



## 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.
Wafer 2.5MM	4071-FxxTDT-P	S0220190617-03

<b>PRODUCT NAME</b> (產品名稱)	<b>DOCUMENT No.:</b> (文件編號)	<b>Rev.</b> (版本)	<b>OUIPIN</b>
Wafer 2.54mm  (RoHS)	4071spec-F	A1(I676)	(歐品)
	<b>Approved</b> (核準)	<b>Checked</b> (審核)	<b>Prepared</b> (製作)
	Q.A. Section Chief	Jack Hsing	NOV.06/2019



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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 Wafer 2.54 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 2.54 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-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)

## 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, 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。)



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

Rating current is 3.0A, rating voltage is 250V DC/AC RMS.

額定電流 3.0A，額定電壓 250V 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-202. Finish shall be free of contaminants.

(產品可焊性符合 MIL-STD-202 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)

Three cycles. Each cycle consisting of three consecutive phased.

(三個週期，每個週期包括三個連續的階段完成；)

#### 1. Preheat (預熱)

Increase in temperature not to exceed 4°C per second.

(溫度增加不超過 4°C /秒,)

#### 2. Soldering (焊接)

Maximum allowable time wave soldering temperature of 150°C is 90~120 seconds.

Temperature in this interval is 250°C, not to exceed 5 seconds.

(波峰焊溫度150°C時最長不超過90~120秒。最高溫度250°C時間不超過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 mΩ 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)	1000 MΩ 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 (500 V DC±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 )(500V DC±10%)
4. Dielectric Strength (耐電壓)	Connector must withstand test potential of 1000 V AC for 1 minute. Current leakage must be 0.5 mA max. (樣品必須承受測試電壓 1000V 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. Durability (Repeated Mating/Un-mating) (耐久性)	Contact Resistance: 20 mΩ Max. after testing. (測試後接觸阻抗最大 20mΩ)	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. Mating (插入力)	Mating force:14.70N(1.50kgf) Max. 插入力最大 14.70N(1.50kgf)	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。



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<p>7. Contact Retention Force (端子保持力)</p>	<p>17.79N(1.80kgf) / Max 最大 17.79N(1.80kgf)</p>	<p>Apply axial pull out force at a speed of 25.4±3 mm/minute on the contact assembled in the housing. 以 25.4±3mm/分鐘的速度施加軸向拉力從塑膠本體上拔出端子。</p>
<p>8. Test temperature rise for rating current (溫升測試)</p>	<p>Mate connectors Temperature Rise 30°C/Max. 組合狀態下之連接器溫度上升最大容許值 30°C/Max.</p>	<p>Mate connectors.measure the Temperature rise of Contact when the maximum rated current is passed 以組合狀態下連接器,通過最大容許電流,量測其導體溫度上升值.</p>
<p>9. Vibration (振動)</p>	<p>Appearance:No Damage, 1μ sec Max Current Discontinuity:1 micro second Max , Contact Resistance: 20 mΩ Max. 外觀不可有異狀,電流中斷: 1μ 最大電流不連續:最大一微秒, 測試後接觸阻抗最大值 20 mΩ。</p>	<p>Subject mated connector to 10-55-10 Hz traversed in 1 minute at 1.5mm amplitude, 15 minutes each of 3 mutually perpendicular planes, 10-55-10 Hz,振幅 1.5 mm 條件下,在互相垂直的三個面上,每個面 15 分鐘下測量。</p>
<p>10.Mechanical Shock (機械沖擊)</p>	<p>Appearance:No Damage, 1μ sec Max Current Discontinuity:1 micro second Max , Contact Resistance: 20 mΩ Max. 外觀不可有異狀,電流中斷: 1μ 最大電流不連續:最大一微秒, 測試後接觸阻抗最大值 20 mΩ。</p>	<p>Velocity:490m/s<sup>2</sup>; 3drops each of X,Y and Z axes. 速度 490m/s<sup>2</sup>; X,Y,Z, 方向各 3 次。</p>
<p>11. Humidity (恆溫恆濕)</p>	<p>After testing, no damage, Contact Resistance 20 mΩ max.. Dielectric Strength should be OK, Insulation Resistance should be 500 MΩ min. (測試後,產品無損壞, 接觸阻抗: 20 mΩ 最大; 耐電壓測試 OK, 絕緣阻抗 500MΩ 最小;)</p>	<p>Temperature :40±2 °C 96 hours. (溫度: 40±2 °C 96 小時) Relative Humidity : 90-95%; (相對濕度 : 90-95%; ) Duration :96 Hours. MIL-STD-202, Method 108, (時間: 96 小時; MIL-STD-202, 方法 108。)</p>
<p>12. Thermal shock (熱衝擊)</p>	<p>After testing, no damage, Contact Resistance 20 mΩ max.. Dielectric Strength should be OK, Insulation Resistance should be 500 MΩ min. (測試後,產品無損壞, 接觸阻抗: 20 mΩ 最大; 耐電壓測試 OK, 絕緣阻抗 500MΩ 最小;)</p>	<p>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. (溫度變化範圍: -25°C~ +85°C; 從 -25°C 開始, 30 分鐘後換到+85°C; 轉換時間不超過 30 秒; 共 5 個循環.)</p>



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<p>13.High Temperature Life (高溫老化)</p>	<p>After testing, no damage, Contact Resistance 20 mΩ max.. Dielectric Strength should be OK, Insulation Resistance should be 500 MΩ min. (測試後,產品無損壞, 接觸阻抗: 20 mΩ 最大; 耐電壓測試 OK, 絕緣阻抗 500MΩ 最小;)</p>	<p>Subject product to 85±2°C for96 hours continuously. 產品置於 85±2°C 連續 96 小時。</p>
<p>14. Salt Spray (鹽霧)</p>	<p>Contact Resistance: 20 mΩ Max. after testing. (測試後接觸阻抗最大 20mΩ)</p>	<p>5±1% salt concentration 24 hours 35±2°C 鹽水濃度 5±1%, 時間 24 小時, 溫度 35±2°C。</p>
<p>15. Solder ability (可焊性)</p>	<p>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;)</p>	<p>Soldering time: 3 to 5 Seconds (焊接時間: 3~5 秒) Soldering Temperature: 245±5°C. (焊接溫度: 245±5°C.)</p>





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Material Housing : 017-LCP(Black)

[SGS Test Report Click here](#)

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Liquid Crystalline Polymer **VECTRA E130i**

(Glass Fiber reinforced)

### TYPICAL PROPERTIES

Feature			E130i
PROPERTY	Test Method (ASTM)	Unit	
Specific Gravity	D792	-	1.62
Tensile Strength (3.2mmt)	D638	MPa (kgf/cm <sup>2</sup> )	167 (1,700)
Tensile Elongation (3.2mmt)	D638	%	1.7
Flexural Strength (3.2mmt)	D790	MPa (kgf/cm <sup>2</sup> )	221 (2,250)
Flexural Modulus (3.2mmt)	D790	MPa (• 10 <sup>4</sup> kgf/cm <sup>2</sup> )	14,210 (145,000)
Izod Impact Strength (Notched)	D256	J/m (kgf•cm/cm)	128 (13)
Deflection Temperature under load (at 1.82MPa)	D648	• •	230
Flammability	UL94	-	V-0

#### NOTE:

- ◇ These property values are typical values obtained under varying conditions prescribed by certain standards and test methods and therefore are not the minimum values of the material specifications



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## Material Housing :UL

UL iQ™

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Component - Plastics

E 106764

### POLYPLASTICS CO LTD

18-1 KONAN 2 CHOME, MINATO TOKYO 1088280 JP

### E 130i(d)(e)(f1)

Liquid Crystal Polymer (LCP), thermotropic aromatic polyester, "VECTRA" or "LAPEROS", furnished as pellets

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
NC, BK	0.75	V-0	2	0	240	220	240
	1.5	V-0	1	0	240	220	240
	3.0	V-0	0	0	240	220	240

Comparative Tracking Index (CTI): 4

Inclined Plane Tracking (IPT): -

Dielectric Strength (kV/mm): 39

Volume Resistivity (10<sup>12</sup> ohm-cm): 16

High-Voltage Arc Tracking Rate (HVTR): 0

High Volt, Low Current Arc Resis (D495): 5

Dimensional Stability (%): 0

(d) - Virgin and regrind up to 50% by weight incl., have the same basic material characteristics in NC and BK with a minimum thickness of 0.75 mm.

(e) - Regrind from 26-50% by weight inclusive has an Impact RTI of 180C at thicknesses greater than 1.5 mm.

(f1) - Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C.

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: 1992-08-19

Last Revised: 2014-08-22

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## IEC and ISO Test Methods

Test Name	Test Method	Units	Thickness Tested (mm)	Value
Flammability	IEC 60695-11-10	Class (color)	0.75	V-0 (NC, BK)
			1.5	V-0 (NC, BK)
			3.0	V-0 (NC, BK)
Glow-Wire Flammability (GWFI)	IEC 60695-2-12	C	0.75	960
			1.5	960
			3.0	960
Glow-Wire Ignition (GWIT)	IEC 60695-2-13	C	0.75	850
			1.5	850
			3.0	900
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>	-	-

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The materials covered in this database are incomplete in certain constructional features or restricted in performance capabilities and are intended for use as components of complete equipment submitted for investigation rather than for direct separate installation in the field. THE FINAL ACCEPTANCE OF THE COMPONENT IS DEPENDENT UPON ITS INSTALLATION AND USE IN COMPLETE PRODUCTS SUBMITTED TO UNDERWRITERS LABORATORIES.

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2014-11-24

Material Contact : Brass( C2680R)

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产品质量保证书  
CERTIFICATE OF QUALITY

客户名称 (Customer)	东莞祥茂	发货重量 Weight (吨)	0.85
产品名称 (Commodity)	H65 (二类环保)	发货日期 (Ship Date)	17.4.7
生产批号 (Lot No.)	047w611	执行标准 (Carried Standard)	GB/T21652-2008

芜湖楚江合金铜材有限公司  
WUHU TRUCHUM ALLOY-COPPER CO.,CTD  
地址: 芜湖桥北工业园和平路 5 号  
邮编: 241008 电话: 0553-5311528  
No.5 Peace Road Bridge North Industrial Park, Wuhu City, China 241008

尺寸公差 (Size & Tolerance)					
规格 Specification (mm×mm×mm)	状态 Status	厚度公差 Thickness Tolerance (mm)	宽度公差 Width Tolerance(mm)	元线公差 Circle line Tolerance(mm)	
Φ 1.7	TM	/	/	±1	
化学成份 (Chemical Composition)					
元素名称 (Element)	铜 (Cu) %	磷 (P) %	铅 (Pb) %	铁 (Fe) %	锌 (Zn) %
含量标准 (Standard)	63.5-68	—	≤0.009	≤0.03	余量 (R)
实测值 (Value)	63.82		0.0020	0.003	余量 (R)
物理性能 (Mechanical Properties)					
检测项目 (Testing Items)	抗拉强度 Tensile Strength(N/mm <sup>2</sup> )	延伸率 Elongation(%)	/	/	/
实测值 (Value)	435	31	/	/	/

一、本保证书未报项次 (如形状精度、表面质量等) 均合格。

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