



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.
SFP Connector 0.80mm (0.0315")	8950-Z20CB30DPT	8950-D0000-001
	8950-Z20CB30DPT1	8950-D0000-002

PRODUCT NAME (產品名稱)	DOCUMENT No.: (文件編號)	Rev. (版本)	OUPIIN
SFP Connector 0.80mm (0.0315") (RoHS)	8950spec-Z	C (I800)	(歐品)
	Approved (核準)	Checked (審核)	Prepared (製作)
	Q.A. Section Chief	Jack Hsing	2020.10.27



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1. SCOPE (範圍)

This product specification defines the product performance and the test methods to ascertain the performance of the 8950 Series SFP Connector 0.80mm (0.0315"), 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 8950 Series SFP Connector 0.80mm. (0.0315") 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)
EIA 364	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)
UL498	UL standard for safety of attachment plug and receptacle.(UL 安規要求標準)
EN/ISO5961	Determination of total lead & cadmium content.(總鉛和總鎘含量測定)
EN1122	Determination of total lead & cadmium content.(總鉛和總鎘含量測定)
EN13346	Determination of heavy metals content.(重金屬含量測定)
EPA3052	Determination of total lead & cadmium content. (總鉛和總鎘含量測定)

3. FEATURE & DIMENSIONS (特徵及尺寸)

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考圖面.)

3.2. 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 參考圖面.)

3.3. BILL OF MATERIAL (材料清單)

Harmful material control follow the requirement of RoHS. The bill of material and product number 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考附件.)



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3.4. 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見圖面)

3.5. 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。) Tape & Reel Packag

3.6. RATING CURRENT AND RATING VOLTAGE 額定電流與額定電壓

Current Rating is 0.5A, Voltage Rating is 30V DC/AC RMS.

額定電流 0.5A，額定電壓 30V DC/AC RMS。

3.7. OPERATING AND STORAGE TEMPERATURE 操作與儲存溫度

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

Nonoperating temperature range: $-55^{\circ}\text{C} \sim +105^{\circ}\text{C}$

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，儲存範圍： $-55^{\circ}\text{C} \sim +105^{\circ}\text{C}$ ，

產品限存時間為 18 個月。

4. ENVIRONMENTAL (環境要求)

4.1. SOLDERABILITY (可焊性)

Connectors meet solder ability to EIA-364-52. Finish shall be free of contaminants.

(產品可焊性符合 EIA-364-52 標準規定的相關要求，表面不得有污染物。)

4.2. RESISTANCE TO SOLDER HEAT (耐焊接熱)

4.2.1. INFRARED REFLOW 紅外線回流焊接

Each cycle consists of three consecutive phases, as shown in **Table III**.

每個焊接週期包括三個連續的階段，見附表三。

Note: (說明)

Device temperature measurements are referenced from the top-center of the package outer surface.

(設備溫度量測時以從頂部中間位置測量為準。)



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5. PERFORMANCE AND TEST DESCRIPTION (性能及測試)

5.1. 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述的機械，電氣及環境要求.)

5.2. 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)

5.3. 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.

(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，每組測試有5個樣品)

5.4. 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。



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Table I: Test Requirements and Procedures

(附錄一:測試要求)

Items (項目)	Requirements (要求)	Test Methods (檢測方法)
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)	35 mΩ Max. initial (最大.初態)	EIA-364-23B Subject mated contacts assembled in housing to closed circuit of 100 mA max. at open circuit voltage of 20 mV max. 所述固定在外殼裏的端子連結到一個封閉回路中測試, 電流 100 mA, 電壓 20 mV max.
3. Insulation Resistance (絕緣阻抗)	500 MΩ Min. (最小)	EIA-364-06 Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector. 測試產品相鄰端子間以及端子與接地間的電阻.
4. Dielectric Withstanding Voltage (耐電壓)	300 Volts AC applied between adjacent contacts for 1 minute, No breakdown or flashover. 必須承受測試電壓 300V AC, 時間 1 分鐘, 不能有擊穿或火花.	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 (耐久性)	Resistance: 45 mΩ Max. after testing. 測試後接觸阻抗最大 45 mΩ.	EIA-364-09 Repeat mate and unmated for connector 250 cycles, at a speed of 25.4mm per minute. 重復進行配合產品 250 次插拔, 速度每分鐘 25.4mm.
6. Mating /Un-mating Force (插入力/拔出力)	Mating force: 25N Max. Un-mating force: 11.5N Min 插入力最大:25N Max. 拔出力最小: 11.5N Min	EIA-364-13 At a speed of 25.4 mm/minute, apply axial insert the mating part into fully or pull out from the subject product. 以 25.4 mm/分鐘的速度, 軸向完全插入對配外掛程式到被測產品中或從被測產品中拔出。



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<p>7. Vibration (振動)</p>	<p>Resistance: 45 mΩ Max. after testing. No evidence of physical Damage. 測試後接觸阻抗最大 45 mΩ。 沒有物理損傷。</p>	<p>Mate connectors and vibrate per EIA 364-28 test condition VII, Test condition D 15 minutes in each of three mutually perpendicular directions. 適用 EIA-364-28 VII D 標準配合連接器進行振動測試，三個垂直方向各十五分鐘。</p>
<p>8. Thermal Shock (熱衝擊)</p>	<p>Resistance: 45 mΩ Max. after testing. No evidence of physical Damage 測試後接觸阻抗最大 45 mΩ。 沒有物理損傷。</p>	<p>EIA-364-32 Test Condition I 10 cycles with the exception of exposure times. 測試 10 次。</p>
<p>9. Cyclic Temperature and Humidity (恆溫恆濕)</p>	<p>Resistance: 45 mΩ Max. after testing. No evidence of physical Damage 測試後接觸阻抗最大 45 mΩ。 沒有物理損傷。</p>	<p>EIA -364 -31 Between 25°C ±3°C at 80% RH and 65°C ±3°C at 50% RH. Ramp times should be 0.5 hour and dwell should be 10 cycles. 溫度範圍在：25°C ±3°C 濕度：80%RH 與 65°C ±3°C 濕度：50% RH 範圍裡測試每個循環 0.5 小時，測試 10 個循環。</p>
<p>10. Solder ability (可焊性)</p>	<p>Solderable area shall have a minimum of 95% solder. 焊錫區域至少應該有 95% 的覆蓋面積</p>	<p>EIA-364-52 Immerse in molten solder at 245°C at a rate of 25.4mm per second.Solder Duration: 5 seconds. 將產品依 25.4mm/分鐘的速度放入 245°C 的錫液裡面，時間：5 秒。</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>EIA-364-70 Subject mated contacts assembled in housing to closed circuit 0.5A . 所述固定在外殼包的端子連結到一個封閉回路中測試，電流 0.5A。</p>
<p>12.High Temperature Life (高溫老化)</p>	<p>No evidence of physical damage 沒有物理損傷</p>	<p>EIA-364-17 115±3°C, for 432 hours. 產品置於 115±3°C 連續 432 小時。</p>
<p>13. Mixed Flowing Gas (混合氣體)</p>	<p>No evidence of physical damage 沒有物理損傷</p>	<p>Per EIA-364-65 20 Days 20 天</p>



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14. Cross Talk (串音)	1% max 最大 1%	EIA 364 -90 With 50+/-5 ohms microstrip trace PCB and applicable connector, measured differentially with all adjacent neighbor pairs driven at 175ps time. 適用 50+/-5Ω 微帶走線 PCB 板及適用的連接器，分別測量所有兩兩相鄰差分對在 175ps 內的相互作用。
15. Differential Impedance (差分阻抗)	Input rise time(10%to90%)=175ps. 輸入躍升時間(10%到 90%):175ps	EIA -364 -108 Signal contacts terminated with 50 ohm resistors. Connector terminated in a 4:1 signal to ground ratio. Differential Impedance:80-100 ohms . 信號末端接 50ohm 匹配電阻，連接器末端信號地線比為 4:1 (即信號線與地線距離為信號線寬度 4 倍)。差分阻抗：80-100Ω.



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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
1. Confirmation of Product 產品確認	1	1	1	1	1	1	1
2. Contact Resistance 接觸阻抗	2, 7	2, 9	2, 7	2, 7	2	2	2
3. Insulation Resistance 絕緣阻抗	3	3	3	3	3	3	3
4. Dielectric Withstanding Voltage 耐電壓	4	4	4	4	4	4	4
5. Durability 耐久性	5	5	5	5	5		
6. Mating /Un-mating Force 插入力/拔出力					6		
7. Vibration 振動			6				
8. Thermal Shock 熱衝擊		6					
9. Cyclic Temperature and Humidity 恆溫恆濕		7					
10. Test temperature rise for rating current 溫升測試						5	
11. Test temperature rise for rating current 溫升測試	6						
12. High Temperature Life 高溫老化				6			
13. Mixed Flowing Gas 混合氣體		8					
14. Cross Talk 串音							5
15. Differential Impedance 阻抗匹配							6

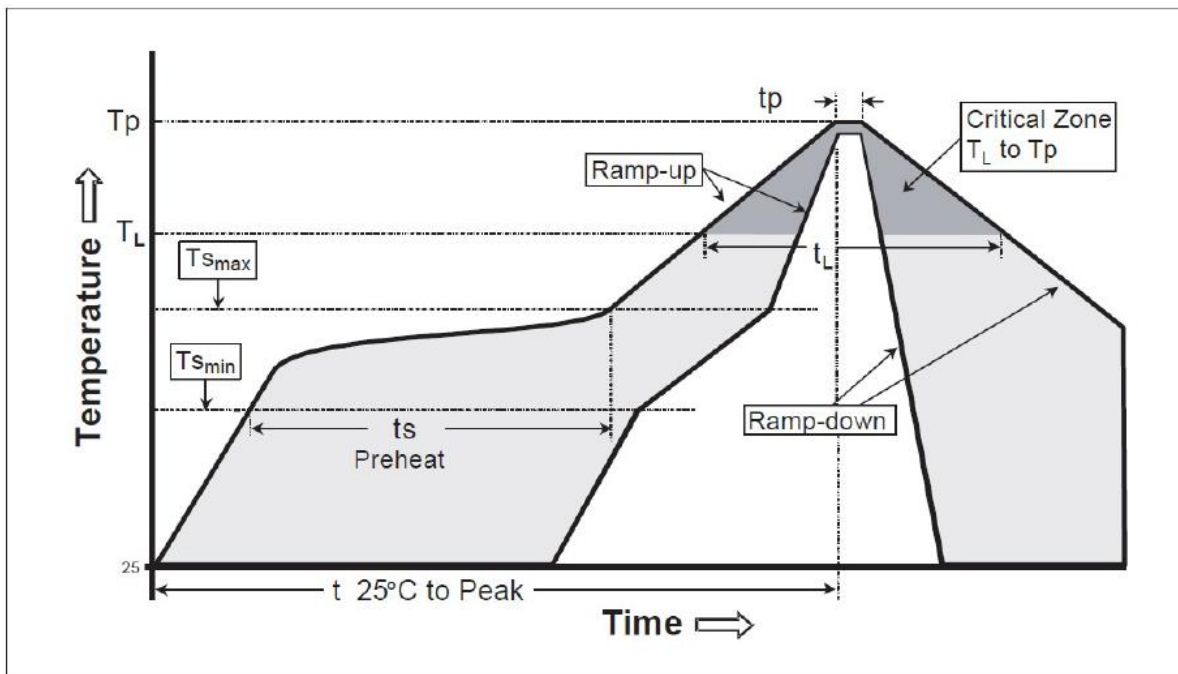
Table III: Reflow Soldering Profile

附表三：回流焊接曲線圖

Lead-free reflow profile requirements:

無鉛回流焊接曲線

Parameter 参数	Reference 参考	Specification 规格
升溫區 Ramp-up	25°C ~150°C	3°C /S Max
預熱區(Pre-heating) Temperature Min($T_{s_{min}}$) Temperature Max($T_{s_{max}}$) Time($T_{s_{min}}$ to $t_{s_{max}}$)	150°C ~200°C	60~180sec
Time maintained above(保持时间) Temperature(T_L) Time(t_L)	217°C	60~150sec
Time within 5°C of actual peak Temperature(t_p)	260-/+5°C	20~40sec
冷卻區 Cooling	Ramp-Down Rate	6°C /S(Max)
Time 25°C to Peak Temperature	25°C ~ Peak Temp.	8 minutes maximum




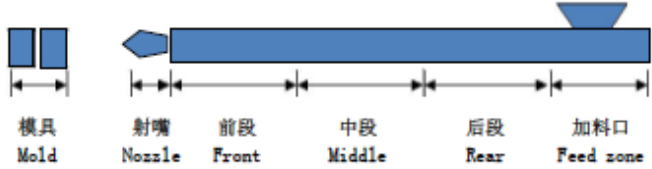
This profile is the minimum requirement for evaluating soldering heat resistance of components. Heat transfer method used for reflow soldering is hot air convection. The actual air temperatures used to achieve the specified profile largely dependent on the reflow equipment.

(這個曲線圖是評估原器件焊接抗熱的基本要求。應用在對流焊接中的熱傳遞方式是熱氣對流。達到特定曲線圖的實際溫度主要依賴於回流焊接設備。)

Material Housing : 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
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				
				
<p>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</p>				



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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, Weijiu RD, Economic development zone, Donglai 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 (10¹⁴ 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 ²	-	-
ISO Izod Impact	ISO 180	kJ/m ²	-	-
ISO Charpy Impact	ISO 179-2	kJ/m ²	-	-



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Material Terminal : Copper Alloy (Phosphor Bronze C5210)

[SGS Test Report Click here](#)

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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.: 251197		DATE: MAY.21,2013		
Customer 顧客名稱 : 名佳利金屬工業股份有限公司				
Commodity 商品名稱 : C5210R PHOSPHOR BRONZE FOR SPRING (EH)				
Applied Standard 引用標準 : CNS 9503 Phosphor Bronze Sheets, Plates and Strips				
Manufacture No.	銅捲製號	24M007A		
(Specification)	產品規格	Standard		
Thickness (mm)	產品厚度	0.300		
Width (mm)	產品寬度	622.000		
Length (mm)	產品長度			
(Chemical Analysis Test)	化性測試			
P(%)	磷	0.030 - 0.350	0.128	
Sn(%)	錫	7.000 - 9.000	7.938	
Cu+Sn+P(%)	銅錫磷	min. 99.700	99.942	
(Mechanical & Physical Test)	物性測試			
Thickness Test (mm)	厚度測試	-	0.292	
Width Test (mm)	寬度測試	-0.10 +0.00	GOOD	
Tensile Strength (kgf/mm ²)	抗拉強度	min. 65.00	72.26	
Elongation (%)	伸長率	min. 10.00	23.54	
Hardness Test (Hv)	硬度	200.0 - 230.0	224.0 - 226.0	
Grain Size (mm)	結晶粒度	-	0.010	
Electric Conductivity (%)	導電率	-	12.10	
(Other Information)	其他資訊			
Delivery No.	出貨單號			
QA Supervisor: 周建偉		A980301 S1800901ME		
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				