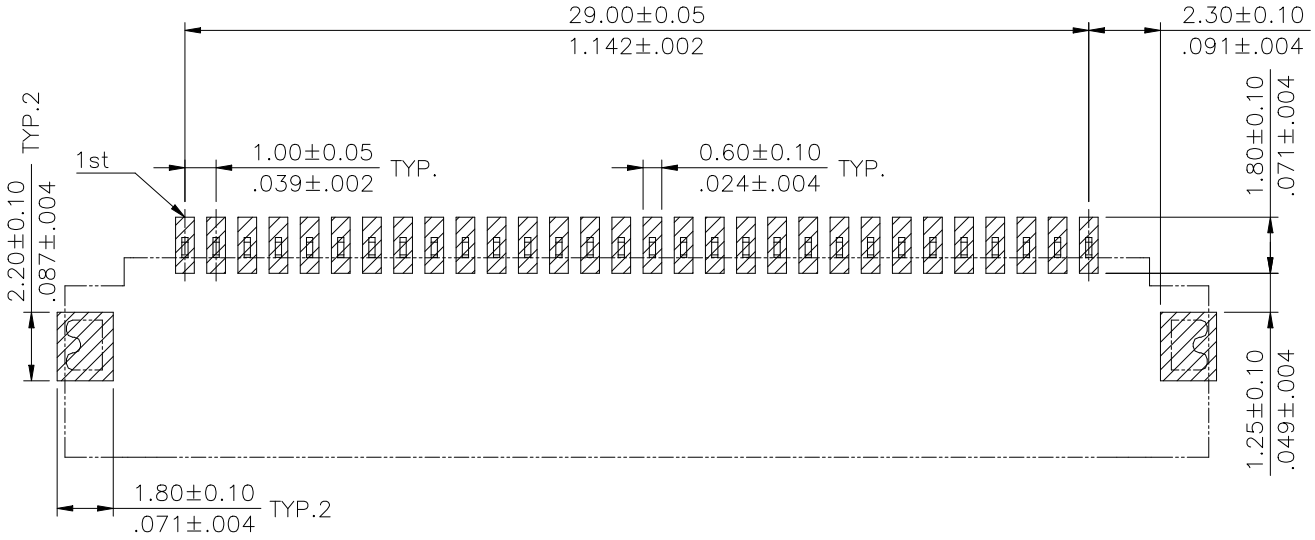
TITLE: 1.00mm(.039") ZIF FFC/FPC ONE-TOUCH CONNECTOR

MATERIAL:

FINISH:

瀚荃股份有限公司
CviLux Corporation

DRAWING NO.	CF1112SC	PART NO.	CF1130AD0*0-NH
SCALE	4 / 1	SHEET 1 OF 3	



Note :

1. Material :
   * Body : High temperature plastic UL 94V-0 Color Nature(Halogen-Free)
   * Cover : High temperature plastic UL 94V-0 Color Black(Halogen-Free)
   * Contact : Phosphor Bronze
   * Fixed tab : Brass with Tin Plated
2. For Leadfree IR Reflow Processes

Ordering Code

CF11	30	A	D	0	*0	-	NH
①	②	③	④	⑤	⑥		⑦

① Series No.

② No. of Circuits: 30 Pin

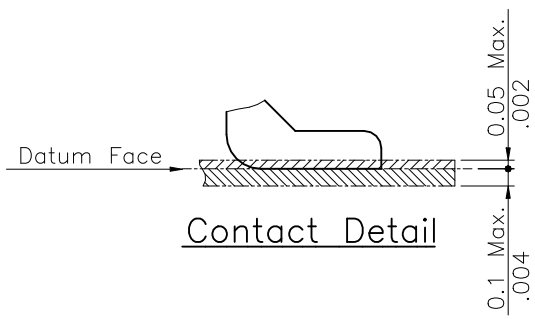
③ Plating code:
A= Gold Flash Plating on Contact area, 3.05μm(120μ') Matte Tin Plating on Soldertails, 1.27μm(50μ") Nickel Underplating over all

④ Contact style: D= Downside contact

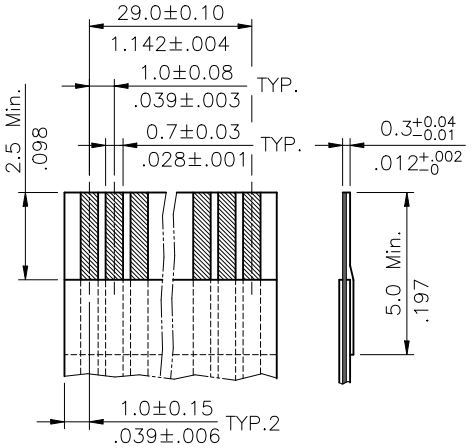
⑤ Color: 0= Nature

⑥ Other option: R0= Tape & Reel
T0= Tube Packing

⑦ NH= For Leadfree IR Processes and Halogen-Free



Contact Detail



Accommodated FFC/FPC

3FM03017610(F0310)

設計驗證
工程課
2025-01-01
發行
鈺鐘科技開發股份有限公司

Halogen-Free | Lead Free Process | RoHS Compliant

SYM	NAME	DATE	REVISIONS
4			
3			
2	Eric	2/24-21'	ECNT121060/ECRH121005
1	Yushu	5/19-20'	ECNT120129

		DATE
DRAWN BY:	Eric	2/24-21'
ENGINEER:	Sun	2/24-21'
CHECKED BY:	Eisley	2/24-21'
APPROVED BY:	Eisley	2/24-21'

UNIT: mm / inch

TOLERANCE UNLESS OTHERWISE SPECIFIED

.X ± 0.20/.008	X.° ± 1°
.XX ± 0.10/.004	.X° ±
.XXX ± 0.05/.002	.XX° ±

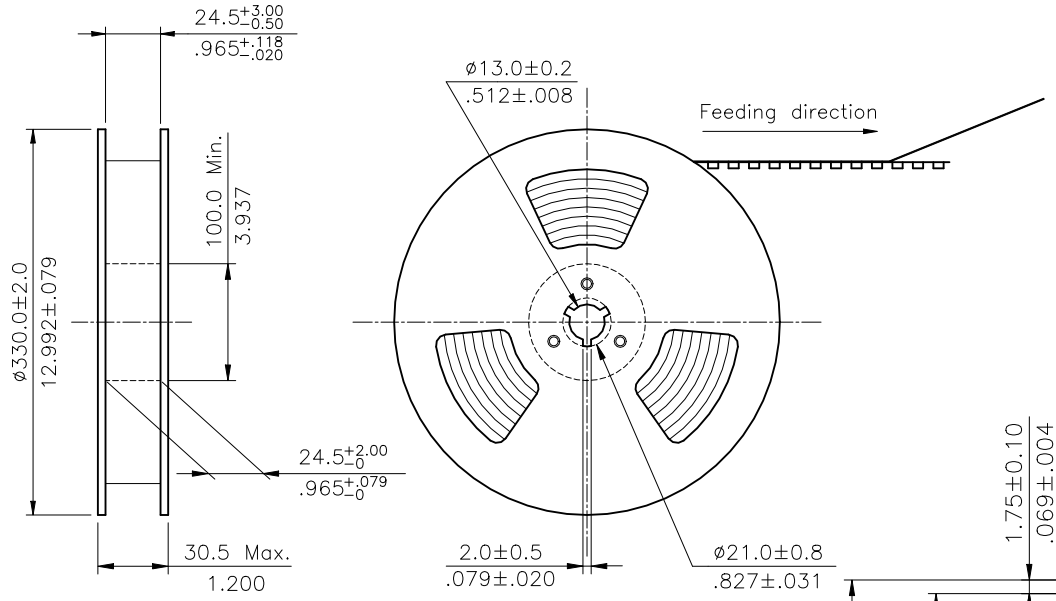
TITLE: 1.00mm(.039") ZIF FFC/FPC ONE-TOUCH CONNECTOR

MATERIAL:

FINISH:

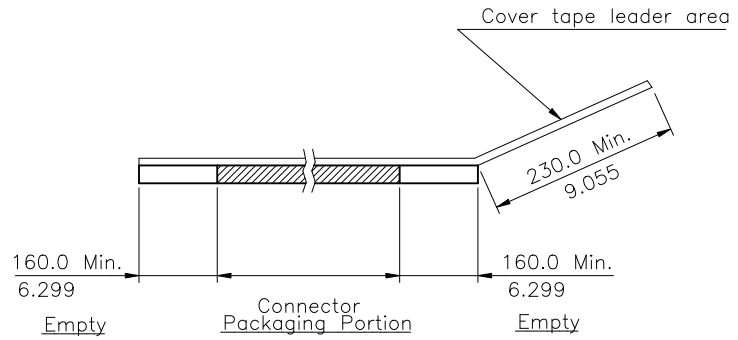
瀚荃股份有限公司
CviLux Corporation

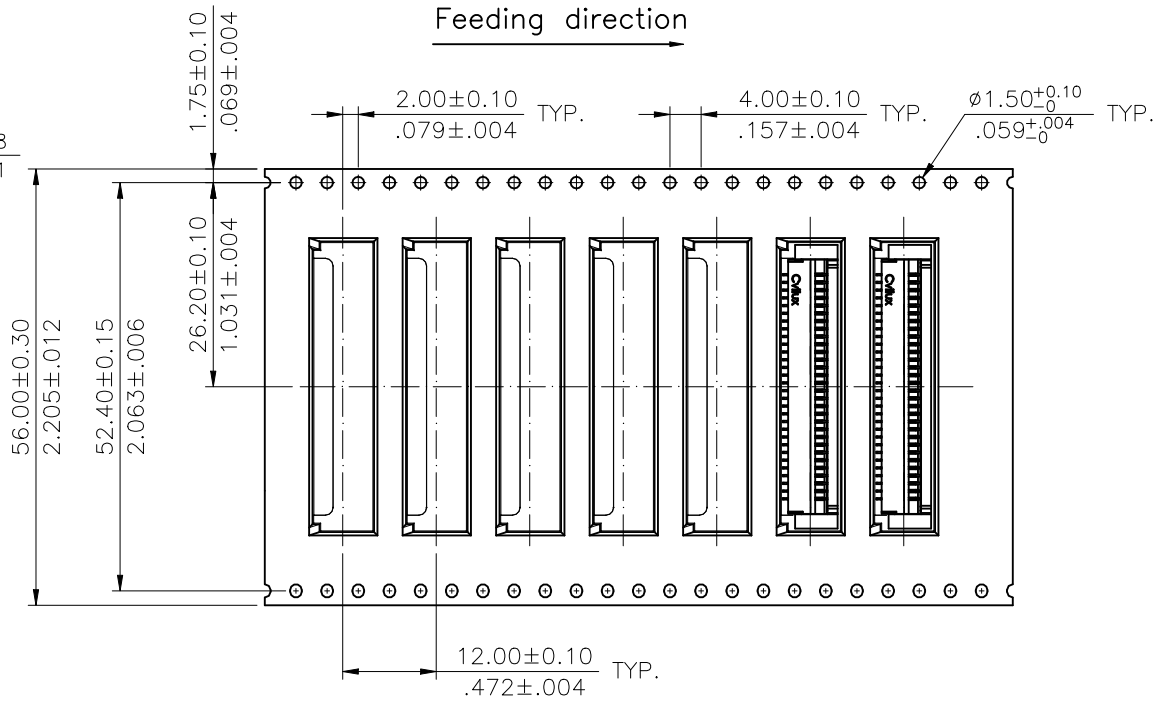
DRAWING NO.	CF1112SC	PART NO.	CF1130AD0*0-NH
SCALE	4 / 1	SHEET	2 OF 3



NOTE :

△2
* Reel Material : HIPS
* Carrier Material : Clear, Conductive Polystyrene Alloy
* Cover Tape Material : Polyester
* Cover Tape Peel Strength : 0.1N – 1.3N
* Carrier camber is within 1mm in 100mm
* All dimensions meet EIA–481–2 & EIA–481–3 requirements.
* Quantity : 1500 PCS/Reel
* Packing : 4 Reel/Carton





WIDTH : 56 mm Carrier

RoHS Compliant

SYM	NAME	DATE	REVISIONS			DATE
△4						
△3				DRAWN BY:	Eric	2/24–21'
△2	Eric	2/24–21'	ECNT121060/ECRH121005	ENGINEER:	Sun	2/24–21'
△1	Yushu	5/19–20'	ECNT120129	CHECKED BY:	Eisley	2/24–21'
				APPROVED BY:	Eisley	2/24–21'

UNIT: mm / inch

TOLERANCE UNLESS OTHERWISE SPECIFIED

.X ±	X.° ± 1°
.XX ±	.X° ±
.XXX ±	.XX° ±

TITLE: 1.00mm(.039") ZIF FFC/FPC ONE-TOUCH CONNECTOR

MATERIAL:

FINISH:

瀚荃股份有限公司
CviLux Corporation

DRAWING NO.	CF1112SC	PART NO.	CF1130AD0*0–NH
SCALE		SHEET 3 OF 3	

瀚荃股份有限公司
CviLux Corporation

ENGINEERING DEPT.		PRODUCT SPECIFICATION	SPEC.NO.: SPCF085B
REVISIONS	ECNT120078	For CF11 Series Connectors	PAGE: 1/4

1. SCOPE:
This specification contains the test requirement of subject connectors when tested under the condition and inserted on the specified size FPC and FFC

2. APPLICABLE STANDARDS:

MIL - STD - 202	Methods for test of connectors for electronic equipment
EAI - 364	Test methods for electrical connectors
J-STD-020	Resistance to soldering Temperature for through hole Mounted Devices
SS-00254	Test methods for electronic components ,LEAD-FREE soldering Part design standards

3. APPLICABLE SERIES NO.: **CF11***D0*C-10-NH

4. SHAPE, CONSTRUCTION AND DIMENSIONS
See attached drawings

5. MATERIALS
See attached drawings

6. ACCOMMODATED P.C.BOARD
6.1 Thickness: 0.5 mm (.020″) ~ 2.0 mm (.079")
6.2 P.C. Board Layout: See attached drawings

7. ACCOMMODATED FPC/FFC THICKNESS
0.29~0.34 mm (.011”~.013”mm)

CVILUX CORP
2021.07.05
ISSUED

REVIEWED : Eisley APPROVED : Sun VERIFIED : Michelle .

8. ELECTRICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
8.1	Rated current and voltage		0.5A max. 50V AC/DC max.
8.2	Contact resistance	Dry circuit of DC 20 mV max. , 1 mA max.	Less than 40 mΩ
8.3	Dielectric strength	When applied AC 500 V 1 minute between adjacent terminal	No change
8.4	Insulation resistance	When applied DC 500 V between adjacent terminal or ground	More than 500 MΩ

9. MECHANICAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
9.1	Contact retaining force in insulator	Retention speed 25± 3 mm per minute from housing	More than 50 gf
9.2	FFC / FPC withdrawal force (Reference data)	Measure force to withdrawal using 0.30 mm thickness FPC / FFC at speed 25± 3 mm per minute	1+(0.03× no. of Contacts) Kgf min.
9.3	Durability	Connector shall be subjected to 30 cycles of insertion and withdrawal	Appearance: No damage Contact resistance: Less than twice of initial

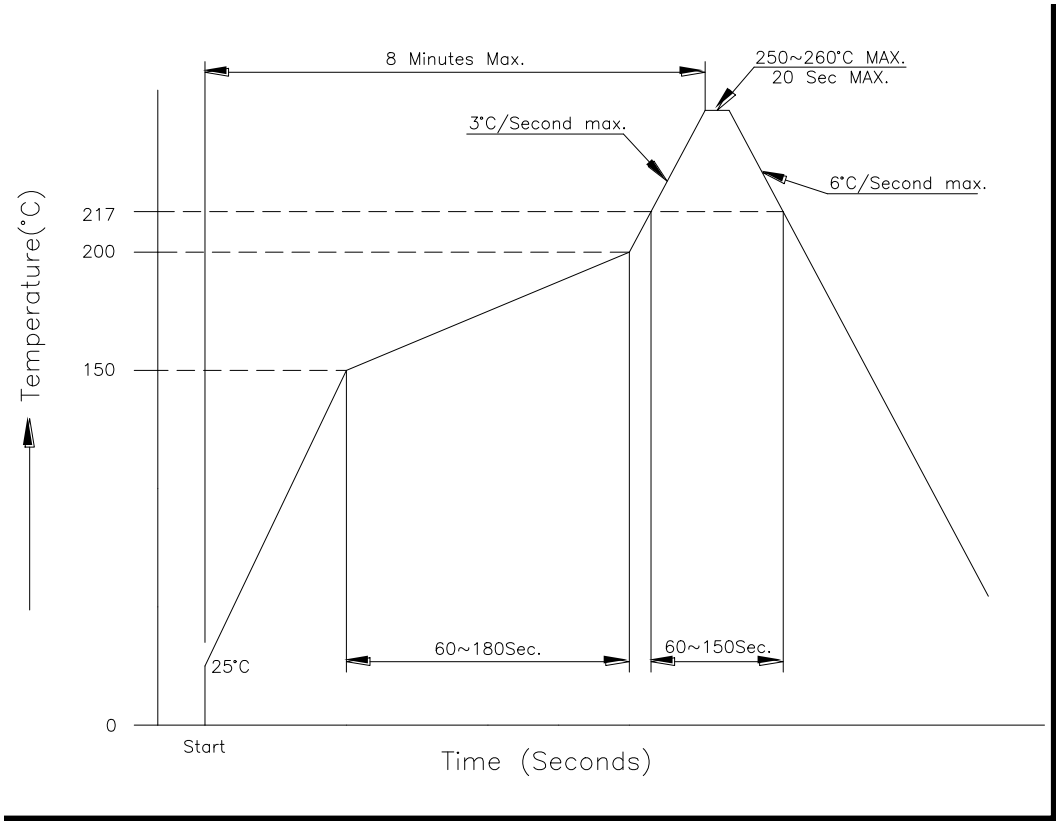
10. ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT
10.1	Temperature rise	Then carried the rated current	30°C max.
10.2	Vibration	1.5 mm 10-55-10 HZ / minute each 2 hours for X , Y and Z directions	Appearance: No damage Discontinuity: 1 micro second max.
10.3	Solder ability	Soldering time: 3 ± 0.5 second Soldering pot: 245 ± 5°C	Minimum: 90% of immersed area
10.4	Resistance to soldering heat	Soldering time: 20 second Max. Soldering pot: 250~260°C	No damage
10.5	Heat aging	85 ± 2°C , 96 hours	No damage

	ITEM	TEST CONDITION	REQUIREMENT
10.6	Humidity	40 ± 2°C , 90-95% RH , 96 hours measurement must be taken within 30 min. after tested	Appearance: No damage Contact resistance: Less than twice of initial Dielectric strength: To pass para 8-3
10.7	Temperature cycling	One cycle consists of : (1) -55^{+0}_{-3} °C , 30 min. (2)Room temp. 10-15 min. (3) 85^{+3}_{-0} °C , 30 min. (4)Room temp. 10-15 min.	Appearance: No damage Contact resistance: Less than twice of initial
10.8	Salt spray	Temperature: 35 ± 3°C Solution: 5 ± 1% Spray time: 48 ± 4 hours (Stamping before plated) Spray time: 24 ± 4 hours (Stamping after plated) Mate connectors and expose to the following salt mist conditions. Upon completion of the exposure period, salt deposits shall be removed by a gentle wash or dip in running water and dried naturally, after which the specified measurements shall be performed. The specimens shall be suspended from the top using waxed twine, string or nylon thread. The test only define the plating area, without plating area (as copper cross section) will not be defined. (EIA 364-26B / MIL-STD-202 Method 101)	Appearance: No damage Contact resistance: Less than twice of initial

11. AMBIENT TEMPERATURE RANGE: -40 to + 85°C

12. Recommended IR Reflow Temperature Profile(Lead-Free):



測試報告
Test Report

號碼(No.): ETR23C05511　　日期(Date): 10-Jan-2024　　

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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)：

送樣廠商(Sample Submitted By)	:	瀚荃股份有限公司 (CVILUX CORPORATION)
樣品名稱(Sample Name)	:	INSULATION
樣品型號(Style/Item No.)	:	LCP UL 94V-0 BLACK COLOR(HALOGEN FREE)

==========

收件日(Sample Receiving Date)	:	28-Dec-2023
測試期間(Testing Period)	:	28-Dec-2023 to 10-Jan-2024

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).)

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

Troy Chang / Department Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory - Taipei

PIN CODE: 84AFE955

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

測試報告
Test Report

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

測試部位敘述 (Test Part Description)

No.1 : 黑色塑膠 (BLACK PLASTIC)

測試結果 (Test Results)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)
				No.1
鎘 (Cd) (Cadmium (Cd))	參考IEC 62321-5: 2013，以感應耦合電漿發射光譜儀分析。(With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.)	mg/kg	2	n.d.
鉛 (Pb) (Lead (Pb))	參考IEC 62321-5: 2013，以感應耦合電漿發射光譜儀分析。(With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.)	mg/kg	2	4.94
汞 (Hg) (Mercury (Hg))	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.
六價鉻 Cr(VI) (Hexavalent Chromium Cr(VI))	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.
一溴聯苯 (Monobromobiphenyl)	參考IEC 62321-6: 2015，以氣相層析儀/質譜儀分析。(With reference to IEC 62321-6: 2015, analysis was performed by GC/MS.)	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)		mg/kg	5	n.d.
多溴聯苯總和 (Sum of PBBs)		mg/kg	-	n.d.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)
				No.1
一溴聯苯醚 (Monobromodiphenyl ether)	參考IEC 62321-6: 2015，以氣相層析儀/質譜儀分析。(With reference to IEC 62321-6: 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.
鄰苯二甲酸丁苯甲酯 (BBP) (Butyl benzyl phthalate (BBP))	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.
鄰苯二甲酸二丁酯 (DBP) (Dibutyl phthalate (DBP))	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(2-乙基己基)酯 (DEHP) (Di-(2-ethylhexyl) phthalate (DEHP))	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.
鄰苯二甲酸二異丁酯 (DIBP) (Diisobutyl phthalate (DIBP))	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.
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	343
氯 (Cl) (Chlorine (Cl)) (CAS No.: 22537-15-1)		mg/kg	50	n.d.
溴 (Br) (Bromine (Br)) (CAS No.: 10097-32-2)		mg/kg	50	n.d.
碘 (I) (Iodine (I)) (CAS No.: 14362-44-8)		mg/kg	50	n.d.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

測試報告
Test Report

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)
				No.1
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 62321-9: 2021，以氣相層析儀/質譜儀分析。(With reference to IEC 62321-9: 2021, analysis was performed by GC/MS.)	mg/kg	20	n.d.
銻 (Sb) (Antimony (Sb)) (CAS No.: 7440-36-0)	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.

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)

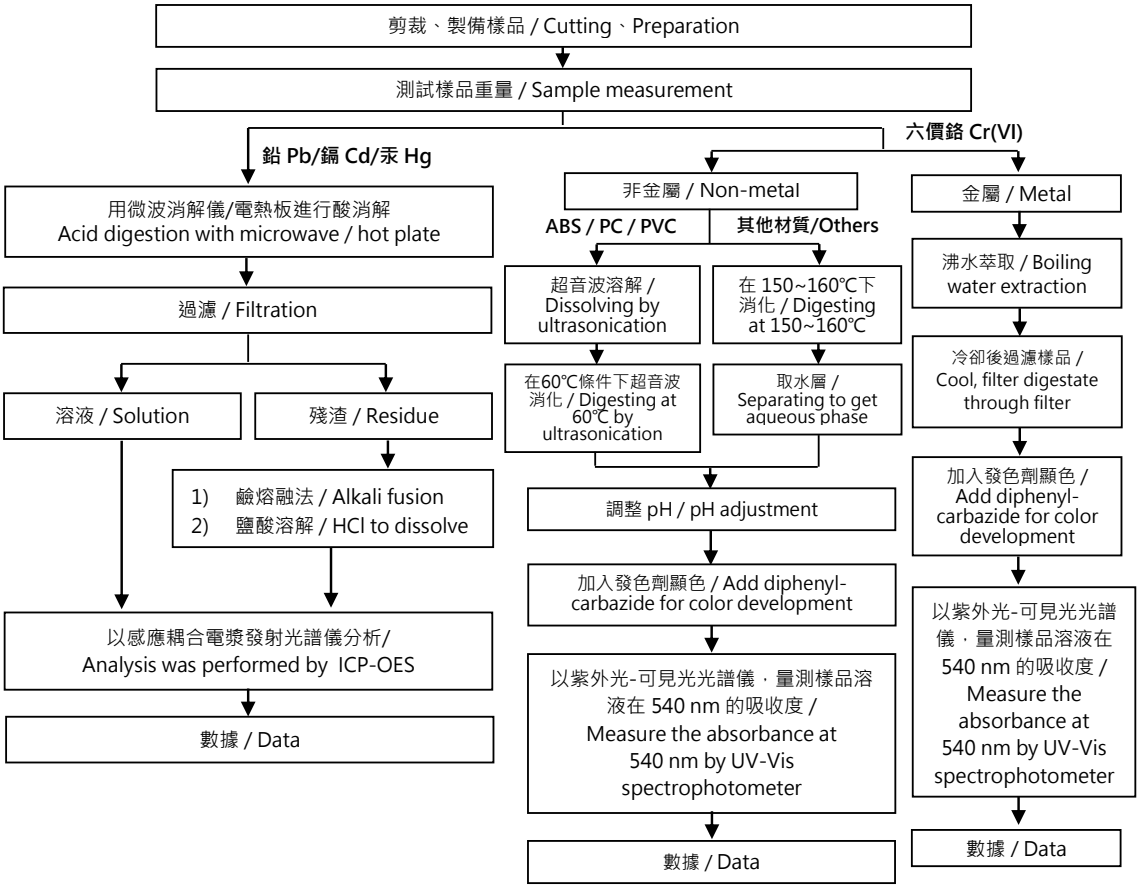
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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）

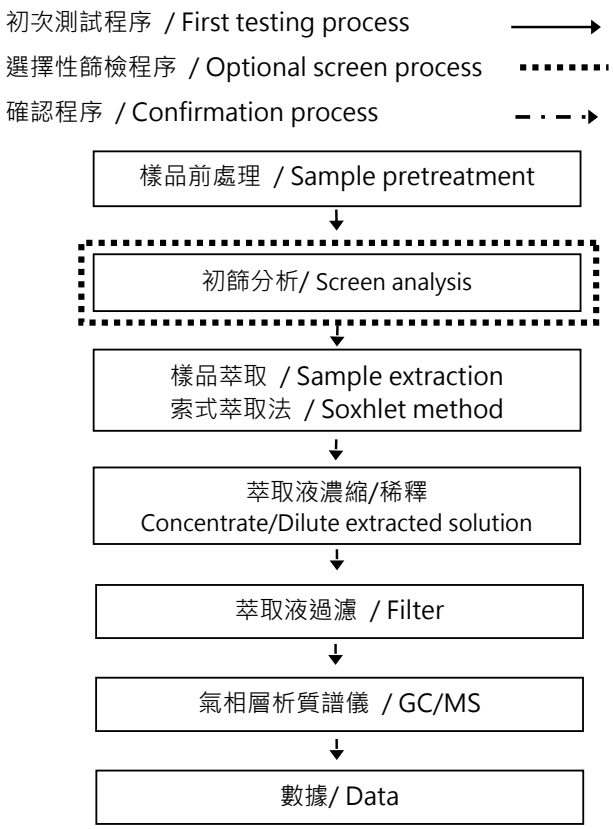
These samples were dissolved totally by pre-conditioning method according to below flow chart.
（Cr^{6+} test method excluded）



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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

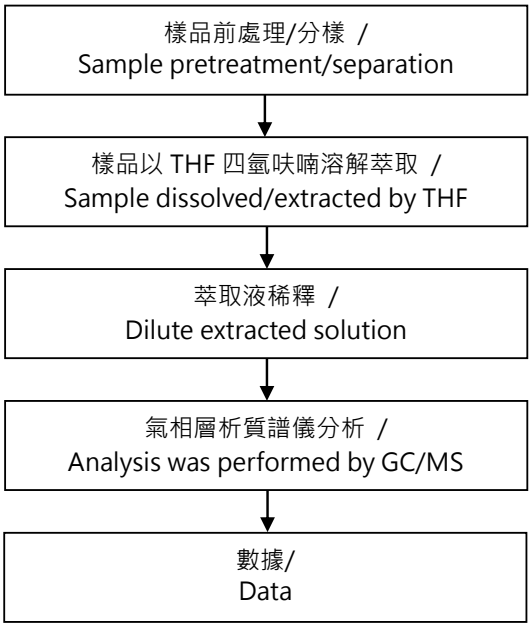


This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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

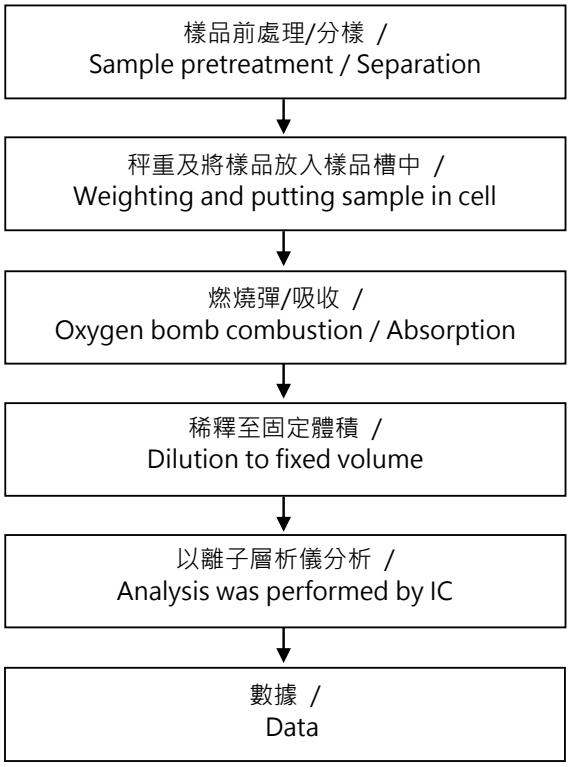
【測試方法/Test method: IEC 62321-8】



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

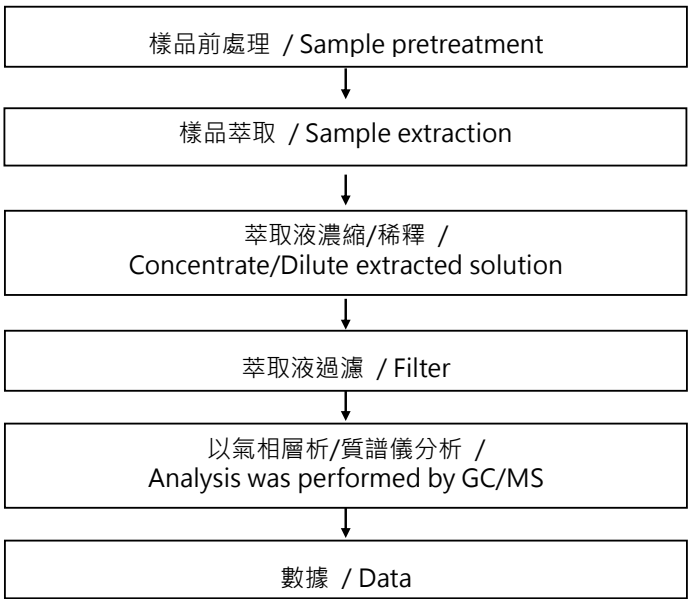
鹵素分析流程圖 / Analytical flow chart - Halogen



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

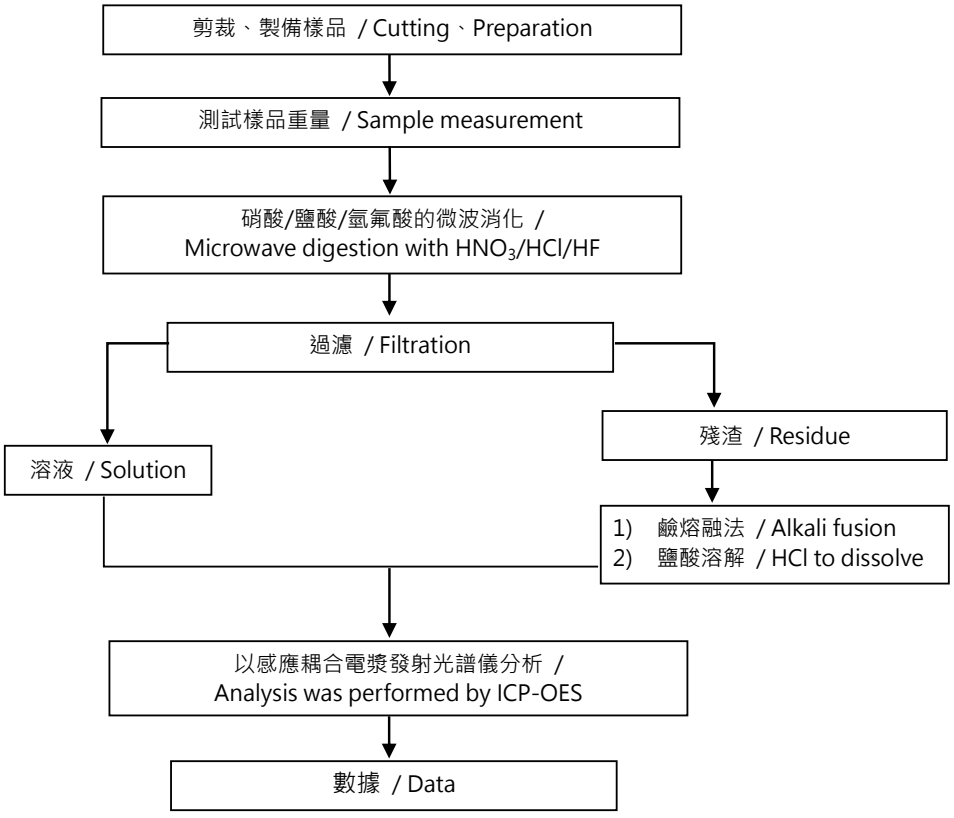
瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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.

【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.

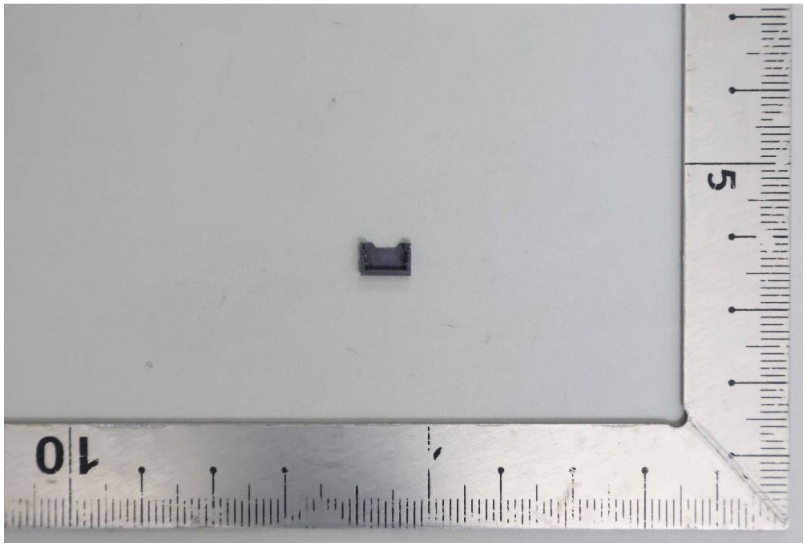
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

測試報告
Test Report

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

*** 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.)

ETR23C05511



** 報告結尾 (End of Report) **

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

測試報告
Test Report

號碼(No.): ETR23C05503　　日期(Date): 10-Jan-2024　　

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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)：

送樣廠商(Sample Submitted By)	:	瀚荃股份有限公司 (CVILUX CORPORATION)
樣品名稱(Sample Name)	:	INSULATION
樣品型號(Style/Item No.)	:	NYLON 6T UL 94V-0 BLACK COLOR(HALOGEN FREE)

==========

收件日(Sample Receiving Date)	:	28-Dec-2023
測試期間(Testing Period)	:	28-Dec-2023 to 10-Jan-2024

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).)

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

Troy Chang / Department Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory - Taipei

PIN CODE: 44D5897A

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

測試報告
Test Report

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

測試部位敘述 (Test Part Description)

No.1 : 黑色塑膠 (BLACK PLASTIC)

測試結果 (Test Results)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)
				No.1
鎘 (Cd) (Cadmium (Cd))	參考IEC 62321-5: 2013，以感應耦合電漿發射光譜儀分析。(With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.)	mg/kg	2	n.d.
鉛 (Pb) (Lead (Pb))	參考IEC 62321-5: 2013，以感應耦合電漿發射光譜儀分析。(With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.)	mg/kg	2	9.24
汞 (Hg) (Mercury (Hg))	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.
六價鉻 Cr(VI) (Hexavalent Chromium Cr(VI))	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.
一溴聯苯 (Monobromobiphenyl)	參考IEC 62321-6: 2015，以氣相層析儀/質譜儀分析。(With reference to IEC 62321-6: 2015, analysis was performed by GC/MS.)	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)		mg/kg	5	n.d.
多溴聯苯總和 (Sum of PBBs)		mg/kg	-	n.d.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)
				No.1
一溴聯苯醚 (Monobromodiphenyl ether)	參考IEC 62321-6: 2015，以氣相層析儀/質譜儀分析。(With reference to IEC 62321-6: 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.
鄰苯二甲酸丁苯甲酯 (BBP) (Butyl benzyl phthalate (BBP))	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.
鄰苯二甲酸二丁酯 (DBP) (Dibutyl phthalate (DBP))	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(2-乙基己基)酯 (DEHP) (Di-(2-ethylhexyl) phthalate (DEHP))	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.
鄰苯二甲酸二異丁酯 (DIBP) (Diisobutyl phthalate (DIBP))	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.
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	299
氯 (Cl) (Chlorine (Cl)) (CAS No.: 22537-15-1)		mg/kg	50	n.d.
溴 (Br) (Bromine (Br)) (CAS No.: 10097-32-2)		mg/kg	50	n.d.
碘 (I) (Iodine (I)) (CAS No.: 14362-44-8)		mg/kg	50	n.d.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

測試報告
Test Report

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)
				No.1
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 62321-9: 2021，以氣相層析儀/質譜儀分析。(With reference to IEC 62321-9: 2021, analysis was performed by GC/MS.)	mg/kg	20	n.d.
銻 (Sb) (Antimony (Sb)) (CAS No.: 7440-36-0)	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.

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)

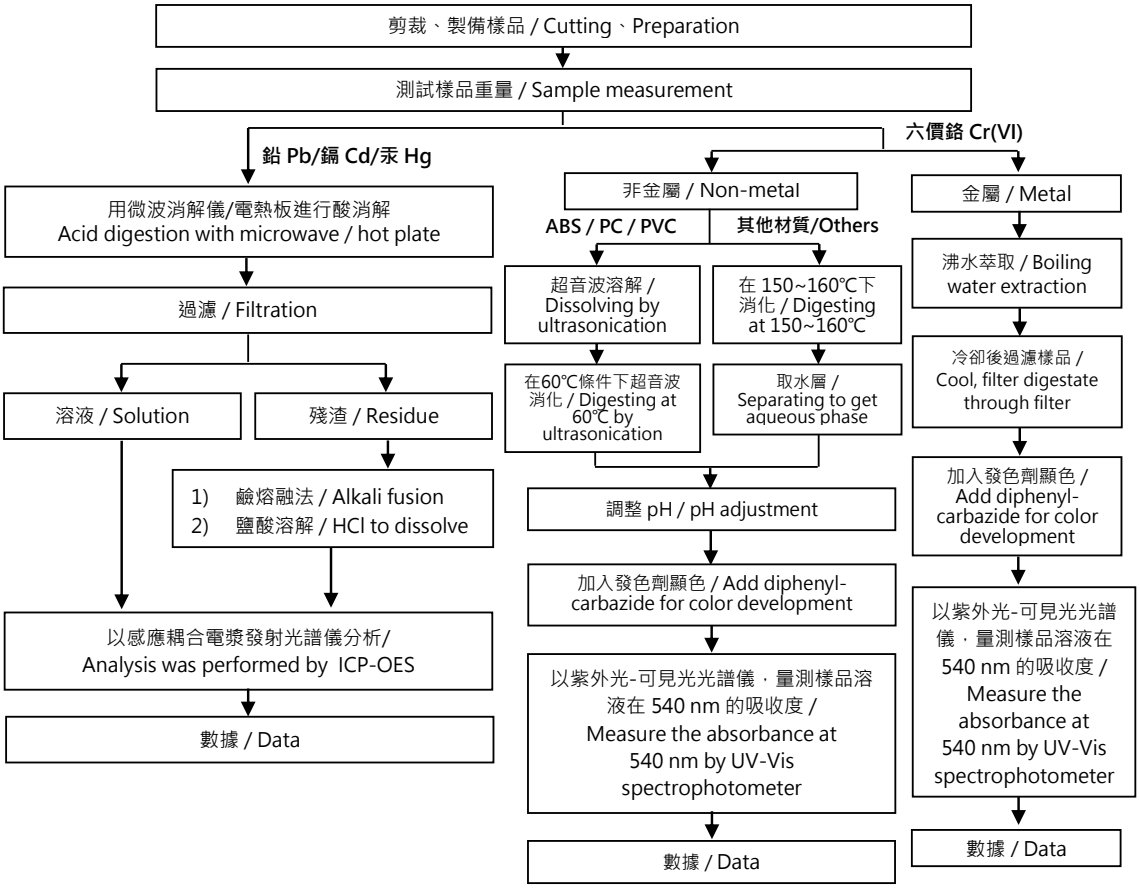
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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）

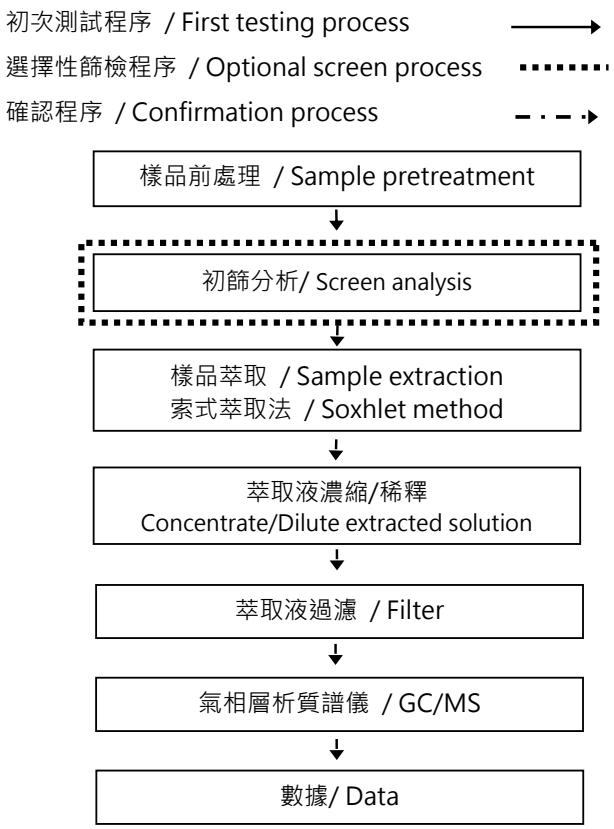
These samples were dissolved totally by pre-conditioning method according to below flow chart.
（Cr^{6+} test method excluded）



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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

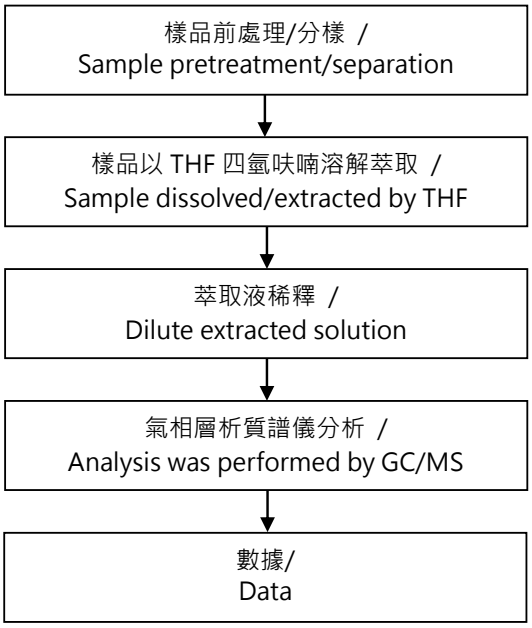


This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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

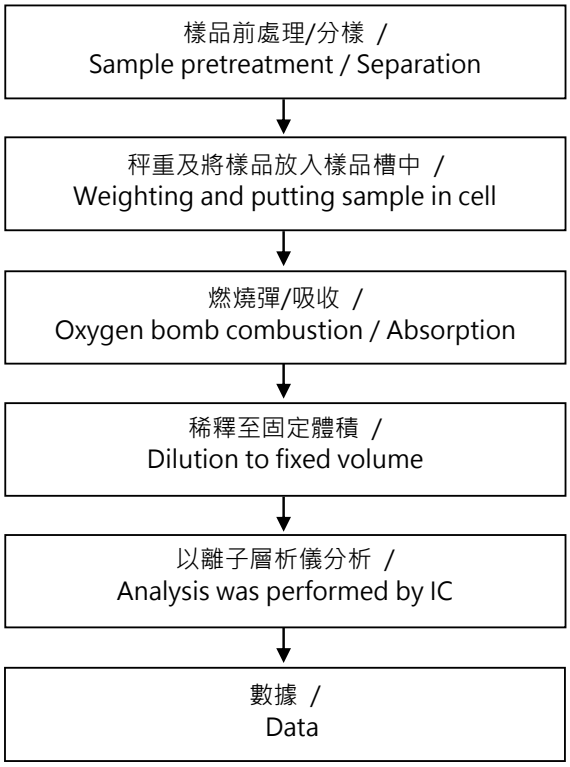
【測試方法/Test method: IEC 62321-8】



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

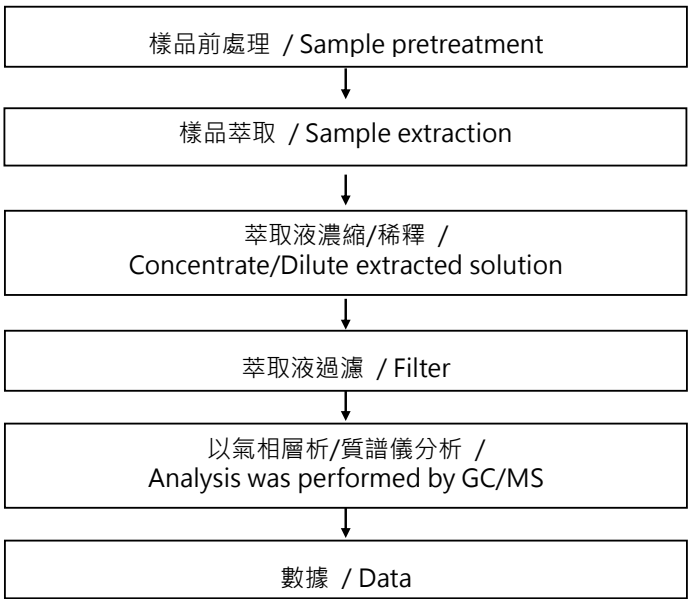
鹵素分析流程圖 / Analytical flow chart - Halogen



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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



This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

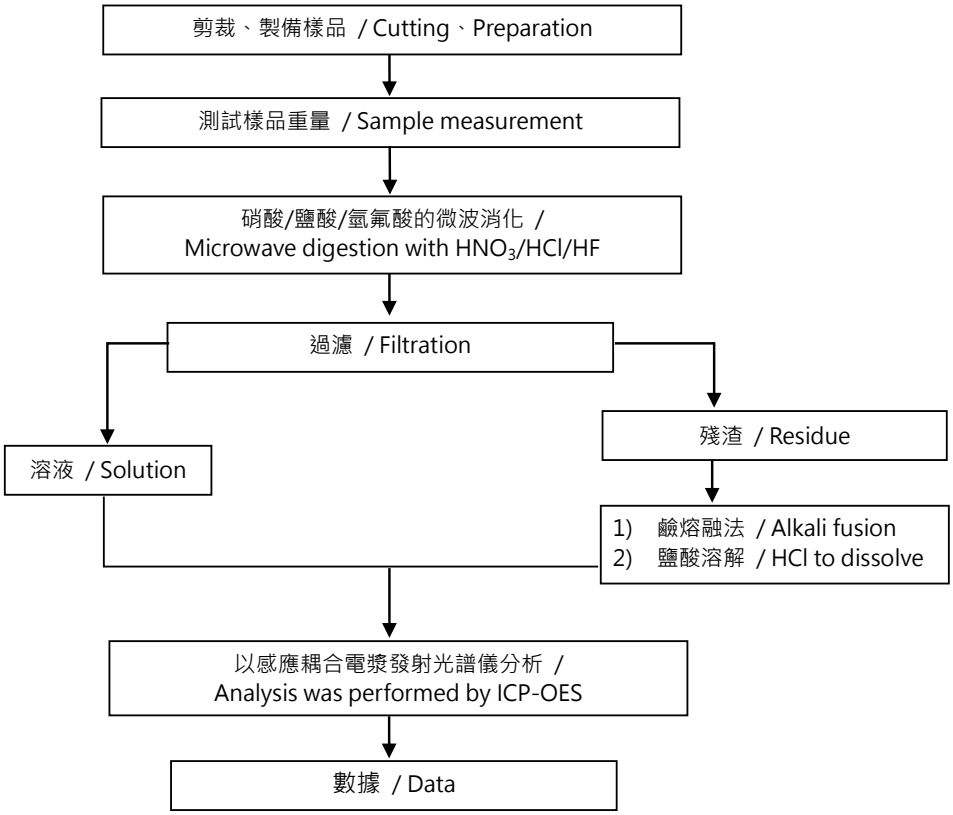
瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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.

【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.

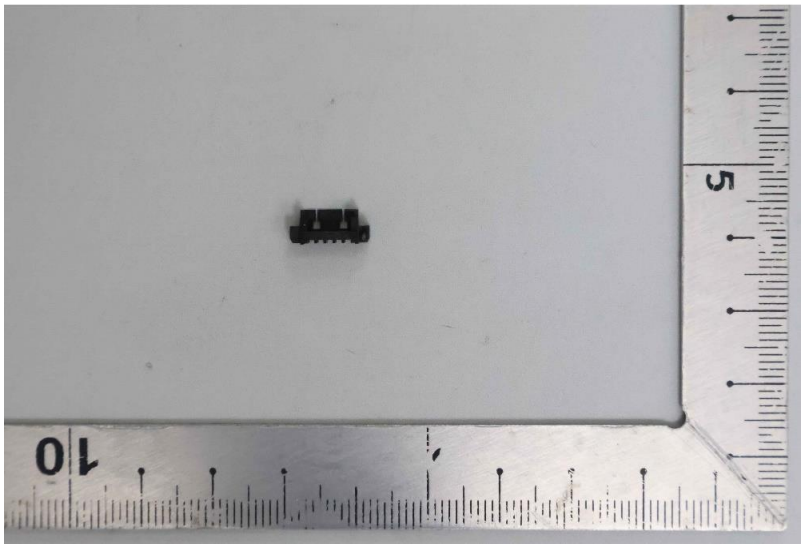
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

測試報告
Test Report

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

*** 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.)

ETR23C05503



** 報告結尾 (End of Report) **

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

測試報告
Test Report

號碼(No.): ETR23C05149　　日期(Date): 10-Jan-2024　　

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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)：

送樣廠商(Sample Submitted By)	:	瀚荃股份有限公司 (CVILUX CORPORATION)
樣品名稱(Sample Name)	:	BRASS
樣品型號(Style/Item No.)	:	C2680(H68),C2600(H70),C2700(H65)

==========

收件日(Sample Receiving Date)	:	28-Dec-2023
測試期間(Testing Period)	:	28-Dec-2023 to 10-Jan-2024

測試需求(Test Requested) :

(1) 依據客戶指定，參考RoHS指令2011/65/EU Annex II測試鎘、鉛、汞、六價鉻。(As specified by client, with reference to RoHS Directive 2011/65/EU Annex II to determine Cadmium, Lead, Mercury, Cr(VI) 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).)

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

Troy Chang / Department Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory - Taipei

PIN CODE: 04B86A2B

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

測試報告
Test Report

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

測試部位敘述 (Test Part Description)

No.1 : 黃銅色金屬 (BRASS METAL)

測試結果 (Test Results)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)
				No.1
鎘 (Cd) (Cadmium (Cd))	參考IEC 62321-5: 2013，以感應耦合電漿發射光譜儀分析。(With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.)	mg/kg	2	n.d.
鉛 (Pb) (Lead (Pb))		mg/kg	2	56.9
汞 (Hg) (Mercury (Hg))	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.
六價鉻 (Hexavalent Chromium) Cr(VI) (#2)	參考IEC 62321-7-1: 2015，以紫外光-可見光分光光度計分析。(With reference to IEC 62321-7-1: 2015, analysis was performed by UV-VIS.)	μg/cm²	0.1	n.d.
鈹 (Be) (Beryllium (Be)) (CAS No.: 7440-41-7)	參考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% = 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. (#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 μg/cm² 時，無法確定塗層是否含有六價鉻。(The result between 0.10 μg/cm² and 0.13 μg/cm² is considered to be inconclusive - unavoidable coating variations may influence the determination.)

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

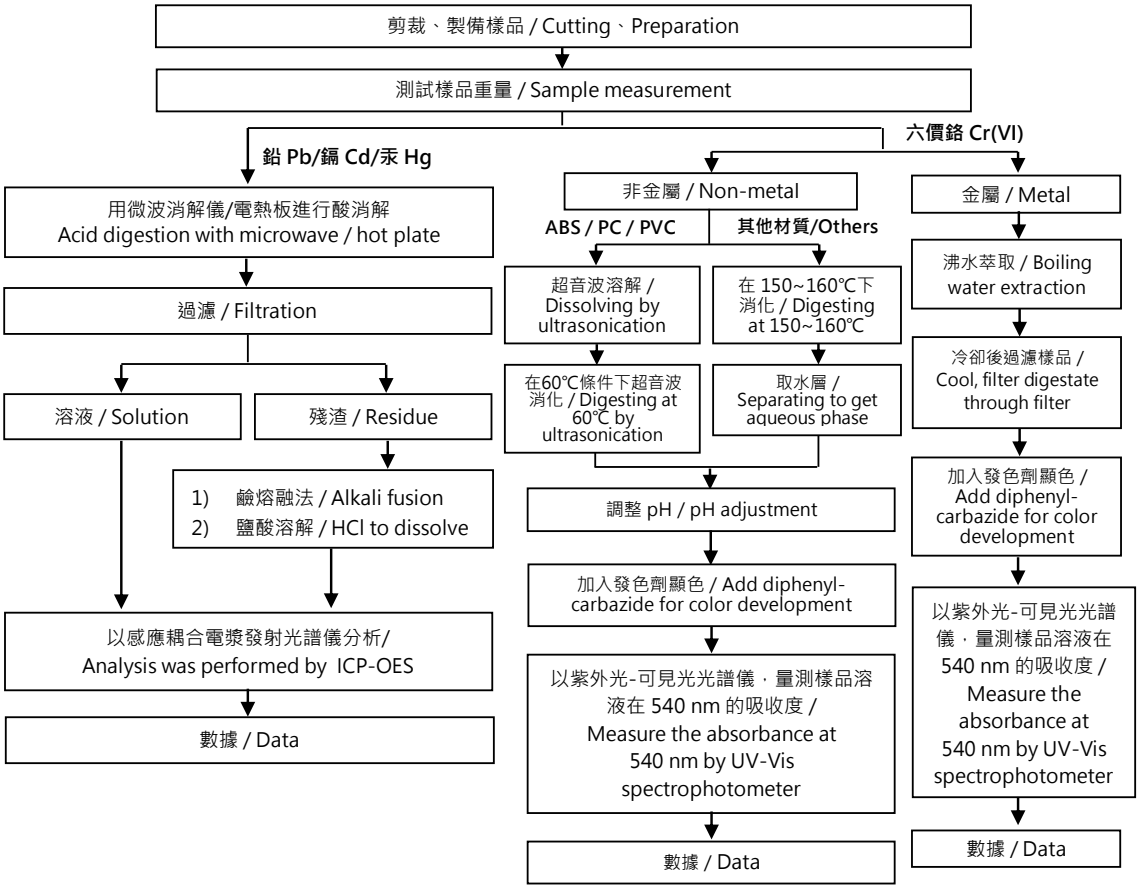
測試報告
Test Report

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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）



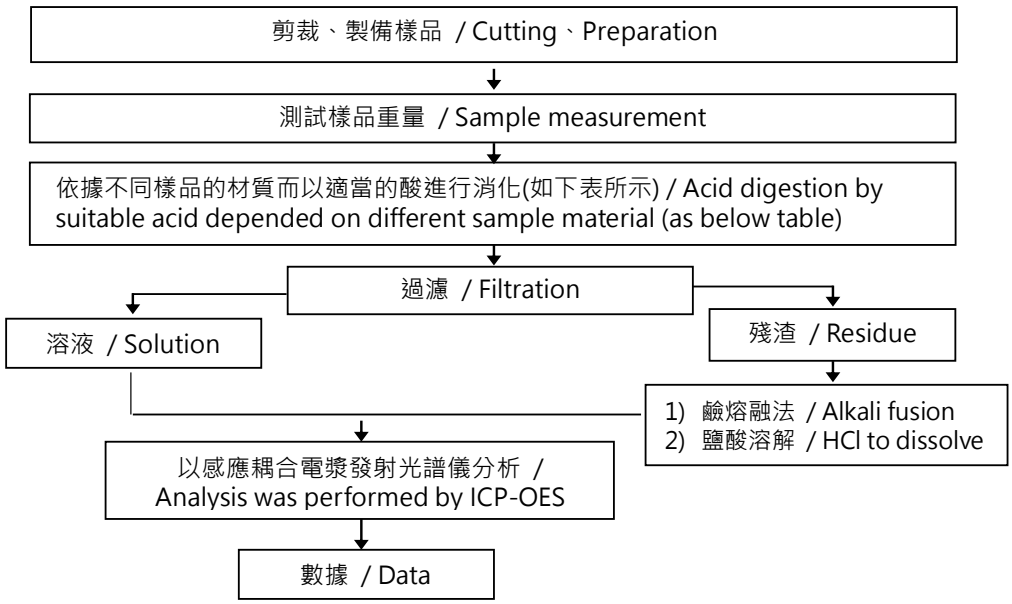
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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_3, HCl, HF, H_2O_2
玻璃 / Glass	硝酸,氫氟酸 / HNO_3,HF
金,鉑,鈀,陶瓷 / Gold, platinum, palladium, ceramic	王水 / Aqua regia
銀 / Silver	硝酸 / HNO_3
塑膠 / Plastic	硫酸,雙氧水,硝酸,鹽酸 / H_2SO_4, H_2O_2, HNO_3, HCl
其他 / Others	加入適當的試劑至完全溶解 / Added appropriate reagent to total digestion

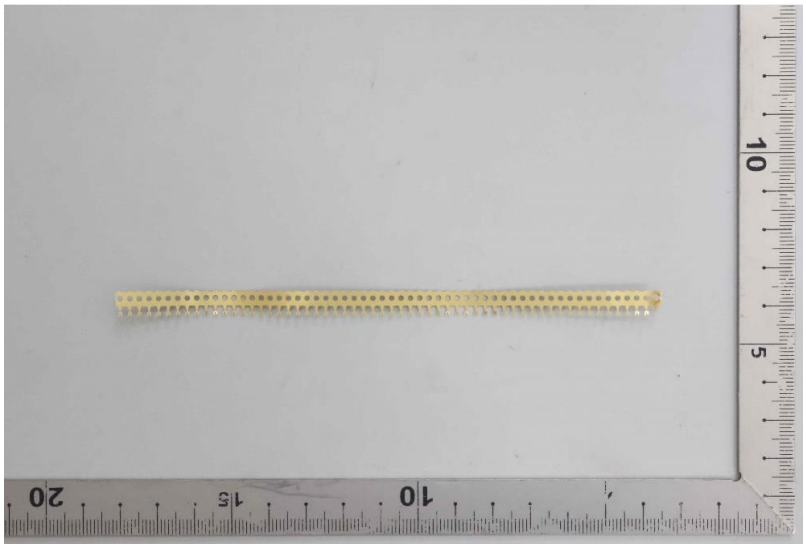
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

測試報告
Test Report

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

*** 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.)

ETR23C05149



** 報告結尾 (End of Report) **

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

測試報告
Test Report

號碼(No.): ETR23C05150　　日期(Date): 10-Jan-2024　　

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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)：

送樣廠商(Sample Submitted By)	:	瀚荃股份有限公司 (CVILUX CORPORATION)
樣品名稱(Sample Name)	:	PHOSPHOR BRONZE
樣品型號(Style/Item No.)	:	C5191,C5210

==========

收件日(Sample Receiving Date)	:	28-Dec-2023
測試期間(Testing Period)	:	28-Dec-2023 to 10-Jan-2024

測試需求(Test Requested) :
(1) 依據客戶指定，參考RoHS指令2011/65/EU Annex II測試鎘、鉛、汞、六價鉻。(As specified by client, with reference to RoHS Directive 2011/65/EU Annex II to determine Cadmium, Lead, Mercury, Cr(VI) 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).)

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

Troy Chang / Department Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory - Taipei

PIN CODE: 94A0C907

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

測試報告
Test Report

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

測試部位敘述 (Test Part Description)

No.1 : 銅色金屬 (含料帶) (COPPER COLORED METAL (INCLUDING THE FRAME))

測試結果 (Test Results)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)
				No.1
鎘 (Cd) (Cadmium (Cd))	參考IEC 62321-5: 2013，以感應耦合電漿發射光譜儀分析。(With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.)	mg/kg	2	n.d.
鉛 (Pb) (Lead (Pb))		mg/kg	2	32.8
汞 (Hg) (Mercury (Hg))	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.
六價鉻 (Hexavalent Chromium) Cr(VI) (#2)	參考IEC 62321-7-1: 2015，以紫外光-可見光分光光度計分析。(With reference to IEC 62321-7-1: 2015, analysis was performed by UV-VIS.)	μg/cm²	0.1	n.d.
鈹 (Be) (Beryllium (Be)) (CAS No.: 7440-41-7)	參考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% = 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. (#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 μg/cm² 時，無法確定塗層是否含有六價鉻。(The result between 0.10 μg/cm² and 0.13 μg/cm² is considered to be inconclusive - unavoidable coating variations may influence the determination.)

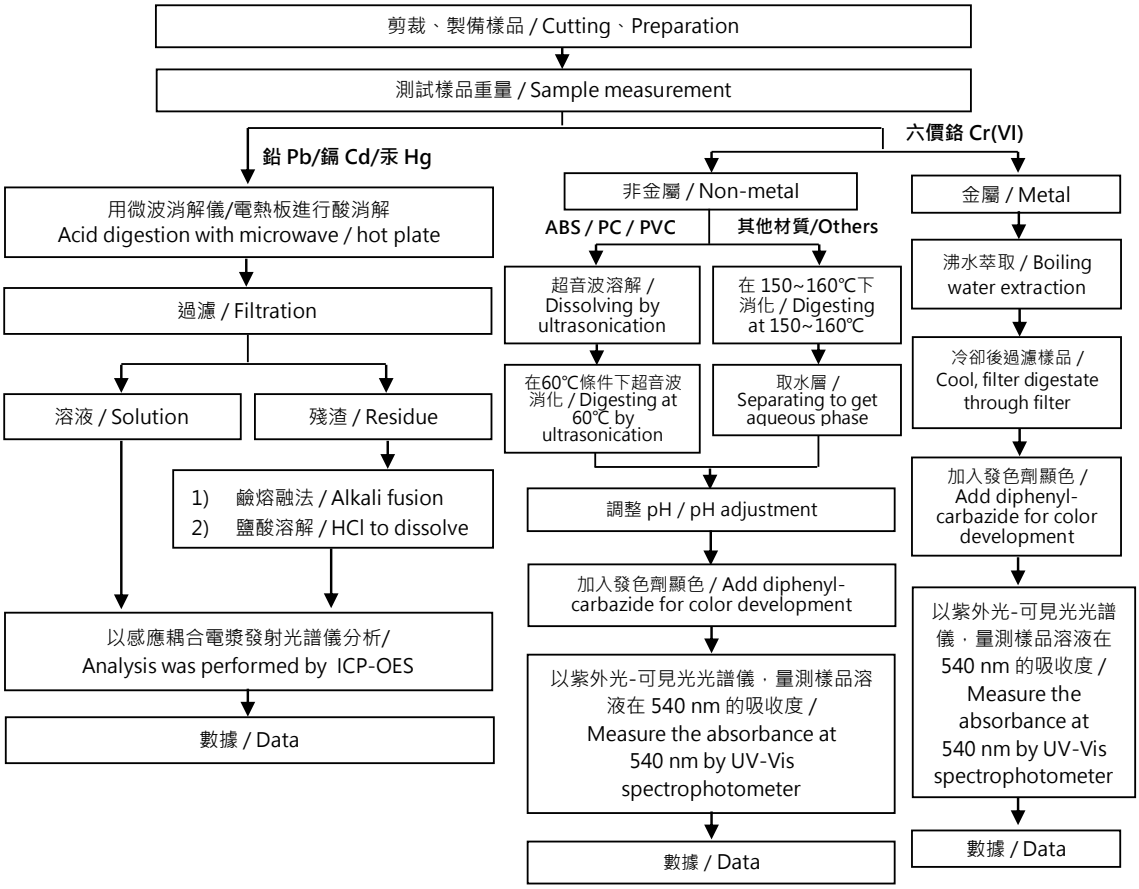
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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）



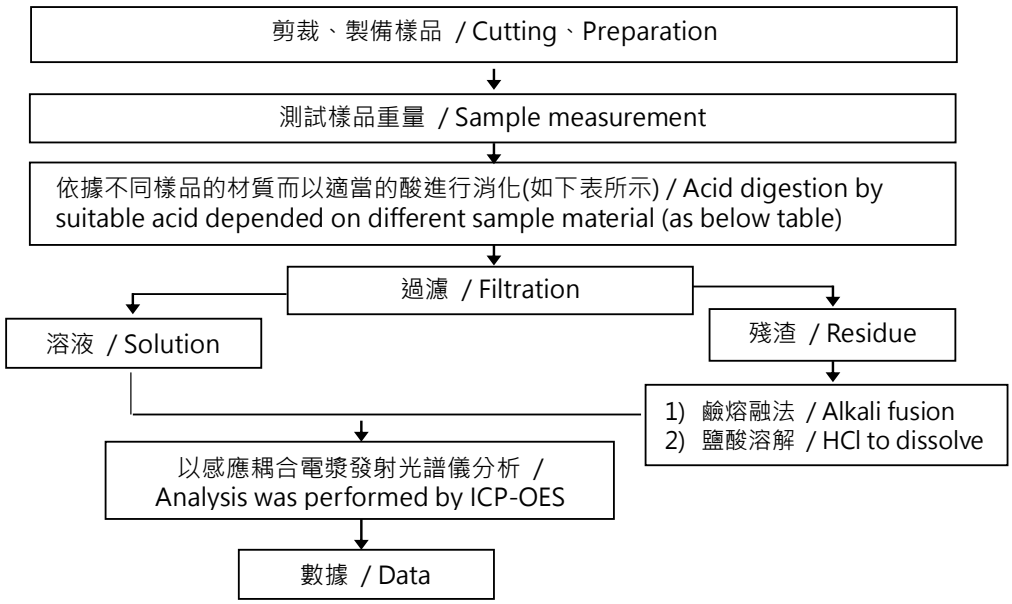
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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_3, HCl, HF, H_2O_2
玻璃 / Glass	硝酸,氫氟酸 / HNO_3,HF
金,鉑,鈀,陶瓷 / Gold, platinum, palladium, ceramic	王水 / Aqua regia
銀 / Silver	硝酸 / HNO_3
塑膠 / Plastic	硫酸,雙氧水,硝酸,鹽酸 / H_2SO_4, H_2O_2, HNO_3, HCl
其他 / Others	加入適當的試劑至完全溶解 / Added appropriate reagent to total digestion

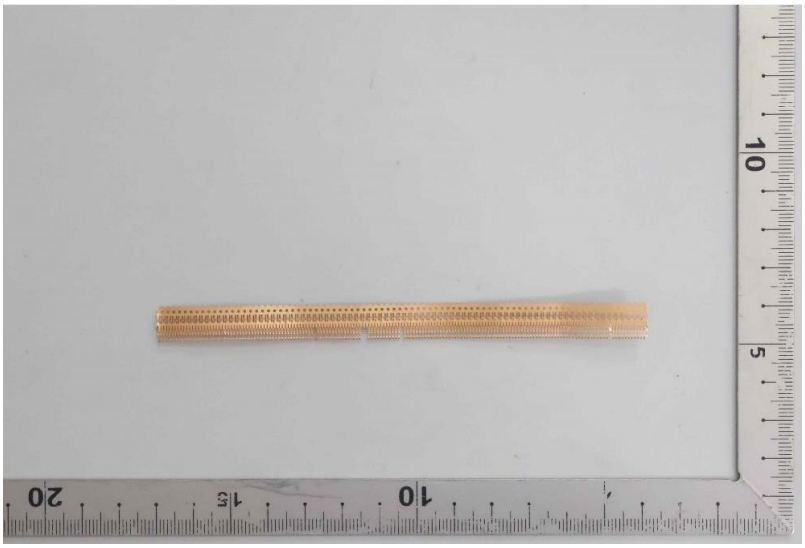
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

測試報告
Test Report

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

*** 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.)

ETR23C05150



** 報告結尾 (End of Report) **

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

測試報告
Test Report

號碼(No.): ETR23C05156　　日期(Date): 10-Jan-2024　　

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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)：

送樣廠商(Sample Submitted By)　：　瀚荃股份有限公司 (CVILUX CORPORATION)
樣品名稱(Sample Name)　：　Au

==========

收件日(Sample Receiving Date)　：　28-Dec-2023
測試期間(Testing Period)　：　28-Dec-2023 to 10-Jan-2024

測試需求(Test Requested)　：
(1) 依據客戶指定，參考RoHS指令2011/65/EU Annex II測試鎘、鉛、汞、六價鉻。 (As specified by client, with reference to RoHS Directive 2011/65/EU Annex II to determine Cadmium, Lead, Mercury, Cr(VI) 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).)

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

Troy Chang / Department Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory - Taipei

CHECK REPORT
PIN CODE: 74B88B58

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

測試報告
Test Report

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

測試部位敘述 (Test Part Description)

No.1 : 金色金屬鍍層(含料帶) (PLATING LAYER OF GOLDEN COLORED METAL (INCLUDING THE FRAME))
No.2 : 金色金屬 (含鍍層) (GOLDEN COLORED METAL (INCLUDING THE PLATING LAYER))

測試結果 (Test Results)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)	
				No.1	No.2
鎘 (Cd) (Cadmium (Cd))	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 surface etching, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	---
鉛 (Pb) (Lead (Pb))	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 surface etching, analysis was performed by ICP-OES.)	mg/kg	2	24.3	---
汞 (Hg) (Mercury (Hg))	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.	---
六價鉻 (Hexavalent Chromium) Cr(VI) (#2)	參考IEC 62321-7-1: 2015，以紫外光-可見光分光光度計分析。(With reference to IEC 62321-7-1: 2015, analysis was performed by UV-VIS.)	μg/cm²	0.1	n.d.	---
鈹 (Be) (Beryllium (Be)) (CAS No.: 7440-41-7)	參考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.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

備註(Note)：

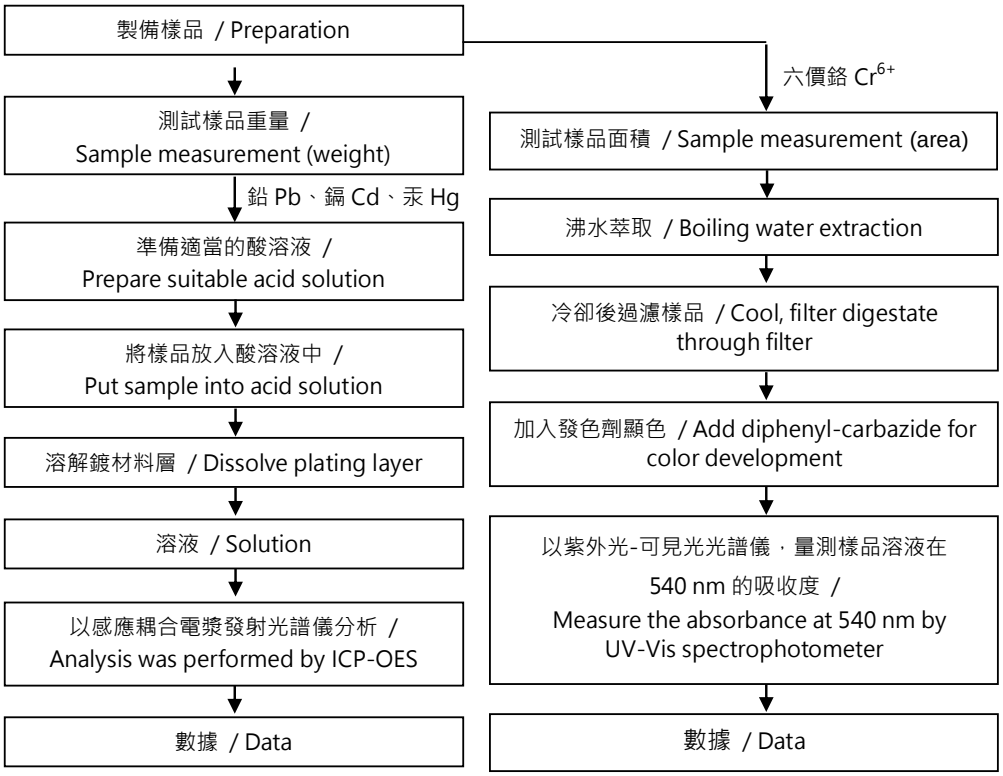
1. mg/kg = ppm；0.1wt% = 0.1% = 1000ppm
2. MDL = Method Detection Limit (方法偵測極限值)
3. n.d. = Not Detected (未檢出)；小於MDL / Less than MDL
4. "---" = Not Conducted (未測試項目)
5. (#2) =
   a. 當六價鉻結果大於0.13 μg/cm²，表示樣品表層含有六價鉻。(The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than 0.13 μg/cm². 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 μg/cm² 時，無法確定塗層是否含有六價鉻。(The result between 0.10 μg/cm² and 0.13 μg/cm² is considered to be inconclusive - unavoidable coating variations may influence the determination.)

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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)

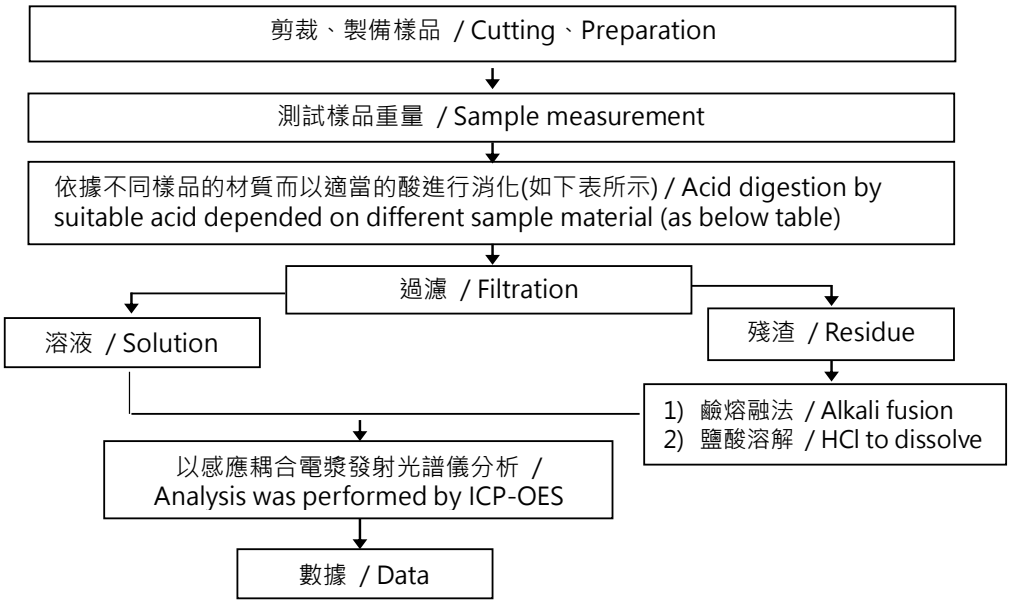


This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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_3, HCl, HF, H_2O_2
玻璃 / Glass	硝酸,氫氟酸 / HNO_3,HF
金,鉑,鈀,陶瓷 / Gold, platinum, palladium, ceramic	王水 / Aqua regia
銀 / Silver	硝酸 / HNO_3
塑膠 / Plastic	硫酸,雙氧水,硝酸,鹽酸 / H_2SO_4, H_2O_2, HNO_3, HCl
其他 / Others	加入適當的試劑至完全溶解 / Added appropriate reagent to total digestion

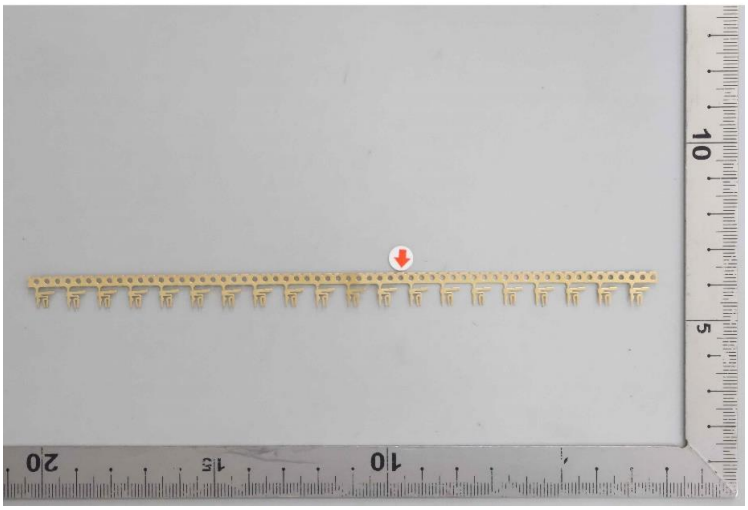
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

測試報告
Test Report

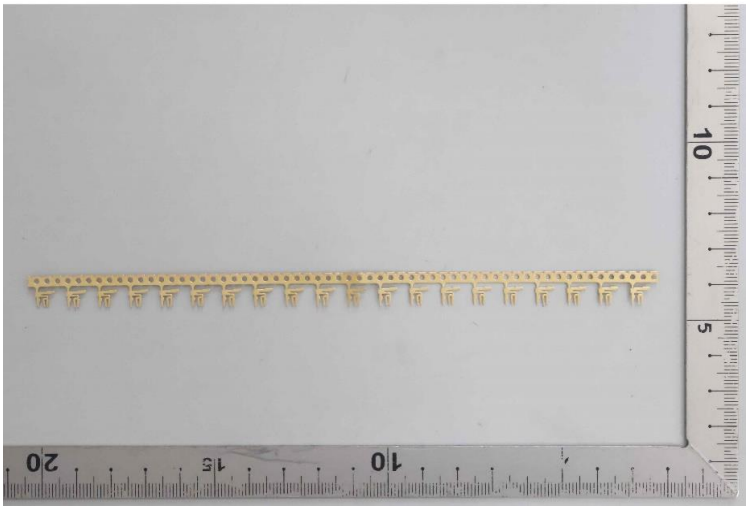
瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

*** 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.)

ETR23C05156 NO.1



ETR23C05156 NO.2



** 報告結尾 (End of Report) **

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

測試報告
Test Report

號碼(No.): ETR23C05159　　日期(Date): 10-Jan-2024　　

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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)：

送樣廠商(Sample Submitted By)　：　瀚荃股份有限公司 (CVILUX CORPORATION)
樣品名稱(Sample Name)　：　MATTE TIN

==========

收件日(Sample Receiving Date)　：　28-Dec-2023
測試期間(Testing Period)　：　28-Dec-2023 to 10-Jan-2024

測試需求(Test Requested)　：
(1) 依據客戶指定，參考RoHS指令2011/65/EU Annex II測試鎘、鉛、汞、六價鉻。 (As specified by client, with reference to RoHS Directive 2011/65/EU Annex II to determine Cadmium, Lead, Mercury, Cr(VI) 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).)

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

Troy Chang / Department Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory - Taipei

CHECK REPORT
PIN CODE: D4B438EA

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

測試報告
Test Report

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

測試部位敘述 (Test Part Description)

No.1 : 銀色金屬鍍層(含料帶) (PLATING LAYER OF SILVER COLORED METAL (INCLUDING THE FRAME))
No.2 : 銀色金屬(含鍍層和料帶) (SILVER COLORED METAL (INCLUDING THE PLATING LAYER AND FRAME))

測試結果 (Test Results)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)	
				No.1	No.2
鎘 (Cd) (Cadmium (Cd))	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 surface etching, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	---
鉛 (Pb) (Lead (Pb))	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 surface etching, analysis was performed by ICP-OES.)	mg/kg	2	38.5	---
汞 (Hg) (Mercury (Hg))	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.	---
六價鉻 (Hexavalent Chromium) Cr(VI) (#2)	參考IEC 62321-7-1: 2015，以紫外光-可見光分光光度計分析。(With reference to IEC 62321-7-1: 2015, analysis was performed by UV-VIS.)	μg/cm²	0.1	n.d.	---
鈹 (Be) (Beryllium (Be)) (CAS No.: 7440-41-7)	參考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.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

測試報告
Test Report

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

備註(Note)：

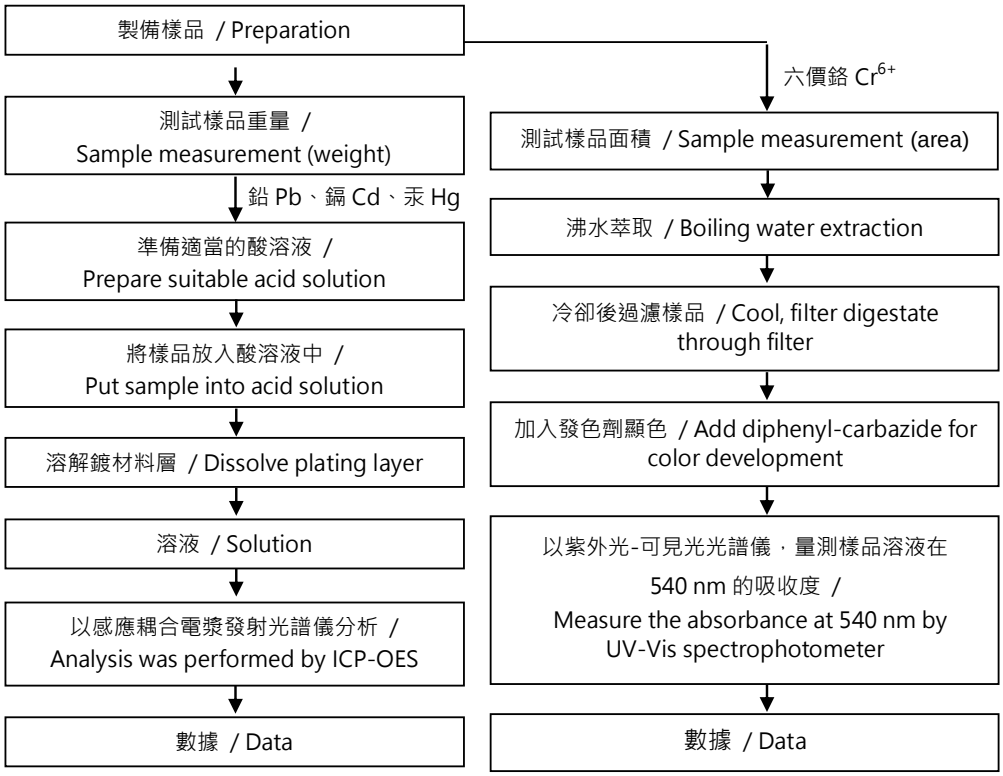
1. mg/kg = ppm；0.1wt% = 0.1% = 1000ppm
2. MDL = Method Detection Limit (方法偵測極限值)
3. n.d. = Not Detected (未檢出)；小於MDL / Less than MDL
4. "---" = Not Conducted (未測試項目)
5. (#2) =
   a. 當六價鉻結果大於0.13 μg/cm²，表示樣品表層含有六價鉻。(The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than 0.13 μg/cm². 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 μg/cm² 時，無法確定塗層是否含有六價鉻。(The result between 0.10 μg/cm² and 0.13 μg/cm² is considered to be inconclusive - unavoidable coating variations may influence the determination.)

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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)

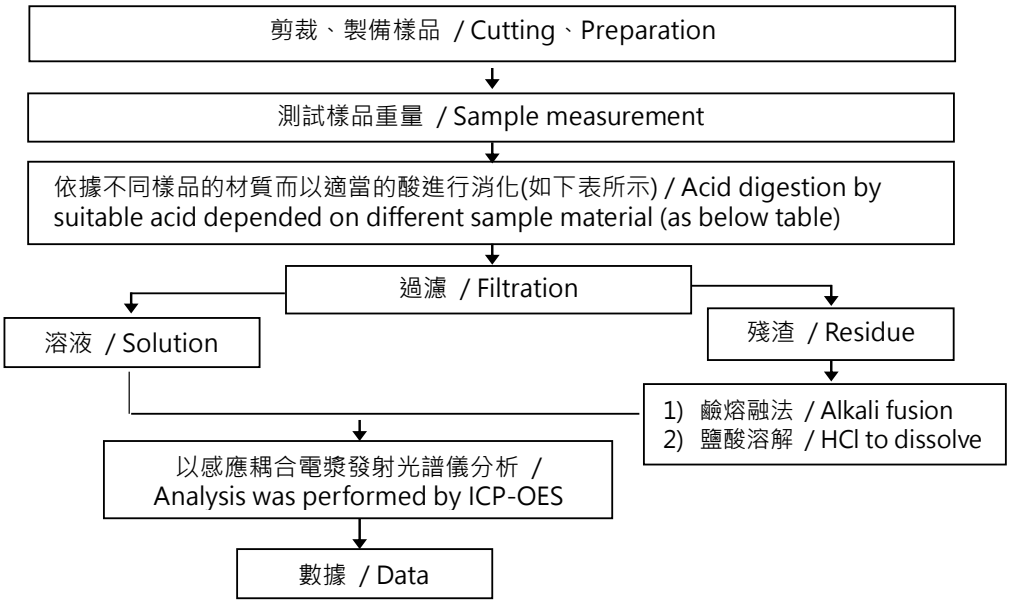


This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

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_3, HCl, HF, H_2O_2
玻璃 / Glass	硝酸,氫氟酸 / HNO_3,HF
金,鉑,鈀,陶瓷 / Gold, platinum, palladium, ceramic	王水 / Aqua regia
銀 / Silver	硝酸 / HNO_3
塑膠 / Plastic	硫酸,雙氧水,硝酸,鹽酸 / H_2SO_4, H_2O_2, HNO_3, HCl
其他 / Others	加入適當的試劑至完全溶解 / Added appropriate reagent to total digestion

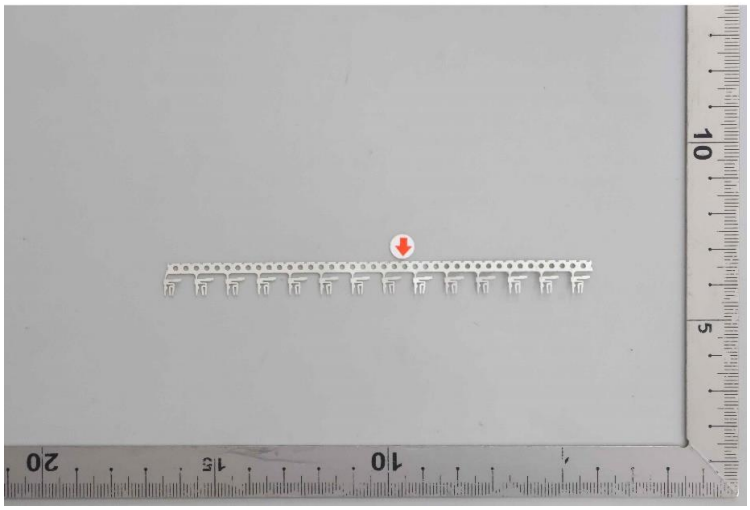
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

測試報告
Test Report

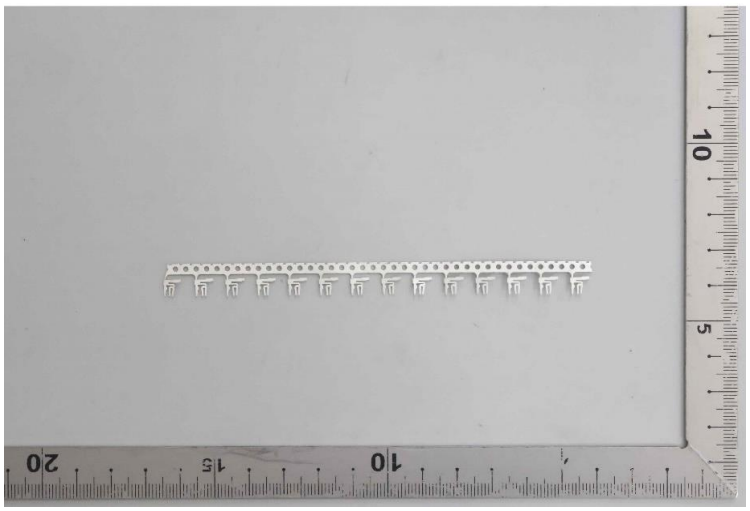
瀚荃股份有限公司 (CVILUX CORPORATION)
新北市淡水區中正東路一段3巷9號9樓 (9F., NO. 9, LANE 3, SEC. 1, CHUNG-CHENG E. RD., TAMSHUI DISTRICT, NEW TAIPEI CITY 25147, R. O. C.)

*** 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.)

ETR23C05159 NO.1



ETR23C05159 NO.2



** 報告結尾 (End of Report) **

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at https://www.sgs.com.tw/terms-of-service and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at https://www.sgs.com.tw/terms-of-service. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of client's instruction, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced, except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

瀚荃股份有限公司
CviLux Corporation

RELIABILITY TEST REPORT

TESTITEM : 1.ELECTRICAL
2.MECHANICAL
3.ENV IRONMENTAL

SERIES NO. : CF11 SERIES (1.00mm)

TEST EQUIPMENT : 1.INSERTION & REMOVAL APPARATUS
2.ELECTRONIC MEASURING APPARATUS
3.ENV IRONMENTAL APPARATUS

DATE OF TESTING : 03/15/2016”

TEST DEPART : R&D TESTER : Ming

CONTAINT : ATTACHED

CV LUX CORP
2016.04.14
ISSUED

REVIEWED : Eisley APPROVED : Clark VERIFIED : Ming .

瀚荃股份有限公司
CviLux Corporation

1. ELECTRICAL PERFORMANCE :

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
1-1	Contact resistance	Dry circuit of DC 20mV max.,1mA max.	Less than 50 mΩ	Sample	50 mΩ Max.
				1	6.27 mΩ
				2	5.73 mΩ
				3	5.93 mΩ
				4	6.16 mΩ
				5	5.85 mΩ
1-2	Dielectric strength	When applied AC 500V 1 minute between adjacent terminal	No Damage	Sample	500 V 1 minute
				1	PASS
				2	PASS
				3	PASS
				4	PASS
				5	PASS
1-3	Insulation resistance	When applied DC 100 V between adjacent terminal or ground	More than 500 MΩ	Sample	500 MΩ min.
				1	$10x10^5$ MΩ
				2	$10x10^5$ MΩ
				3	$10x10^5$ MΩ
				4	$10x10^5$ MΩ
				5	$10x10^5$ MΩ

2. MECHANICAL PERFORMANCE :

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
2-1	Single contact retaining force in insulator	Retention speed 25±3 mm per minute form housing	More than 0.2 Kgf.	Sample	0.2 Kgf min.
				1	0.32 Kgf
				2	0.34 Kgf
				3	0.28 Kgf
				4	0.25 Kgf
				5	0.33 Kgf
2-2	FFC / FPC withdrawal force (Reference data)	Measure force to withdrawal using 0.30mm Thickness FPC/FFC at speed 25±3 mm per minute	(0.07 x no. of Contacts) Kgf min. For 8pin: Move than 0.56 kgf	Sample	0.56 Kgf min.
				1	4.47 Kgf
				2	4.85 Kgf
				3	4.73 Kgf
				4	4.51 Kgf
				5	4.54 Kgf
2-3	Durability	Connector shall be subjected to 20 cycles of insertion and withdrawal	Appearance: No damage	Sample	No damage
				1	PASS
				2	PASS
				3	PASS
				4	PASS
				5	PASS
			Contact resistance: Less than twice of initial	Sample	Contact resistance
				1	6.42 mΩ
				2	6.72 mΩ
				3	6.84 mΩ
				4	6.55 mΩ
				5	6.47 mΩ

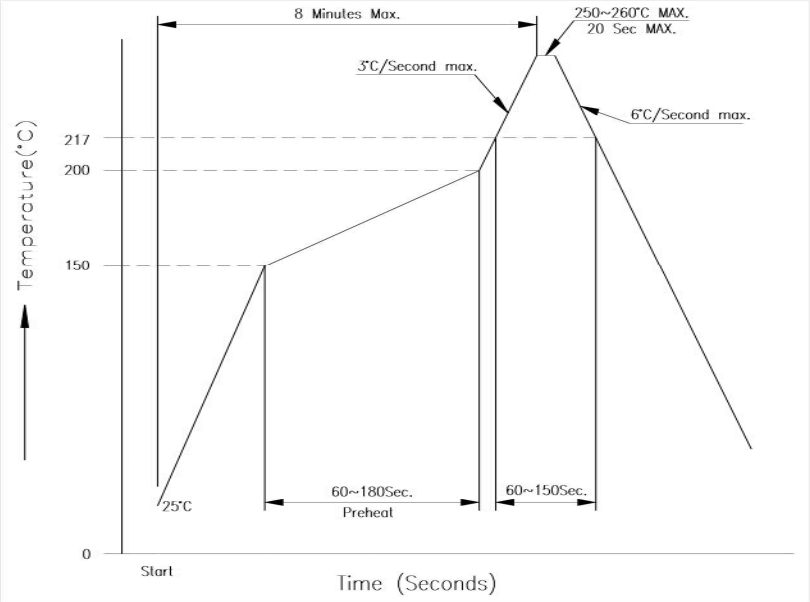
3.ENVIRONMENTAL PERFORMANCE:

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
3-1	Temperature rise	Then carried the rated current	30°C max.	Sample	< 30°
				1	15.6 ℃
				2	14.9 ℃
				3	16.0 ℃
				4	15.5 ℃
				5	15.4 ℃
3-2	Vibration	1.5 mm 10-55-10 HZ / minute each 2 hours for X , Y and Z directions	Appearance: No damage	Sample	No damage
				1	PASS
				2	PASS
				3	PASS
				4	PASS
				5	PASS
			Discontinuity: 1 micro second max.	Sample	
				1	PASS
				2	PASS
				3	PASS
				4	PASS
				5	PASS
3-3	Solder ability	Soldering time: 3 ± 0.5 second Soldering pot: 245 ± 5°C	Minimum: 90% of immersed area	Sample	> 90%
				1	PASS
				2	PASS
				3	PASS
				4	PASS
				5	PASS
3-4	Heat aging	85± 2°C, 96 hours	No damage	Sample	No damage
				1	PASS
				2	PASS
				3	PASS
				4	PASS
				5	PASS

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
3-5	Humidity	40± 2°C, 90-95% RH, 96 hours measurement must be taken within 30 min. after tested	Appearance : No damage	Sample	No damage
				1	PASS
				2	PASS
				3	PASS
				4	PASS
				5	PASS
			Contact resistance: Less than twice of initial	Sample	Contact resistance
				1	6.53 mΩ
				2	6.72 mΩ
				3	7.02 mΩ
				4	7.06 mΩ
				5	6.66 mΩ
			Dielectric strength: To pass para 1-2	Sample	500 V 1 minute
				1	PASS
				2	PASS
				3	PASS
				4	PASS
				5	PASS
3-6	Temperature cycling	One cycle consists of : (1) -55 °C , 30 min. (2) Room temp. 10-15 min. (3) 85 °C , 30 min. (4) Room temp. 10-15 min.	Appearance : No damage	Sample	No damage
				1	PASS
				2	PASS
				3	PASS
				4	PASS
				5	PASS
			Contact resistance: Less than twice of initial	Sample	Contact resistance
				1	6.57 mΩ
				2	6.72 mΩ
				3	7.04 mΩ
				4	6.96 mΩ
				5	6.61 mΩ
3-7	Salt spray	Temperature: 35± 3°C Solution: 5± 1% Spray time: 48± 4 hours Measurement must be taken after water rinse	Appearance : No damage	Sample	No damage
				1	PASS
				2	PASS
				3	PASS
				4	PASS
				5	PASS
			Contact resistance: Less than twice of initial	Sample	Contact resistance
				1	6.72 mΩ
				2	6.90 mΩ
				3	7.06 mΩ
				4	7.03 mΩ
				5	6.93 mΩ

	ITEM	TEST CONDITION	REQUIREMENT	TEST RESULT	
3-8	Resistance to soldering heat	Lead-Free Process for SMT Type: Refer Reflow temperature profile(4.1)	No damage	Sample	No damage
				1	Pass
				2	Pass
				3	Pass
				4	Pass
				5	Pass

4. Recommended IR Reflow Temperature Profile:
   4.1 Using Lead-Free Solder Paste



CERTIFICATE

This is to certify that the site

CviLux Corporation

9F, No. 9, Lane 3, Sec. 1, Chung-Cheng East Road, Tamshui District
New Taipei City, 251
Taiwan

is part of the certified **Management System** of the organization
CviLux Electronics (Dongguan) Co., Ltd.
with the main certificate registration no. 20000612 UM15

according to

ISO 14001 : 2015

Scope:
The environmental activities and supporting processes associated with the design and manufacture of electronic connectors.
The environmental activities and supporting processes associated with the procurement, inspection, packaging and storage of connectors, wiring harnesses, cable assemblies and flat flexible cables.

Certificate registration no.	20000613 UM15
Date of revision	2023-04-26
Valid from	2023-05-15
Valid until	2026-05-14
Issuing date	2023-04-26

DQS IS A MEMBER OF

DQS Inc.

Brad McGuire
Managing Director

Accredited Body: DQS Inc., 1500 McConnor Parkway, Suite 400, Schaumburg, IL 60173 USA
Administrative Office: DQS Taiwan Inc., 8F, 23, Yuan Huan West Road, Feng Yuan Dist.,
Taichung City, Taiwan 420
The validity of this certificate depends on the validity of the main certificate and can only be verified by the QR-code.

CERTIFICATE

This is to certify that

CviLux Corporation

9F, No. 9, 8F, No. 17, B1, No. 31, Lane 3, Sec. 1, Chung-Cheng East Road
Tamshui District
New Taipei City 251
Taiwan

with the organizational units/sites as listed in the annex

has implemented and maintains a **Quality Management System**.

Scope:
The design and manufacture of electronic connectors.
The manufacture of printed circuit board assemblies, wiring harnesses, cable assemblies.
The procurement, inspection, packaging and storage of connectors, wiring harnesses, cable assemblies and flat flexible cables.
The design and manufacture of connector.
The manufacture of wiring harness cables.
Assembly of wearable intelligent devices.

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 9001 : 2015

Certificate registration no.	20000613 QM15
Date of certification	2023-08-10
Valid until	2026-08-09

DQS IS A MEMBER OF

DQS Inc.

Brad McGuire
Managing Director

Accredited Body: DQS Inc., 1500 McConnor Parkway, Suite 400, Schaumburg, IL 60173 USA
Administrative Office: DQS Taiwan Inc., 8F, 23, Yuan Huan West Road, Feng Yuan Dist., Taichung City, Taiwan 420
The validity of this certificate can only be verified by the QR-code.

Annex to certificate
Registration No. 20000613 QM15

CviLux Corporation

9F, No. 9, 8F, No. 17, B1, No. 31, Lane 3, Sec. 1, Chung-Cheng East Road
Tamshui District
New Taipei City 251
Taiwan

Location	Scope
20000613	
CviLux Corporation 9F, No. 9, 8F, No. 17, B1, No. 31, Lane 3, Sec. 1, Chung-Cheng East Road Tamshui District New Taipei City 251 Taiwan	The design and manufacture of electronic connectors. The procurement, inspection, packaging and storage of connectors, wiring harnesses, cable assemblies and flat flexible cables. The manufacture of wiring harnesses, cable assemblies.
20000612	
CviLux Electronics (Dongguan) Co., Ltd. Room 101, No. 2 Tai He Road Huan Zhu Li Village Chang Ping Town, Dong Guan City Guang Dong 523585 China	The design and manufacture of electronic connectors. The manufacture of printed circuit board assemblies. The manufacture of wiring harnesses, cable assemblies and flat flexible cables.
20000614	
CviLux Technology (Suzhou) Co., Ltd. Fen Hu Economic Development Zone Wu Jiang City Jiang Su Province 215211 China	The design and manufacture of electronic connectors. The manufacture of wiring harnesses, cable assemblies and flat flexible cables.
20006522	
CviLux Technology (Chongqing) Corporation No. 2609, Xing Long Road, Phoenix Lake Industrial Park, Yongchuan Zone Chongqing City 402160 China	The design and manufacture of electronic connectors. The manufacture of wiring harnesses, cable assemblies and flat flexible cables.
50600096	
Dongguan Qunhan Electronics Co., Ltd. Room 101, No. 3 Tai He Road Huan Zhu Li Village Chang Ping Town, Dong Guan City Guang Dong 523585 China	The design and manufacture of connector. The manufacture of wiring harness cables. Assembly of wearable intelligent devices.

This annex (edition: 2023-08-10) is only valid in connection with the above-mentioned certificate.