



PRODUCT SPECIFICATION OF Oupiin

PRODUCT SPECIFICATION

產品規格書

產品名稱 Description	產品料號 Part No.	圖號 Drawing No.
Male Right-angle Press fit Type	9113-D3S24CB30PPRA	9113-D0000-022
Fmale Straigh Press Fit Type	9114-D3S24CB30PNSA	9114-D0000-015

PRODUCT NAME 產品名稱	DOCUMENT No.: 文件編號	Rev. 版本	OUPIIN
Signal 3AMP Connector	9113spec-D3R +9114spec-D3S	B	歐品電子
	Approved 核准	Checked 審核	Prepared 制作
	QA. Chief	Joseph Yen	03.12/2018



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1. SCOPE 適用範圍

This product specification defines the product performance and the test methods to ascertain the performance of the Signal 3AMP Connector, which is designed and manufactured by Oupiin Electronic Co., Ltd. This product specification is applicable but not only for those part numbers which be shown in the cover page.

本產品規格書規定了由歐品電子有限公司設計生產的 Signal 3AMP Connector 型連接器產品的特性及測試方法。本產品規格書適用於但不局限於封面所顯示的產品料號。

2. REFERENCE DOCUMENTS 參考文件

MIL-STD-1344	Test method for electrical connector 電子連接器測試方法
MIL-STD-202	Test method for electrical components 電子零件測試方法
EIA364	Test method for electrical components 電子零件測試方法
JIS C 0051	Test method for electrical components 電子零件測試方法
MIL-G-45204C	Specification for gold plating 鍍金規格
IEC-512-3	IEC standard for current carrying capacity tests IEC電流測試標準
QQ-N-290A	Specification for nickel plating 鍍鎳規格
MIL-P-81728A	Specification for tin/lead plating 鍍錫鉛規格
MIL-T-10727B	Specification for tin plating 鍍錫規格
UL1977	UL standard for safety of attachment plug and receptacle UL安規要求標準

3. FEATURE & DIMENSIONS 特征及尺寸

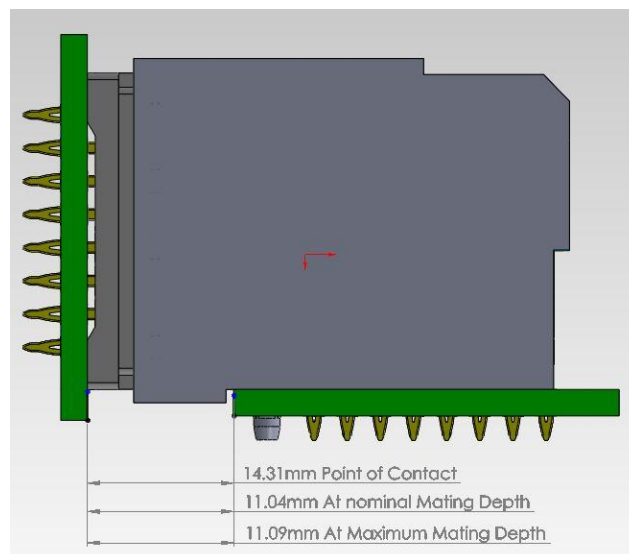
3.1. PRODUCT DIMENSION 產品尺寸

These connectors shall have the dimensions as shown in drawing.

本產品的相關尺寸參見圖面。

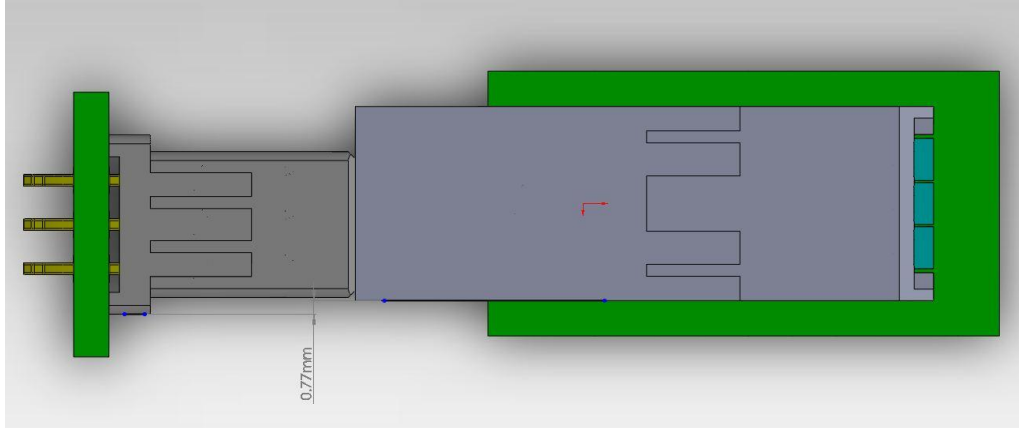
3.2.MALE AND FEMALE PRODUCT 公母產品裝配

3.2.1.Male emale assembly dimension 公母產品裝配尺寸

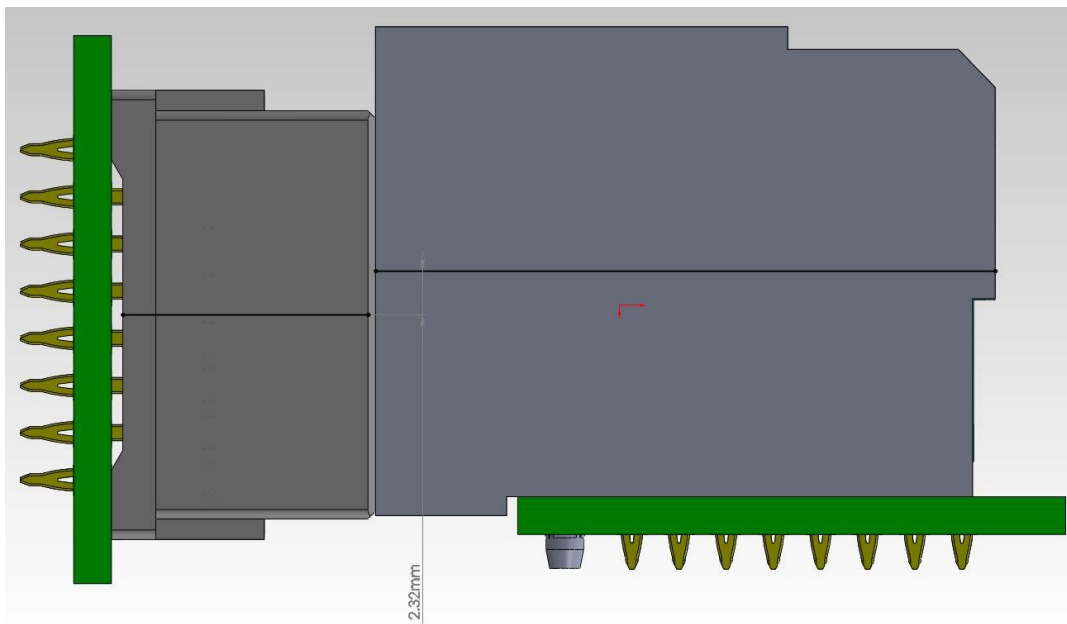


3.2.2 Product oriented capability 产品导向能力

the design of the centering and guiding in the mpc of the free and fixed board connector modules shall accept a misalignment of 0.77MM in transverse and 2.32MM in longitudinal axes of the connector
 固定板连接器模件的Mpc裡，连接器设计中心线横向可接受0.77mm和纵向可接受2.32mm的偏差。



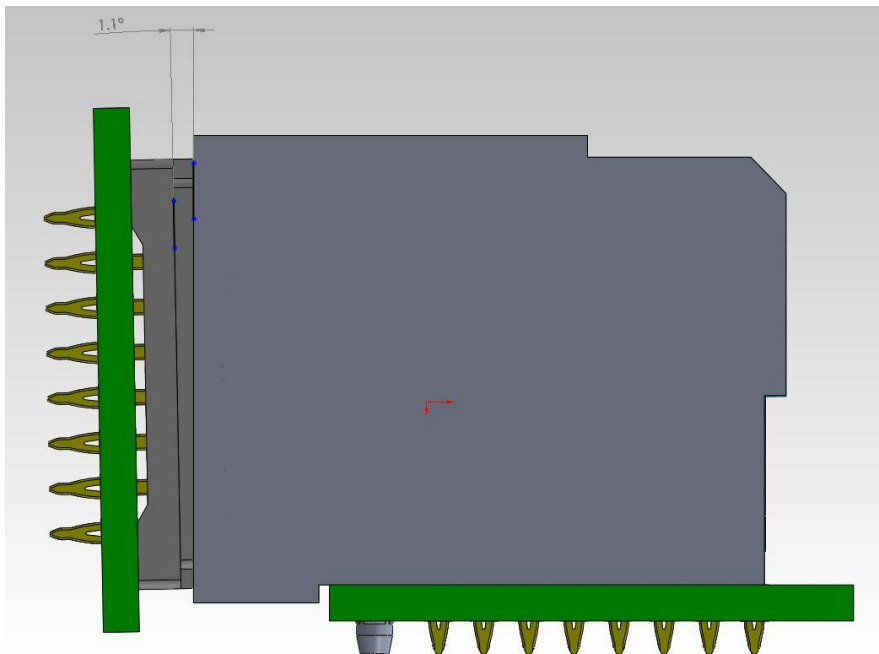
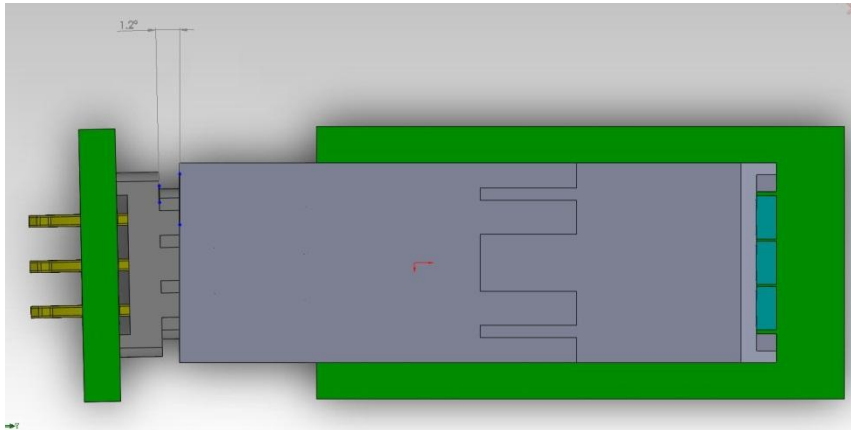
allowed misalignment in transverse axes 在横向方向允许对插偏差量



allowed misalignment in longitudinal axes 在纵向方向允许对插偏差量

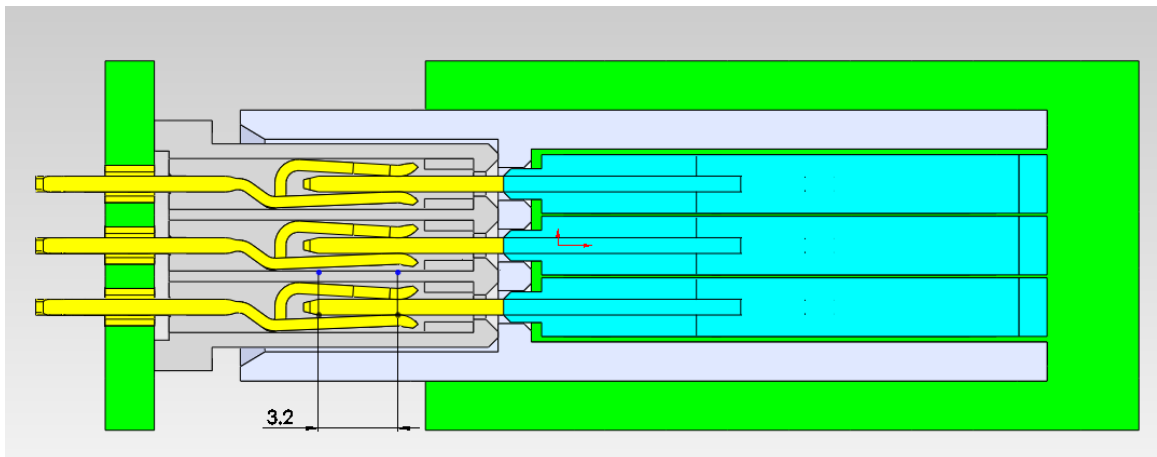
3.2.3 Inclination 倾向

The center and guiding in the Mpc OF THE FREE AND THE FIXED BOARD connector modules shall allow an initial angular misalignment of 0.5 FROM in the transverse and 1.5 FROM in longitudinal axes
 固定板连接器模件的在Mpc裡,连接器可接受横向1.1° 和纵向1.2° 的最大倾斜对插角度。



3.2.4 Capability for products wipe length

產品接觸長度等級





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3.3. PCB/PANEL LAYOUT 印刷電路板佈局

The recommended PCB layout is shown in drawing.

本產品適用的 PCB layout 參見圖面。

3.4. BILL OF MATERIAL 材料清單

Harmful material controlling follows the requirements of RoHS. The bill of material is described in drawing.

有害物質控制符合RoHS指令要求。本產品使用的材料參見圖面。

3.5. MECHANICAL & ELECTRICAL CHARACTERISTIC 機械及電氣特性

The connector shall have the mechanical and electrical performance as described in drawing.

本產品的機械及電氣特性參見圖面。

3.6. PACKAGING 包裝

Products shall be packaged according to requirements specified in purchase order for safe delivery, connector container and the packaging method are shown in package specification.

產品可依客戶指定要求包裝，包裝材料與包裝方式參見產品包裝規範。

3.7 RATING CURRENT AND RATING VOLTAGE 額定電流與額定電壓

Rating current : Signal pin 3A

額定電流: Signal pin 3A,

Rating voltage is 450V

額定電壓 450 V

3.8 STORAGE AND OPERATING TEMPERATURE 存貯與使用溫度

Temperature range: $-40^{\circ}\text{C}\sim+105^{\circ}\text{C}$, including terminal temperature rise for rating current.

Storage Temperature : $-40^{\circ}\text{C}\sim+95^{\circ}\text{C}$, Humidity: 95%RH under 。

溫度範圍： $-40^{\circ}\text{C}\sim+105^{\circ}\text{C}$,包含接觸端子的額定電流溫升。

儲存溫度： $-40^{\circ}\text{C}\sim+95^{\circ}\text{C}$ ，濕度：95%RH以下。

4. PERFORMANCE AND TEST DESCRIPTION 性能及測試

4.1. REQUIREMENT 要求

Product is designed to meet electrical, mechanical, and environmental performance requirements specified in **Table I**.

本產品設計符合附表一所列的機械，電氣及環境要求。

4.2. TEST CONDITION 測試條件

Unless otherwise specified, all tests shall be performed at ambient environmental conditions.

除非特別注明，所有測試在室溫條件下完成。



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4.3. SAMPLE SELECTION 樣品選擇

Test samples shall be selected at random from current production. No test samples shall be reused. Samples are pre-conditioned with 10cycles of durability. Each group shall be containing 5 test samples at least.

測試樣品從現生產的產品中隨機抽取，所有測試過的樣品不得重複使用。樣品已預先插拔10次，每組測試至少有5個樣品。



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Table I: Test Requirements and Methods

附表一：測試要求與方法

Items 項目	Requirements 要求	Test Methods 測試方法
1. Confirmation of Product 產品確認	Product shall be conforming to the requirements of applicable product drawing. 產品必須符合相關產品圖面的要求。	Visually, dimensions and functionally inspected per applicable product drawing. 依相關產品圖面，檢查產品的外觀、尺寸及功能。
2. Contact Resistance 接觸阻抗	Contact resistance change 15.0mΩ Max 接觸電阻變化值 Δ 15.0mΩ Max	Subject specimens to 100milliamperes maximum and 20 millivolts maximum open circuit voltage. EIA-364-23 所述固定端子連結到一個封閉回路中測試，電流 100 mA max, 電壓 15.0 mV max。適用：EIA-364-23
3. Insulation Resistance 絕緣阻抗	Signal Pin: 5000 MΩ Min Signal Pin: 最小 5000 MΩ.	Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector. EIA-364-21. (500 V DC \pm 10%). 測試產品相鄰端子間以及端子與接地間的電阻 適用：EIA-364-21.. (500 V DC \pm 10%)。
4. Dielectric Withstanding Voltage 耐電壓	Signal Pin: must withstand test potential of 450 VDC RMS for 1 minute, current leakage must be 1.0mA Max. Signal Pin: 必須承受測試電壓450 VDC RMS，時間1 分鐘，漏電流不大於 1.0 mA	One minute hold with no Break down or flashover . EIA-364-20. 一分鐘不得有損傷或閃電。適用：EIA-364-20.
5. Durability (Repeated Mating/Un-mating) 耐久性	Contact Resistance: Rise in relation to initial values 0.25mΩ max(power pin). After testing. Signal Pin: 測試後接觸阻抗比初始值增大不超過0.25 mΩ。	Repeat mate and unmated for connector 50 cycles, at a speed of 25.4 mm per minute. 重復進行配合產品 50 次插拔，速度 25.4mm/分鐘。
6. Contact Retention Force 端子保持力	Signal Pin: 1Kg per Pin .Min. Signal Pin: 每支最小 1Kg/per Pin.	Apply axial pull out force at a speed of 25.4 \pm 3 mm/minute on the contact assembled in the housing. 以 25.4 \pm 3mm/分鐘的速度施加軸向拉力從塑膠本體上拔出端子。



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<p>7. Compliant Pin Insertion Force 压接力</p> <p>Compliant Pin Retention Force 压接保持力</p>	<p>Press in force per pin:40N Max 單 PIN 端子魚眼插入力最大 40N 最大</p> <p>Per Pin Retention Force in PCB: 9N Min 單 PIN 端子魚眼退板力為：9N 最小</p>	<p>At a speed of 25.4 mm/minute, Apply axial press in PCB to right position .EIA-364-37 以 25.4mm/分鐘的速度，施加軸向壓力將端子壓入 PCB 板上。EIA-364-37</p> <p>at a speed of 25.4 mm/minute, Apply axial pull out from PCB to right position . EIA-364-37 以 25.4mm/分鐘的速度施加軸向拉力從 PCB 板上拔出端子。EIA-364-37</p>
<p>8. Mating /Un-mating Force 插入力/拔出力</p>	<p>Mating force Signal Pin:65g/PIN pair Max.</p> <p>Un-mating force: Signal Pin:25g/PIN pair Min 插入力最大</p> <p>Signal Pin: 65g/PIN pair Max. 拔出力最小</p> <p>Signal Pin:25g/PIN pair Min</p>	<p>At a speed of 25.4 mm/minute, apply axial insert the mating part into fully or pull out from the subject product. EIA-364-37 以 25.4 mm/分鐘的速度，軸向完全插入對配插件到被測產品中或從被測產品中拔出。EIA-364-37</p>
<p>9. Vibration Sinusoidal Low Frequency 低頻正弦振動</p>	<p>No electrical discontinuity less than 1μs shall occur, Contact resistance: 不允許出現超過 1μs 的瞬間斷開</p> <p>Contact resistance change 0.25mΩ Max 接觸電阻變化值 Δ0.25mΩ Max</p>	<p>Subject mated connector to 10-55-10 Hz traversed in 1 minute at 1.52mm amplitude, 2hours each of 3 mutually perpendicular planes, potential applied. EIA-364-28。 10-55-10Hz,振幅 1.52 mm 條件下，在互相垂直的三個面上，每個面 2 小時下測量電流。適用：EIA-364-28。</p>
<p>10. Thermal Shock 溫度沖擊</p>	<p>After testing, no damage, Contact Resistance: Rise in relation to initial values 0.25mΩ max(Signal Pin). After testing. 測試後產品無損壞，Signal Pin 測試後接觸阻抗比初始值增大不超過 0.25 mΩ。</p>	<p>Temperature range from -40$^{\circ}$C to +85$^{\circ}$C. Start from -40$^{\circ}$C, after 30 minutes, change to +85$^{\circ}$C; change time is no more than 1 minutes, total ycles. EIA-364 TS-1000.01). 溫度變化範圍：-40$^{\circ}$C~ +85$^{\circ}$C。從 -40$^{\circ}$C 開始，30 分鐘後換到+85$^{\circ}$C，轉換時間不超過 1 分鐘，共 5 個循環。適用：EIA-364 TS-1000.01).</p>
<p>11. Humidity-Temperature Cycle 溫濕度循環</p>	<p>After testing, no damage, Contact Resistance: Rise in relation to initial values 0.25 mΩ max(Signal Pin). After testing. 測試後產品無損壞，Signal Pin 測試後接觸阻抗比初始值增大不超過 0.25 mΩ。</p>	<p>Mate connectors: expose to 24 cycles from 25 $^{\circ}$C / 80% RH to 65 $^{\circ}$C / 50% RH EIA-364 TS-1000.01 互配连接器： 周期：24，从 25$^{\circ}$C / 80%湿度到 65 $^{\circ}$C / 50%度 EIA-364 TS-1000.01</p>
<p>12. Test temperature rise for rating current</p>	<p>The temperature rise above ambient shall not exceed 30 $^{\circ}$C。</p>	<p>Subject mated contacts assembled in housing to closed circuit of Power Pin: 150A max. Test</p>



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溫升測試	溫度不能超過 30 °C。	Specification IEC 60512-5-1 所述固定在外殼包的端子連結到一個封閉回路中 測試，Power Pin: 150A 最大。參考規範： IEC 60512-5-1
13. Salt Spray 鹽霧	After testing, no damage, Contact Resistance: Rise in relation to initial values 0.25mΩ max(Signal Pin). After testing. Signal Pin 測試後接觸阻抗比初始值 增大不超過 0.25 mΩ。	5±1% salt concentration(PH=7.0) ,48 hours 35±2°C:MIL-STD-202, Method 101, condition B. 鹽水濃度5±1%(PH=7.0),時間48小時，溫度 35±2°C。適用：MIL-STD-202，方法101，條件B。
14.High Temperature Life 高溫老化	After testing, no damage, Contact Resistance: Rise in relation to initial values 0.25 mΩ max(Signal Pin). After testing. 測試後產品無損壞，Signal Pin 測試 後接觸阻抗比初始值增大不超過 0.25 mΩ。	Subject product to 105°C for 180 hours . continuously. EIA-364-17 產品置於 105°C 連續 180 小時。 適用：EIA-364-17



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Material Housing : 074-LCP

[SGS Test Report Click here](#)

[如需 SGS 測試報告請點選此處](#)

产品数据表
沃特特种工程塑料



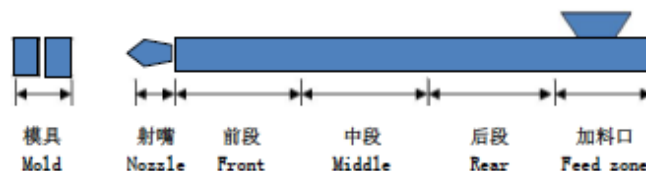
SELCION® KC184BLM

SELCION® LCP KC184BLM is a 40% glass fiber and mineral reinforced LCP for great dimensional stability
SELCION® LCP KC184BLM 是含有 40% 玻纤与矿纤增强的具有优异尺寸稳定性能的 LCP。

性能	PROPERTIES	典型数值 VALUE	单位 UNIT	测试标准 TEST METHOD
机械性能 MECHANICAL				
拉伸强度	Tensile Strength@break	132	MPa	ASTM D638
断裂伸长率	Tensile Elongation@break	1.94	%	ASTM D638
弯曲强度	Flexural Strength	180	MPa	ASTM D790
弯曲模量	Flexural Modulus	14.4	GPa	ASTM D790
IZOD 无缺口冲击强度	IZOD un-notched impact strength	395	J/m	
热性能 THERMAL				
热变形温度	Heat distortion temperature 18.5kgf/cm ²	283	°C	ASTM D648
物理性能 PHYSICAL				
比重	Specific Gravity	1.68		ASTM D792
成型收缩率	MD / TD	0.1 / 0.3	%	In house
烤炉起泡	270°C, 10min	OK		In house
难燃性能	Flame Retardancy	V-0 (0.3 mm)		UL-94

加工性能	PROCESSING CONDITIONS	典型数值 VALUE	单位 UNIT	备注 REMARK
射嘴温度	Nozzle Temp.	345-365	°C	355 is recommended
前段温度	Front Temp.	350-370	°C	360 is recommended
中段温度	Middle Temp.	345-365	°C	355 is recommended
后段温度	Rear Temp.	320-340	°C	330 is recommended
加料口温度	Feed zone Temp.	50-70	°C	60 is recommended
模具温度	Mold Temp.	80-120	°C	100 is recommended
干燥温度	Drying Temperature	140-160	°C	150 is recommended
干燥时间	Drying Time	4-8	h	6 Hr is recommended

※ 成型条件根据不同的机种和操作环境而不同



江苏沃特特种材料制造有限公司
江苏省东台市经济开发区纬九路 6-3 号
DONGTAL,JIANGSU, CHINA
Tel: 0515-85390662
Fax: 0515-85390660



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Material Housing :UL

iq.ul.com

Component - Plastics [\[guide info\]](#)

E478701

Jiangsu Wote High Performance Materials Co Ltd

No. 6-3, Weiju RD, Economic development zone, Dongtai CN

KC184(@)

Liquid Crystal Polymer (LCP), "SELCION", furnished as pellets

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
NC, BK	0.3	V-0	4	4	130	130	130
	3.0	V-0	0	4	130	130	130

Comparative Tracking Index (CTI): 3

Inclined Plane Tracking (IPT): -

Dielectric Strength (kV/mm): -

Volume Resistivity (10⁸ ohm-cm): -

High-Voltage Arc Tracking Rate (HVTR): 1

High Volt, Low Current Arc Resis (D495): 4

Dimensional Stability (%): -

(@) - Represented by one, two or three numbers or letters.

ANSI/UL 94 small-scale test data does not pertain to building materials, furnishings and related contents. ANSI/UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in the components and parts of end-product devices and appliances, where the acceptability of the combination is determined by UL.

Report Date: 2006-12-13

Last Revised: 2016-02-28

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IEC and ISO Test Methods

Test Name	Test Method	Units	Thk (mm)	Value
Flammability	IEC 60695-11-10	Class (color)	0.3	V-0 (NC, BK)
			3.0	V-0 (NC, BK)
Glow-Wire Flammability (GWFI)	IEC 60695-2-12	C	-	-
Glow-Wire Ignition (GWIT)	IEC 60695-2-13	C	-	-
IEC Comparative Tracking Index	IEC 60112	Volts (Max)	-	-
IEC Ball Pressure	IEC 60695-10-2	C	-	-
ISO Heat Deflection (1.80 MPa)	ISO 75-2	C	-	-
ISO Tensile Strength	ISO 527-2	MPa	-	-
ISO Flexural Strength	ISO 178	MPa	-	-
ISO Tensile Impact	ISO 6256	kJ/m ²	-	-
ISO Izod Impact	ISO 180	kJ/m ²	-	-
ISO Charpy Impact	ISO 179-2	kJ/m ²	-	-



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Material : Copper Alloy (Phosphor Bronze C5191)

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REPORT OF MATERIAL TEST

DATE: AUG.05,2009

Customer: 聯松貿易有限公司	Commodity: C 5191 R PHOSPHOR BRONZE STRIP (H)	台正字第 3545 號
Applied Standard: CNS 9503 Phosphor Bronze Sheets, Plates and Strips		

Chemical Analysis Test

Work No.	Size of Product			P (%)	Sn (%)	Cu+Sn+P (%)				
	Thickness (mm)	Width (mm)	Length (mm)							
	Standard									
87C194A	0.400	624.000		0.139	5.979	99.967				

Mechanical & Physical Test

Work No.	Size of Product			Dimension Test		Tension Test		Hardness Test HV	Grain Size (mm)	Electric Conductivity (%)
	Thickness (mm)	Width (mm)	Length (mm)	Thickness (mm)	Width (mm)	Tensile Strength (kgf/mm ²)	Elongation (%)			
	Standard			-	(-) 0.10 - (+) 0.00	60 - 70	min. 8	190 - 200	-	-
87C194A	0.400	624.000		GOOD.	GOOD.	60.70	21.66	190.0 - 191.0	-	14.6

MINCHALI METAL INDUSTRY CO., LTD.
11, Pei Yuan Road, Chung Li City, Taiwan, R. O. C.

QC Supervisor

謝冠群

A090202



PRODUCT SPECIFICATION OF Oupiin

Material Contact : Copper Alloy (Brass C2680)

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REPORT OF MATERIAL TEST 材料測試報告

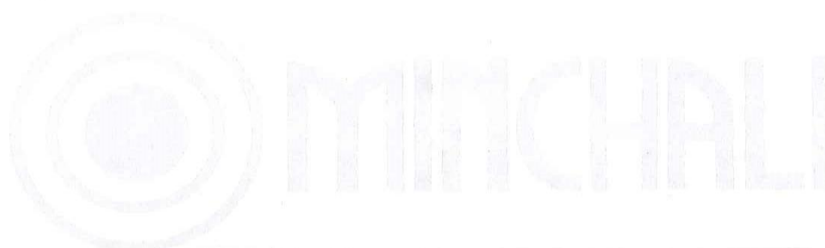
ISO 9001
ISO/TS 16949
IECQ QC080000
ISO 14001
OHSAS 18001 & TOSHMS

No. : 3C1556

DATE: DEC.26,2014

Customer 顧客名稱 : 歐品電子有限公司
Commodity 商品名稱 : C 2680 R BRASS STRIP (H)
Applied Standard 引用標準 : JIS H 3100 Copper and Copper alloy sheets, plates and strips

Manufacture No.	銅捲號	3AA046A	
(Specification)	產品規格	Standard	
Thickness (mm)	產品厚度	0.400	
Width (mm)	產品寬度	27.500	
Length (mm)	產品長度		
(Chemical Analysis Test)	化性測試		
Cu(%)	銅	64.000-68.000	64.947
Fe(%)	鐵	max. 0.050	0.013
Pb(%)	鉛	max. 0.0500	0.0003
Zn(%)	鋅	REM.	REM.
(Mechanical & Physical Test)	物性測試		
Thickness Test (mm)	厚度測試	-0.015 +0.010	0.394
Width Test (mm)	寬度測試	-0.10 +0.00	GOOD
Tensile Strength (kgf/mm2)	抗拉強度	42.00 - 55.00	51.06
Elongation (%)	伸長率	-	17.92
Hardness Test (Hv)	硬度	140.0 - 160.0	158.0 - 160.0
Grain Size (mm)	結晶粒度	-	0.015
Electric Conductivity (%)	導電率	-	26.20
(Other Information)	其他資訊		
Delivery No.	出貨單號	3CA079	
Customer Purchase Order	採購單號	PO.B02A14101603	



QA Supervisor: 周建偉

A980301 G3A00203AH

MINCHALI METAL INDUSTRY CO., LTD.
名佳利金屬工業股份有限公司
11, Pei Yuan Road, Chung Li City, Taiwan, R.O.C.
Tel : (03)4526141-5 (03)4526017-9
Fax : (03)4529112 (03)4629625