

# PRODUCT SPECIFICATION

## (產品規格書)

### Ordering information

4572-	12	T	S	B
Series	No. of Pin Count	T: Tin Plated	S: Straight R: Right Angle	B: Bulk Package

<b>PRODUCT NAME</b> (產品名稱)	<b>DOCUMENT No.:</b> (文件編號)	<b>Rev.</b> (版本)	<b>OUPIIN</b>  (歐品)
Wafer 1.50 mm  (RoHS)	4572spec-W	A1	
	<b>Approved</b> (核準)	<b>Checked</b> (審核)	
	Q.A. Section Chief	Amy Chiu	SEP.11/2012

<b>1. SCOPE (範圍)</b> .....	<b>3</b>
<b>2. REFERENCE DOCUMENTS (參考文件)</b> .....	<b>3</b>
<b>3. FEATURE &amp; DIMENSIONS (特徵及尺寸)</b> .....	<b>3</b>
3.1. <i>PRODUCT DIMENSION (產品尺寸)</i> .....	3
3.2. <i>PCB/PANEL LAYOUT (印刷電路板佈局)</i> .....	3
3.3. <i>BILL OF MATERIAL (材料清單)</i> .....	3
3.4. <i>MECHANICAL &amp; ELECTRICAL CHARACTERISTIC (機械及電器特性)</i> .....	3
3.5. <i>PACKAGING (包裝)</i> .....	3
3.6. <i>RATING CURRENT AND RATING VOLTAGE (額定電流與額定電壓)</i> .....	4
3.7. <i>STORAGE AND OPERATING TEMPERATURE (儲存使用溫度)</i> .....	4
<b>4. Environmental (環境要求)</b> .....	<b>4</b>
4.1. <i>SOLDERABILITY (可焊性)</i> .....	4
4.2. <i>RESISTANCE TO SOLDER HEAT (耐焊接熱)</i> .....	4
WAVE SOLDERING (波峰焊) .....	4
1.Preheat (預熱) .....	4
2.Soldering (焊接) .....	4
3.Cool Down (冷卻) .....	4
<b>5. PERFORMANCE AND TEST DESCRIPTION (性能及測試)</b> .....	<b>5</b>
5.1. <i>REQUIREMENT (要求)</i> .....	5
5.2. <i>TEST CONDITION (測試條件)</i> .....	5
5.3. <i>SAMPLE SELECTION (樣品選擇)</i> .....	5
<b>Table I: Test Requirements and Procedure</b> .....	<b>6</b>
(附錄一: 測試要求)	
<b>Table II: Material</b> .....	<b>7-9</b>
(附錄二: 材料證明)	

## 1. SCOPE (範圍)

This product specification defines the product performance and the test methods to ascertain the performance of the Wafer 1.50 mm , which is designed and manufactured by Oupiin Electronic Co.,Ltd.

(本產品規格書規定了由歐品電子有限公司生產的 Wafer 1.50 mm 型連接器,產品的特性及測試方法.)

## 2. REFERENCE DOCUMENTS (參考文件)

MIL-STD-1344A	Test method for electrical connector (電子連接器測試方法)
MIL-STD-202F	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)

## 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.)

### 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. Products required carrier tape should meet the proper specification per purchase order. Connector container and the packaging specification is shown in package drawing.

(產品包裝可依客戶指定要求.本產品採用 Bulk Packag 包裝,具體見包裝圖面.)

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

Rating current is 1.0A, rating voltage is 50V DC/AC RMS.

額定電流 1.0A，額定電壓 50V DC/AC RMS。

### 3.7 STORAGE AND OPERATING TEMPERATURE 儲存與使用溫度

Temperature range: -25°C~+85°C, including terminal temperature rise for rating current.

溫度範圍：-25°C~+85°C，包含接觸端子的額定電流溫升。

## 4. ENVIRONMENTAL (環境要求)

### 4.1. SOLDERABILITY (可焊性)

Connectors meet solder ability to MIL-STD-202F. Finish shall be free of contaminants.

(產品可焊性符合 MIL-STD-202F 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)

#### WAVE SOLDERING (波峰接)

Each cycle consists of three consecutive phases.(每個焊接週期包括三個連續的階段)

#### 1. Preheat (預熱)

The steady temperature of the preheat zone is 90~125°C.

(預熱區最終溫度控制在90~125°C)

#### 2. Soldering (焊接)

To avoid the secondary tin-melting, the temperature on PCB upper surface is 160°C Max. for products with lead, or 200°C Max. for lead-free products. The temperature of the PCB bottom surface shall not be exceed 100°C more than the temperature of the PCB upper surface. The peak temperature is during 220~240°C for products with lead, or 230~250°C for lead-free products. The tin dip time is duration for 3~5 seconds.

(有鉛產品板面溫度不得超過160°C，無鉛產品板面溫度不得超過200°C，以防止貼片零件二次熔錫。板面溫度與板底的溫度溫差不得超過100°C。板下溫度峰值有鉛產品維持在220~240°C，無鉛產品控制在230~250°C。浸錫時間控制在3~5秒。)

#### 3. Cool Down (冷卻)

Cool down shall not exceed 6°C per second.

(冷卻速度不超過6°C/秒.)

#### 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.)

## 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；)

**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. (產品必須滿足相關檔的規定)	Check the dimensions and functions per applicable product drawing in your eyes. (目視，尺寸及功能依產品圖面檢查)
2. Contact Resistance (接觸阻抗)	20 m $\Omega$ Max. initial (最大.初態)	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 M $\Omega$ Min. (最小)	Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector.MIL-STD-202, Method 302,Condition B (100 V DC $\pm$ 10%). (測試產品端子間以及端子與接地間的電阻，適用：MIL-STD-202,方法 302，條件 B )(100V DC $\pm$ 10%)
4. Dielectric Strength (耐電壓)	Connector must withstand test potential of 500 V AC for 1 minute. Current leakage must be 0.5 mA max. (樣品必須承受測試電壓 500V AC，時間一分鐘，漏電流不大於 0.5 mA.)	Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector. MIL-STD-202, Method 301. (測試產品端子間以及端子與接地間的電壓，適用：MIL-STD-202，方法 301。)
5. Thermal shock (熱衝擊)	After testing, no damage, Contact Resistance 30 m $\Omega$ max.. Dielectric Strength should be OK, Insulation Resistance should be 1000 M $\Omega$ min. (測試後,產品無損壞，接觸阻抗：30 m $\Omega$ 最大；耐電壓測試 OK，絕緣阻抗 1000M $\Omega$ 最小;)	Temperature range from -25°C to +85°C .Start from -25°C, after 30 min. change to +85°C; change time is no more than 30 seconds. Total 5 cycles. MIL-STD-202, Method 107D, condition A. (溫度變化範圍： -25°C ~ +85°C；從 -25 開始，30 分鐘後換到+85°C；轉換時間不超過 30 秒；共 5 個循環.適用：MIL-STD-202，方法 107D，條件 A.)
6. Solder ability (可焊性)	Appearance of the specimen shall be inspected after the test with the assistance of a magnifier capable of giving a magnification of 10 X for any damage such as pinholes, void or rough surface. (樣品在測試完成後，在放大倍數為 10 倍的顯微鏡下，檢查外觀損壞如：小孔，空焊，外觀粗糙度；)	Soldering time: 3 to 5 Seconds (焊接時間：3~5 秒) Peak Temperature: 245 $\pm$ 5°C. (最高溫度：245 $\pm$ 5°C.)

Material Housing : I704-PA66(6410G5-25%GF)

[SGS Test Report Click here](#)

[如需 SGS 測試報告請點選此處](#)

## 南亞 FR-PA66 工程塑膠加工物性表

規格: 6410G5 AWT2 -- 25%玻纖強化耐燃級NYLON66

性 質	測試方法	單 位	參考值
1. 機械性質	拉伸強度	ASTM D638	Kg/cm <sup>2</sup> 1300
	伸長率	ASTM D638	% 2
	彎曲強度	ASTM D790	Kg/cm <sup>2</sup> 1800
	彎曲彈性率	ASTM D790	Kg/cm <sup>2</sup> 80000
	IZOD衝擊強度(缺口1/8")	ASTM D256	Kg-cm/cm 7
	Rockwell硬度	ASTM D785	R-Scale 119
2. 熱性質	融點	DSC法	°C 260
	熱變形溫度(18.6Kg/cm <sup>2</sup> )	ASTM D648	°C 248
	熱熔融指數(MFI)	ASTM D1238	g/10 min 15
3. 電氣性質	體積固有阻抗	ASTM D257	Ω · cm 10 <sup>15</sup>
	絕緣破壞強度	ASTM D149	KV/mm ----
	介電常數(10 <sup>6</sup> Hz)	ASTM D150	-- 3.4
	介電損失因數(10 <sup>6</sup> Hz)	ASTM D150	-- 0.025
	耐電弧性	ASTM D495	sec. ----
4. 其它	比重	ASTM D792	-- 1.55
	成形收縮率(流動方向)	3 mm t	% 0.4
	成形收縮率(橫方向)	3 mm t	% 1.2
	燃燒性	UL 94	-- V-0
備註	UL FILE NO. : E130155(M)		

成形參考條件		
乾燥時間	Hrs	4
乾燥溫度	°C	80
料管溫度後部	°C	265
料管溫度中央	°C	275
料管溫度前部	°C	285
噴嘴溫度	°C	295
模具溫度	°C	95
射出壓力	Kg/cm <sup>2</sup>	450-1000
螺桿轉數	rpm	180
射出速度	--	快速

試驗成形機: 2 OZ
ES 50/150
模具: ASTM 試片模
澆口尺寸: 5.8×1.2 mm
試片厚度: 3.2 mm
測試條件: 23°C , 50%RH

南亞塑膠工業股份有限公司  
 四部工程塑膠組  
 電話:(02)27122211轉5813  
 傳真:(02)27138248

▲熔融流動指數條件: 275°C×2.16 kg。

▲本性質表僅供參考。

▲製訂日期: 88年12月15日



# PRODUCT SPECIFICATION OF OUPIIN

## Material Housing :UL



QMFZ2 Component - Plastics

Friday, October 24, 2003

E130155

NAN YA PLASTICS CORP PLASTICS 4TH DIV

Material Designation: **6410G5**

Product Description: Polyamide 66 (PA66), furnished as pellets.

Color	Min. Thick. (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str	IEC GWIT	IEC GWFI
ALL	0.75	V-0	0	0	130	115	120	-	-
	1.5	V-0	0	0	130	115	120	-	-
	3	V-0	0	0	130	115	120	-	-

CTI: 2 IEC CTI: - HVTR: 1 D495: 6 IEC Ball Pressure (\* C): -

Dielectric Strength (kV/mm): 17 Volume Resistivity (10<sup>10</sup>ohm-cm): 14 Dimensional Stability (%): 0

ISO Tensile Strength (MPa): - ISO Flexural Strength (MPa): - ISO Heat Deflection (\* C): -

ISO Tensile Impact (kJ/m<sup>2</sup>): - ISO Izod Impact (kJ/m<sup>2</sup>): - ISO Charpy Impact (kJ/m<sup>2</sup>): -

Report Date: 1/30/1991

Underwriters Laboratories Inc®

UL94 small-scale test data does not pertain to building materials, furnishings and related contents. UL 94 small-scale test data is intended solely for determining the flammability of plastic materials used in components and parts of end-product devices and appliances, where the acceptability of the combination is determined by ULL.



Material Contact :Copper Alloy (SQUAREPIN-Tin)

[SGS Test Report Click here](#)

[如需 SGS 測試報告請點選此處](#)

材 質 測 試 報 告  
( Test Report )

客戶名稱 (Title of customer)	台聘股份有限公司				出貨日期 (Date of delivery)	2010/12/30		
訂單號碼 (Number of order)				製造批號 (Manufacture No)				
材質名稱 (Spec.)	訂單規格 (Ordered Dimension)		容許公差 (Tolerance)		實際規格 (Measured Dimension)			
JIS H3260 C2700 W / 0H	尺寸(mm) (Diameter)	1.5	+0 -0.02		1.483			
	長度(mm) (Length)	—	+ -		—			
化學分析 (Chemical Analysis)								
使用儀器 (Instrument)	光 譜 分 析 儀 (Spark Metal Analyser)							
元素名稱 (Element)	銅 (Cu)	鉛 (Pb)	鋅 (Zn)	鐵 (Fe)	錫 (Sn)	鐵+錫 (Fe)+(Sn)	鉍 (Bi)	鎘 (Cd)
標準規範 % (Specification)	63.0~67.0	≤0.05	Balance	≤0.05	—	—	—	—
實際含量 % (Actual value)	63.5~64.5	≤0.02	Balance	≤0.03	—	—	—	—
外觀及物理性質 (Exteriority Check And Physical Properties )								
外 觀 (Exteriority)	外觀檢驗 (Exter Appear)	OK			直度檢驗 (Camber)	OK		
使用儀器 (Instrument)	材 料 試 驗 機 (Material test machine)				測試方法 (Method of test)	JIS Z 2201 NO.2		
物理性質 (Physical character)	時期破裂試驗 (S.C.C. Test)	抗拉強度 (Tensile strength)			延伸率 (Elongation)	硬度 (Hardness)		
標準規範 (Specification)	OK	≥295 (N/mm <sup>2</sup> )			≥20 %	— HV		
實測數值 (Actual value)	OK	341 ~ 383 (N/mm <sup>2</sup> )			31 ~ 48 %	— HV		
單位主管 (Supervisor)	鄭如雯				檢驗員 (Operator)	許淑美		
<p>此份測試報告僅供本材質參考 Reference Only , This report is uncertificated but referenced .</p> <p>國 晟 工 業 股 份 有 限 公 司 GWO CHERN INDUSTRIAL CO., LTD.</p> 								