



**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.
Modular Jack With LED	8949-AL1881-06ABA	8949D02144
	8949-AL1881-06S1xBA	8949D02173
	8949-AL1881-06BA	8949D02175
	8949-AL188x-06S1xBA	8949D02197
Modular Jack W/O LED	8949-AL1881-06S1BA	8949D02209

PRODUCT NAME (產品名稱)	DOCUMENT No.: (文件編號)	Rev. (版本)	OUPIIN
Modular Jack  L1 Type	8949-AL1spec	B(I563)	(歐品)
	<b>Approved</b> (核準)	<b>Checked</b> (審核)	<b>Prepared</b> (製作)
	Q.A. Section Chief	Allen	08.03/2018



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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 Moular Jack With LED , 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 Moular Jack With LED 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)
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, 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 1.5A, rating voltage is 150V DC/AC RMS.

額定電流 1.5A，額定電壓 150V DC/AC RMS。

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

Temperature range: -40°C~+85°C, including terminal temperature rise for rating current.

溫度範圍：-40°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)

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 220~245°C for products with lead, or 235~260°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220~245°C，無鉛產品控制在235~260°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.)



## **PRODUCT SPECIFICATION OF OUPIIN**

### **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；)



## PRODUCT SPECIFICATION OF OUPIIN

### 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)	30 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)	500 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 Withstanding Voltage (耐電壓)	Connector must withstand test potential of 1000 V AC for 1 minute. (樣品必須承受測試電壓 1000V AC，時間一分鐘)	Measure by applying test potential between the adjacent contacts, and between the contacts and ground in the mated connector. EIA-364-20B, (測試產品端子間以及端子與接地間的電壓，適用：EIA-364-20B)
5. Durability (Repeated Mating/Unmated) (耐久性)	Contact Resistance: 50 mΩ Max. after testing. (測試後接觸阻抗最大 50mΩ)	The sample should be mounted the tester and fully mated and unmated 750 cycles specified at the rate of 25mm/min (重復進行配合產品 750 次插拔.)
6. Connector Mated Force (產品插入力)	2 contacts ----1.6Kgf Max. 4 contacts ----1.8Kgf Max. 6 contacts ----2.1Kgf Max. 8 contacts ----2.3Kgf Max. 10 contacts ----2.5Kgf Max.	Measure force necessary to unmated between the counterparts connectors.. (軸向力以 25±3mm/分的速度從塑膠本體對插後拔出)
7. Thermal shock (熱衝擊)	After testing, no damage, Contact Resistance 50 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：50 mΩ 最大；耐電壓測試 OK, 絕緣阻抗 500MΩ 最小;)	Temperature range from -40°C to +85°C .Start from -40°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： -40°C~ +85°C；從 -40°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.適用：MIL-STD-202，方法 107D，條件



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		A.)
8. 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±5°C. (最高溫度：245±5°C.)



## PRODUCT SPECIFICATION OF OUPIIN

Material Housing : 029-PA46 (Black)

[SGS Test Report Click here](#)

[如需 SGS 測試報告請點選此處](#)

### DSM Engineering Plastics - Property Data Stanyl® TE250F6

PA46-GF30

30% Glass Reinforced, Heat Stabilized, Flame Retardant

Properties	Typical Data	Unit	Test Method
<b>RHEOLOGICAL PROPERTIES</b>			
	dry / cond		
Molding shrinkage (parallel)	0.4 / *	%	ISO 294-4
Molding shrinkage (normal)	1.1 / *	%	ISO 294-4
<b>MECHANICAL PROPERTIES</b>			
	dry / cond		
Tensile modulus	12000 / 8000	MPa	ISO 527-1/-2
Stress at break	180 / 125	MPa	ISO 527-1/-2
Strain at break	2.5 / 3.5	%	ISO 527-1/-2
Charpy impact strength (+23°C)	50 / 60	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength (-30°C)	50 / 50	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	10 / 11	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength (-30°C)	9 / 9	kJ/m <sup>2</sup>	ISO 179/1eA
<b>THERMAL PROPERTIES</b>			
	dry / cond		
Melting temperature (10°C/min)	295 / *	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	290 / *	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	0.2 / *	E-4/°C	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	0.8 / *	E-4/°C	ISO 11359-1/-2
Burning Behav. at thickness h	V-0 / *	class	IEC 60695-11-10
Thickness tested	0.35 / *	mm	IEC 60695-11-10
UL recognition	UL / *	-	-
Relative Temperature Index - electrical	140 / *	°C	UL746B
RTI electrical (Thickness (1) tested)	1.5 / *	mm	UL746B
<b>ELECTRICAL PROPERTIES</b>			
	dry / cond		
Volume resistivity	1E13 / 1E8	Ohm*m	IEC 60093
Electric strength	30 / 20	kV/mm	IEC 60243-1
Comparative tracking index	225 / 250	-	IEC 60112
<b>OTHER PROPERTIES</b>			
	dry / cond		
Humidity absorption	1.6 / *	%	Sim. to ISO 62
Density	1680 / -	kg/m <sup>3</sup>	ISO 1183



# PRODUCT SPECIFICATION OF OUPIIN

Material Housing :UL

Component - Plastics

E47960

## DSM ENGINEERING PLASTICS B V

POSTBUS 804, GELEEN 6180 AP NL

### TE250F6(h1)(j)

Polyamide 4/6 (PA4/6), glass reinforced, flame retardant, "Stanyl", furnished as pellets

Color	Min Thk (mm)	Flame Class	RTI		RTI		RTI
			HWI	HAI	Elec	Imp	Str
ALL	0.35	V-0	0	0	65	65	65
	0.75	V-0	0	0	140	110	120
	1.5	V-0	0	0	140	125	125
	3.0	V-0	0	0	140	130	130

Comparative Tracking Index (CTI): 2

Dimensional Stability (%): 0.0

High-Voltage Arc Tracking Rate (HVTR): 1

High Volt, Low Current Arc Resis (D495): 6

Dielectric Strength (kV/mm): 23

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

(h1) - Virgin and regrind, up to 50% by weight inclusive, in thicknesses of 0.75mm and greater, have the same basic material characteristics, except for CTI.

(j) - Virgin and regrind, up to 100% by weight inclusive, have the same basic material characteristics with respect to Flammability in the 0.75mm thickness and greater.

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:2003-01-01  
Last Revised:2007-08-21

Underwriters Laboratories Inc®



## IEC and ISO Test Methods

Test Name	Test Method	Units	Thickness	
			Tested (mm)	Value
Flammability	IEC 60695-11-10	Class (color)	0.35	V-0 (ALL)
			0.75	V-0 (ALL)
			1.5	V-0 (ALL)
			3.0	V-0 (ALL)
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	3.0	285
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>	-	-

Underwriters Laboratories Inc®





# PRODUCT SPECIFICATION OF OUPIIN

Material Contact : Copper Alloy (Phosphor Bronze)

[SGS Test Report Click here](#)

[如需 SGS 測試報告請點選此處](#)



GUO CHING PRECISION CO., LTD

## 試驗成績表

### REPORT OF MATERIAL TEST

客戶 : 歐品電子有限公司	國慶精密股份有限公司
Customer	桃園縣龜山鄉大崗村大湖路2-17號
品名 : C5191-H	尺寸 : 0.200x 29.5x C
Product	TEL : 03-2115391~8
料號 : 1020109011	日期 : 102/01/29
Lot No	FAX : 03-2115399

## 化學成份

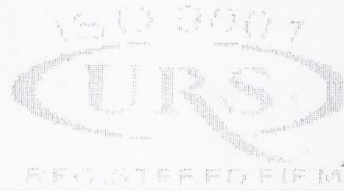
### CHEMICAL COMPOSITION

元素 ELEMENT	Cu	P	Sn
規範 MAX	-	0.350	7.000
SPEC MIN	93.400	0.030	5.500
分析值 ANALYSIS VALUE	93.975	0.130	5.868

## 試驗

### TEST RESULT

項目 ITEM	抗張 Tensile Strength kgf/mm2	伸長 Elongation %	硬度 Hardness Test o	結晶粒度 Grain Size µm	導電率 Electric Conductivity
規範 CONDITION	-	-	HV	-	-
SPEC MAX	70.000	-	200.000	-	-
SPEC MIN	58.000	8.000	180.000	-	-
測驗值 MEASUREMENT VALUE	61.430	23.000	195.000	-	14.500



Approved by:



Checked by:





# PRODUCT SPECIFICATION OF OUPIIN

Material Shell : Copper Alloy (Brass)

[SGS Test Report Click here](#)

[如需 SGS 測試報告請點選此處](#)



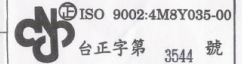
## REPORT OF MATERIAL TEST

MILL CERTIFICATE

DATE: FEB. 11, 2009

Customer: 歐品電子有限公司

Commodity: C 2680 R BRASS STRIP ( H )



Applied Standard: CNS 4383 Brass Sheets, Plates and Strips

台正字第 3544 號

### Chemical Analysis Test

Work No.	Size of Product			Cu(%)	Fe(%)	Pb(%)	Zn(%)			
	Thickness (mm)	Width (mm)	Length (mm)							
	Standard									
				64.00 - 68.00	max. 0.050	max. 0.014	REM.			
81A414A	0.400	305.000		65.816	0.009	0.006	REM.			

### 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	42 - 55	-			
81A414A	0.400	305.000		GOOD.	GOOD.	49.89	17.36	150.0 - 152.0	-	25.4

QC Supervisor

鄭建益

A920303

**MINCHALI METAL INDUSTRY CO., LTD.**

11, Pei Yuan Road, Chung Li City, Taiwan, R. O. C.

Tel : (03)4526141-5 (03)4526017-9

Fax : (03)4529112 (03)4629625