

# PRODUCT SPECIFICATION

## 產品規格書

產品名稱 Description	產品料號 Part No.	圖號 Drawing No.
Rapid Connector	9211-9354A1CB30PU	9211-D0000-001
	9211-9454A1CB30PU	9211-D0000-002

PRODUCT NAME 產品名稱	DOCUMENT No.: 文件編號	Rev. 版本	OUPIIN
Rapid Connector	Q9211-PSS-001	A	歐品電子
	Approved 核准	Checked 審核	Prepared 制作

## 1. SCOPE 適用範圍

This product specification defines the product performance and the test methods to ascertain the performance of the Rapid 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 Rapid 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

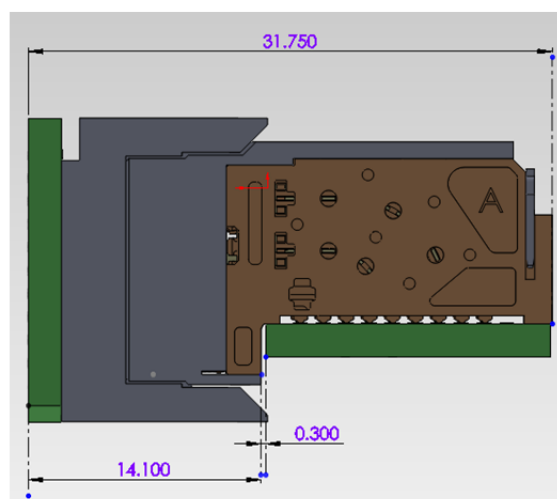
### 3.1. PRODUCT DIMENSION 產品尺寸

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 Female assembly dimension 公母產品裝配尺寸



### 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, RATING VOLTAGE AND TR 額定電流,額定電壓及溫升

Operating Voltage Rating: Less than 30 VAC (RMS)

工作電壓等級：小於 30 VAC (RMS)

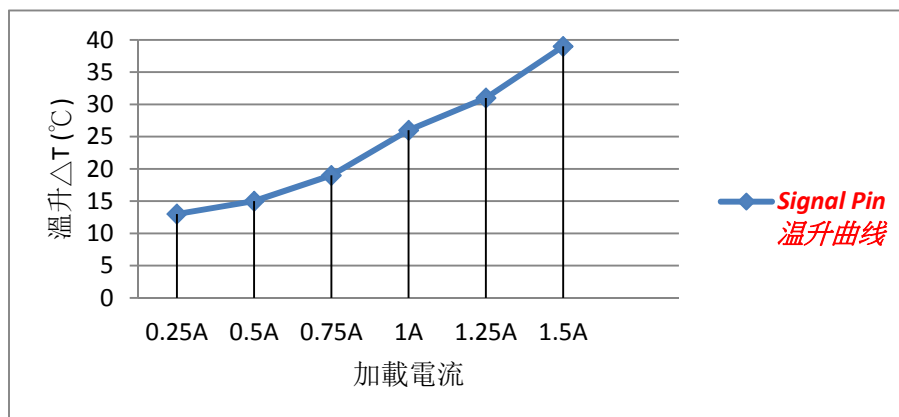
Operating Current Rating: 0.5 Amps/contact with all contacts powered

額度工作電流：0.5 Amps

### 3.8 TEMPERATURE RISE 溫升

1.Chart of Temperature rise vs current( series connection with all contact of SPEC)

加載電流對應溫升曲線圖



### 3.9 STORAGE AND OPERATING TEMPERATURE 存貯與使用溫度

Temperature range:  $-55^{\circ}\text{C}\sim+85^{\circ}\text{C}$ , including terminal temperature rise for rating current.

Storage Temperature : $0^{\circ}\text{C}\sim+40^{\circ}\text{C}$ , Humidity: 80%RH under , Time limit is 18 months the products are stored .

溫度範圍： $-55^{\circ}\text{C}\sim+85^{\circ}\text{C}$ ,包含接觸端子的額定電流溫升.

儲存溫度： $0^{\circ}\text{C}\sim+40^{\circ}\text{C}$ ，濕度：80%RH以下,產品限存時間為18個月.

## 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。

### 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。

### 4.4. TEST SEQUENCE 測試順序

Product qualification test sequence as shown in **Table II**.

產品品質測試順序見附表二。

**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	Signal and Ground pin: 20.0mΩ Max initial 信號和地線 PIN 初始狀態 20.0mΩ Max  Per EIA 364 TP06 適用：EIA 364 TP06	Subject mated contacts assembled in housing to closed circuit of 100 mA max. 所述固定端子連結到一個封閉回路中測試, 電流 100mA max, 電壓 20 mV max。
3. Insulation Resistance 絕緣阻抗	Ground and Signal pin: 1000 MΩ Min. 信號和地線 PIN： 最小 1000 MΩ.  Per EIA 364-21 TP06 ,Condition B 適用：EIA 364 -21TP06,條件 B	Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector (500 V DC±10%) ,Ground and Ground in the mated connector (200 V DC±10%) . 測試產品相鄰端子間以及端子與接地間的電阻 (500 V DC±10%) 。 地線與地線之間的電阻(200 V DC±10%)
4. Dielectric Withstanding Voltage 耐電壓	(Sig-Sig & Sig-Grd) pin must withstand test potential of 500VAC and (Grd-Grd) pin must withstand test potential of 200VAC for 1 minute current leakage must be 0.5mA Max. (Sig-Sig & Sig-Grd) pin 必須承受測試電壓 500 VAC (Grd-Grd) pin 必須承受測試電壓 200 VAC，時間 1 分鐘，漏電流不大于 0.5 mA  Per EIA-364-20 適用：EIA-364-20.	Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector. 對產品相鄰端子間以及端子與接地間加載電壓，並測試其漏電流。
5. Durability (Repeated Mating/Un-mating) 耐久性	After testing :Maximum Change: Signal Contact: 10 mΩ, 初始狀態最大 20 mΩ。測試後：信號 PIN 最大變化 10 mΩ;	Repeat mate and unmated for connector 200 cycles, at a speed of 127 mm per minute. 重復進行配合產品 200 次插拔，速度 127mm/分鐘。



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	Per EIA-364-09 適用： EIA-364-09	
6. Compliant Pin Insertion Force/Retention Force 压接力/压接保持力	Ground and Signal Pin: Insertion Force 15 N/PIN maximum , Retention Force 3.6N/PIN Min (small EON 0.4mm PCB hole). Ground and Signal Pin: Insertion Force 30 N /PIN maximum Retention Force 4.5N/PIN Min (standard EON 0.5mm PCB hole). 信號和地線 PIN: 壓入每 Pin 最大 15N, 拔出每 PIN 最 小 3.6N(小孔 0.40MM PCB) 信號和地線 PIN: 壓入每 Pin 最大 30N, 拔出每 PIN 最小 4.5N(標準孔 0.50MM PCB)	At a speed of 25.4±3 mm/minute, apply axial Press in PCB to Right Position or Pull out from PCB. 以 25.4±3 mm/分鐘的速度軸向施加壓力將 Press 部分壓入 PCB 孔適當位置或從 PCB 孔中拉出。
	Per EIA-364-05 適用： EIA-364-05	
7. Mating /Un-mating Force 插入力/拔出力	Signal and Ground Pin: Mating force: 50g/pin pair Max. Un-mating force:15g/pin pair Min 信號和地線 PIN: 插入力最大: 50g /pin pair Max 拔出力最小: 15g/pin pair Min	At a speed of 25.4±3 mm/minute, apply axial insert the mating part into fully or pull out from the subject product. 以 25.4±3 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。
	Per EIA-364-13 適用： EIA-364-13	
8. Vibration 機械振動	After testing, no damage. No electrical discontinuity greater than 1μs shall occur, Contact Resistance: Maximum Change: Signal and Ground Pin: 10 mΩ 測試後, 产品无损坏.不允許出現超過 1 μs 的瞬間斷開, 接觸阻抗信號和 地線 PIN 最大變化 10mΩ;	Subject mated connector to 10-500-10 Hz traversed in 1 minute at 1.5mm amplitude, 8 hours each of 3 mutually perpendicular planes (24 hours total). 10-500-10 Hz, 振幅 1.5 mm 條件下, 在互相垂直 的三個面上, 每個面持續 8 小時(一共 24 小時)。
	Per EIA-364-28. Condition II 適用： EIA-364-TP-28。條件II	
9. Thermal Shock 溫度沖擊	After testing, no damage, Maximum Change: Signal and Ground Contact: 10 mΩ, Dielectric Strength should be OK, Insulation Resistance should be 1000 MΩ	Temperature range from -55°C to +85°C. Start from -55°C, after 30 minutes, change to +85°C; change time is no more than 30 seconds, total 5 cycles. 溫度變化範圍： -55°C~ +85°C。從 -55°C 開始，



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	<p>Min. 測試後產品無損壞，接觸阻抗：接觸阻抗信號和地線PIN最大變化 10.0mΩ；耐電壓測試OK，絕緣阻抗最小1000 MΩ</p> <p>Per EIA-364-32 適用：EIA-364-32</p>	<p>30 分鐘後換到+85°C，轉換時間不超過 30 秒，共 5 個循環。</p>
<p>10. Humidity- Temperature Cycle 溫濕度循環</p>	<p>After testing, no damage, Maximum Change: Signal and Ground Contact: 10 mΩ, Dielectric Strength should be OK, Insulation Resistance should be 1000 MΩ Min.</p> <p>測試後產品無損壞，接觸阻抗：接觸阻抗信號和地線 PIN 最大變化 10.0mΩ；耐電壓測試 OK，絕緣阻抗最小 1000 MΩ</p> <p>Per EIA-364-31B 適用：EIA-364-31B</p>	<p>Subject product to 25~65°C, 80-98%.R.H 50Cycles of 10-hour duration for a total of 500 hours.</p> <p>產品置於 25~65°C,相對濕度：80-98%,循環 50 次,每次 10 小時總計 500 小時,</p>
<p>11. Test temperature rise for rating current 溫升測試</p>	<p>The temperature rise above ambient shall not exceed 30 °C。 溫度不能超過 30 °C。 Ambient conditions - Still air 25°C。 周圍環境溫度 25°C。</p> <p>Per EIA-364-70 參考規範：EIA-364-70</p>	<p>Subject mated contacts assembled in housing to closed circuit of Power Pin: 0.5A max, Test Specification</p> <p>所述固定在外殼包的端子連結到一個封閉回路中測試，信號和地線 Pin:0.5A max。</p>
<p>12. Salt Spray 鹽霧</p>	<p>After testing, no damage, Maximum Change: Signal and Ground Contact: 10 mΩ, Dielectric Strength should be OK, Insulation Resistance should be 1000 MΩ Min.</p> <p>測試後產品無損壞，接觸阻抗：接觸阻抗信號和地線 PIN 最大變化 10.0mΩ；耐電壓測試 OK，絕緣阻抗最小 1000 MΩ</p> <p>Per MIL-STD-202, Method 101, condition B 適用：MIL-STD-202，方法 101，條件 B。</p>	<p>5±1% salt concentration(PH=7.0) ,96 hours 35±2°C:.</p> <p>鹽水濃度 5±1%(PH=7.0),時間 96 小時，溫度 35±2°C。</p>



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<p>13.High Temperature Life 高溫老化</p>	<p>After testing, no damage, Maximum Change: Signal and Ground Contact: 10 mΩ, Dielectric Strength should be OK, Insulation Resistance should be 1000 MΩ Min. 測試後產品無損壞，接觸阻抗: 接觸阻抗信號和地線 PIN 最大變化 10.0mΩ；耐電壓測試 OK，絕緣阻抗最小 1000 MΩ</p> <p>Per EIA-364-17 Method C 適用：EIA-364-17，條件 C。</p>	<p>Subject product to 85°C for 500 hours continuously. 產品置於 85°C 連續 500 小時。</p>
<p>14. Mechanical Shock 機械沖擊</p>	<p>After testing, no damage. No electrical discontinuity greater than 1μs shall occur, Contact Resistance: Maximum Change: Signal Contact: 10 mΩ 測試後，產品無損壞。不允許出現超過 1μs 的瞬間斷開，接觸阻抗信號和地線PIN最大變化10mΩ;</p> <p>Per EIA-364-27 Condition H 適用：EIA-364-27，條件H。</p>	<p>Accelerate Velocity:294m/s<sup>2</sup>; Wave form: Half-sine shock plus; Duration:11msec; 3drops each to normal and reversed directions of X,Y and Z axes; 速度 294m/s<sup>2</sup>; 半正弦波；持續 11 毫秒；±X, ±Y, ±Z, 方向各 3 次;</p>





**Table II: Product Qualification Test Sequence**

附表二：產品測試順序

Test Description 測試描述	Test Group 測試分組									
	A	B	C	D	E	F	G	H	I	J
1. Conformation of Product 產品確認	1,7	1,3	1,9	1,9	1,9	1,9	1,9	1,9	1,9	1,9
2. Contact Resistance 接觸阻抗	2,6		2,6	2,6	2,6	2,6	2,6	2,6	2,6	2,6
3. Insulation Resistance 絕緣阻抗	3		3,7	3,7	3,7	3,7	3,7	3,7	3,7	3,7
4. Dielectric Withstanding Voltage 耐電壓	4		4,8	4,8	4,8	4,8	4,8	4,8	4,8	4,8
5. Durability 耐久性	5									
6. Compliant Pin Insertion Force /Retention Force 壓接力/壓接保持力		2								
7. Mating/Un-mating Force 插入/拔出力			5							
8. Vibration Sinusoidal Low Frequency 低頻正弦振動				5						
9. Thermal Shock 溫度衝擊					5					
10. Humidity-Temperature Cycle 溫濕度循環						5				
11. Current rating 溫升測試							5			
12. Salt Spray 鹽霧								5		
13. High Temperature Life 高溫老化									5	
14. Mechanical Shock 機械沖擊										5

Material Housing -9211(Male) : 074-LCP(Black)

[SGS Test Report Click here](#)

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产品数据表  
沃特特种工程塑料



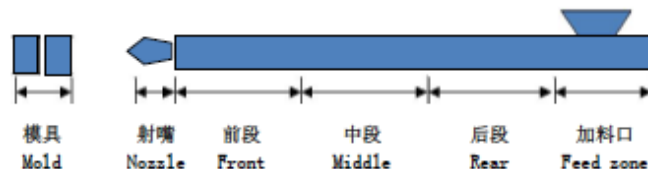
## SELCION® KC184BLM

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
<b>机械性能 MECHANICAL</b>				
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	
<b>热性能 THERMAL</b>				
热变形温度	Heat distortion temperature 18.5kgf/cm <sup>2</sup>	283	°C	ASTM D648
<b>物理性能 PHYSICAL</b>				
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
喷嘴温度	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



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# PRODUCT SPECIFICATION OF Oupin

## 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

Dielectric Strength (kV/mm): -

High-Voltage Arc Tracking Rate (HVTR): 1

Dimensional Stability (%): -

Inclined Plane Tracking (IPT): -

Volume Resistivity (10<sup>11</sup> ohm-cm): -

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

(@) - 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: 2016-02-26

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### IEC and ISO Test Methods

Test Name	Test Method	Units	Thk (mm)	Value
Flammability	IEC 60895-11-10	Class (color)	0.3	V-0 (NC, BK)
			3.0	V-0 (NC, BK)
Glow-Wire Flammability (GWFI)	IEC 60895-2-12	C	-	-
Glow-Wire Ignition (GWIT)	IEC 60895-2-13	C	-	-
IEC Comparative Tracking Index	IEC 60112	Volts (Max)	-	-
IEC Ball Pressure	IEC 60895-10-2	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 <sup>2</sup>	-	-
ISO Izod Impact	ISO 180	kJ/m <sup>2</sup>	-	-
ISO Charpy Impact	ISO 179-2	kJ/m <sup>2</sup>	-	-



# PRODUCT SPECIFICATION OF Oupin

Material Terminal -9211(Male) : Copper Alloy (Phosphor Bronze C5191)

[SGS Test Report Click here](#)

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## REPORT OF MATERIAL TEST

DATE: AUG.05, 2009

Customer: 亞松貿易有限公司	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									
				0.030 - 0.350	5.50 - 7.00	min. 99.50				
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 <sup>2</sup> )	Elongation (%)			
	Standard			-	(-) 0.10 - (+) 0.00	60 - 70	min. 8			
				GOOD.	GOOD.	60.70	21.66	190.0 - 191.0	-	14.6
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

謝仁祥

A020203



# PRODUCT SPECIFICATION OF Dupin

Material Housing 9211(Female) : 076-LCP(White)

[SGS Test Report Click here](#)

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产品数据表

沃特特种工程塑料



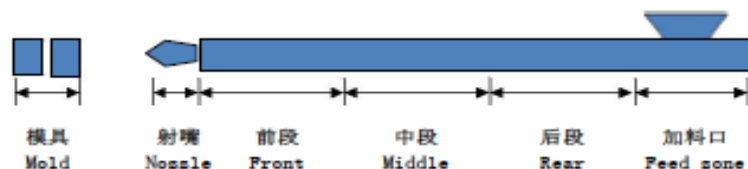
## SELCION® KC184BLM/NLM

SELCION® LCP KC184BLM/NLM is a 40% glass fiber/mineral reinforced LCP for great dimensional stability  
 SELCION® LCP KC184BLM/NLM 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
<b>机械性能 MECHANICAL</b>				
拉伸强度	Tensile Strength@break	125	MPa	ASTM D638
断裂伸长率	Tensile Elongation@break	1.8	%	ASTM D638
弯曲强度	Flexural Strength	180	MPa	ASTM D790
弯曲模量	Flexural Modulus	13.5	GPa	ASTM D790
I2OD 无缺口冲击强度	I2OD un-notched impact strength	400	J/m	
<b>热性能 THERMAL</b>				
热变形温度	Heat distortion temperature 18.5kgf/cm <sup>2</sup>	265	°C	ASTM D648
<b>物理性能 PHYSICAL</b>				
比重	Specific Gravity	1.70		ASTM D792
成型收缩率 MD / TD		0.12 / 0.65	%	In house
烤炉起泡	270°C, 10min	OK		In house
介电常数	Dielectric Constant	3.4		1 GHz
		3.5		5 GHz
		4.0		10 GHz
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
喷嘴温度	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  
 DONGTAI, JIANGSU, CHINA  
 Tel: 0515-85390662  
 Fax: 0515-85390660



# PRODUCT SPECIFICATION OF Oupin

## Material Housing :UL

iq.ul.com

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

E478701

**Jiangsu Wote High Performance Materials Co Ltd**

No. 6-3, Weijiu 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 (10<sup>6</sup> 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: 2016-02-26

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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 8256	kJ/m <sup>2</sup>	-	-
ISO Izod Impact	ISO 180	kJ/m <sup>2</sup>	-	-
ISO Charpy Impact	ISO 179-2	kJ/m <sup>2</sup>	-	-

Material Molding 9211(Female) : 074-LCP(Black)

[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



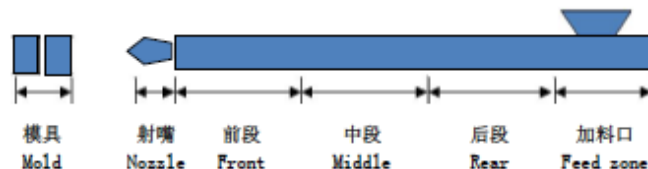
## SELCION® KC184BLM

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
<b>机械性能 MECHANICAL</b>				
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	
<b>热性能 THERMAL</b>				
热变形温度	Heat distortion temperature 18.5kgf/cm <sup>2</sup>	283	°C	ASTM D648
<b>物理性能 PHYSICAL</b>				
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
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※ 成型条件根据不同的机种和操作环境而不同



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# PRODUCT SPECIFICATION OF Oupin

## 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

Dielectric Strength (kV/mm): -

High-Voltage Arc Tracking Rate (HVTR): 1

Dimensional Stability (%): -

Inclined Plane Tracking (IPT): -

Volume Resistivity (10<sup>11</sup> ohm-cm): -

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

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

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Report Date: 2006-12-13

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### IEC and ISO Test Methods

Test Name	Test Method	Units	Thk (mm)	Value
Flammability	IEC 60895-11-10	Class (color)	0.3	V-0 (NC, BK)
			3.0	V-0 (NC, BK)
Glow-Wire Flammability (GWFI)	IEC 60895-2-12	C	-	-
Glow-Wire Ignition (GWIT)	IEC 60895-2-13	C	-	-
IEC Comparative Tracking Index	IEC 60112	Volts (Max)	-	-
IEC Ball Pressure	IEC 60895-10-2	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 <sup>2</sup>	-	-
ISO Izod Impact	ISO 180	kJ/m <sup>2</sup>	-	-
ISO Charpy Impact	ISO 179-2	kJ/m <sup>2</sup>	-	-





# PRODUCT SPECIFICATION OF Oupin

Material Contacts 9211(Female) : Copper Alloy (Phosphor Bronze)

[SGS Test Report Click here](#)

[如需 SGS 測試報告請點選此處](#)



## REPORT OF MATERIAL TEST

DATE: AUG.06,2008

Customer: 亞細亞貿易有限公司	Commodity: C 5191 R PHOSPHOR BRONZE STRIP ( H )	ISO 9002:4MSY035-00 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								
				0.030 - 0.350	5.50 - 7.00	min. 99.50			
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 <sup>2</sup> )	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

謝其祥

4090303



# PRODUCT SPECIFICATION OF Oupin

Shell : 9211(Female) (SUS-304)

[SGS Test Report Click here](#)

[如需 SGS 測試報告請點選此處](#)



**SHENZHEN MINGSCHIN INDUSTRIAL MATERIAL CO., LTD.**  
深圳市明鑫工业材料有限公司

## 产品检测单

客户: 坤泽华

产品名称	不锈钢	产品规格	0.15mm
产品牌号	SUS304	产品状态	H
厚度公差	±0.01	宽度公差	+0,-0.1

化学成份 (%)

执行标准: JIS G4313:1996

化学元素	CAS.NO	实测含量	标准含量	化学元素	CAS.NO	实测含量	标准含量	化学元素	CAS.NO	实测含量	标准含量
铜 Cu	7440-50-8	-----	-----	锌 Zn	7440-66-6	-----	-----	铁 Fe	7439-89-6	余量	余量
锡 Sn	7440-31-5	-----	-----	磷 P	7723-14-0	0.017	≤0.045	铅 Pb	7439-92-1	-----	-----
锑 Sb	7440-36-0	-----	-----	硅 Si	7440-21-3	0.36	≤1.0	铋 Bi	7440-69-9	-----	-----
镍 Ni	7440-02-0	8.42	8.0-10.5	锰 Mn	7439-96-5	1.22	≤2.0	铝 Al	7429-90-5	-----	-----
银 Ag	7440-22-4	-----	-----	砷 As	13826-64-7	-----	-----	镉 Cd	7440-43-9	-----	-----
硫 S	7704-34-9	0.01	≤0.03	钴 Co	7440-48-4	-----	-----	碳 C	7440-44-0	0.04	≤0.08
镁 Mg	7439-95-4	-----	-----	铬 Cr	7440-47-3	18.29	18-20	杂质总和	-----	-----	-----

物理性能:

测试项目	实测值	标准值	测试项目	实测值	标准值
抗拉强度 N/mm <sup>2</sup>	1196	/	延伸率 (%)	/	/
杯突值	—	—	维氏硬度 HV	374	370-410

生产批号: 20130711001

检验员: 奉小勇

确认: 王锡超