





# PRODUCT SPECIFICATION OF OUPIIN

## 1. SCOPE (範圍)

This product specification defines the product performance and the test methods to ascertain the performance of the D-SUB (H.D.)Straight Type, 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D-SUB (H.D.)Straight Type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：)



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### 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。)-Tray Packag 包裝

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

Rating current is 1.0A, rating voltage is 150V DC/AC RMS.

額定電流 1.0A，額定電壓 150V DC/AC RMS。

### 3.7 OPERATING TEMPERATURE 使用溫度

Temperature range: -55°C~+105°C,.

溫度範圍：-55°C~+105°C。

## 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 220~245°C for products with lead, or 235~260°C for lead-free products. The tin dip time is duration for 3~10 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3~10秒。)

#### 3. Cool Down (冷卻)

Cool down shall not exceed 5°C per second.

(冷卻速度不超過5°C/秒。)



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**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；)

## 6. MOUNTING OPTION (配件選擇)

TYPE	
Option N1	With NUTS #4-40 Threaded Riveted On Face Side.
Option N2	With NUTS #4-40 Threaded Riveted On Rear Side.
Option N3	With NUTS #4-40 Threaded Riveted Brackets (Board Locks).
Option N1N6	With NUTS #4-40 Threaded Riveted On Face Side and Jack Screws Assembled.
Option N2N6	With NUTS #4-40 Threaded Riveted On Rear Side and Jack Screws Assembled.
Option N3N6	With NUTS #4-40 Threaded Riveted Brackets and Jack Screws Assembled.



## 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 10 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 10 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. (測試產品端子間以及端子與接地間的電壓)
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 200 cycles specified at the rate of 25mm/min (重復進行配合產品 200 次插拔.)
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 10 Seconds (焊接時間：3~10 秒) Peak Temperature: 260-5/+0°C. (最高溫度：260-5/+0°C.)



## PRODUCT SPECIFICATION OF OUPIIN

Material Housing : 023-PBT (Black)

[SGS Test Report Click here](#) 如需 SGS 測試報告請點選此處

Material Housing : 001-PBT (White)

[SGS Test Report Click here](#) 如需 SGS 測試報告請點選此處

### 長春人造樹脂廠股份有限公司

台北市松江路三〇一號七樓

**CHANG CHUN PLASTICS CO., LTD.**

NO.301, SONGKIANG ROAD, 7<sup>TH</sup> FL.,  
TAIPEI, 10477 TAIWAN

TEL:886-2-25001883  
FAX:886-2-25018018

#### CCP PBT 4830BK PROPERTIES

MATERIAL : PBT4830BK

VENDOR: CHANG CHUN PLASTICS CO., LTD.

TEST ITEM	TEST METHOD	UNIT	QC RANGE
比重 (SPECIFIC GRAVITY)	ASTM D-792		≥ 1.57
灰份 (ASH)		%	28-32
抗張強度 (TENSILE STRENGTH)	ASTM D-638	KG/CM <sup>2</sup>	≥ 1000
伸長率 (ELONGATION)	CCP METHOD	%	≥ 3.0
抗折強度 (FLEXURAL STRENGTH)	ASTM D-790	KG/CM <sup>2</sup>	≥ 1500
抗折模數 (MODULUS)	ASTM D-790	KG/CM <sup>2</sup>	≥ 70000
衝擊強度 (IMPACT STRENGTH, NOTCHED)	ASTM D256	KG-CM/CM	≥ 7.0
熔融指數 (MELT INDEX)	ASTM D-1238	g/10MIN	14-26



# PRODUCT SPECIFICATION OF OUPIIN

Material Housing :UL

QMFZ2 Component - Plastics      Wednesday, May 25, 2005      E59481

**CHANG CHUN PLASTICS CO LTD**  
7TH FL 301 SONGKIANG RD TAIPEI TW

Material Designation: **PBT-4830**

Product Description: Polybutylene Terephthalate (PBT), glass reinforced, designated "LONGLITE" furnished as pellets.

Color	Min. Thick. (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str	IEC GWIT	IEC GWFI
ALL	3.0-3.2	V-0	0	1	75	75	75	-	-

**CTI: 3    IEC CTI (V): -    HVTR: 2    D495: 7    IEC Ball Pressure (°C): -**

Dielectric Strength (kV/mm): -	Volume Resistivity (10 <sup>12</sup> ohm-cm): -	Dimensional Stability(%): -
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: 9/1/1987      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.



# PRODUCT SPECIFICATION OF OUPIIN

Material Contact : Copper Alloy (Brass)

[SGS Test Report Click here](#)

[如需 SGS 測試報告請點選此處](#)



## REPORT OF MATERIAL TEST

DATE: NOV. 27, 2008

Customer: 亞松貿易有限公司	Commodity: C 2690 R BRASS STRIP ( H )	台正字第 3544 號
Applied Standard: CNS 4393 Brass Sheets, Plates and Strips		

### 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.			
7BA014B	0.300	623.000		65.197	0.018	0.003	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	-			
								105 - 175	-	-
7BA014B	0.300	623.000		GOOD.	GOOD.	49.06	20.78	153.0 - 154.0	0.015	26.1

QC Supervisor

**MINCHALI METAL INDUSTRY CO., LTD.**  
 11, Pei Yuan Road, Chung Li City, Taiwan, R. O. C.



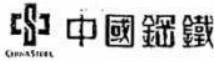


# PRODUCT SPECIFICATION OF OUPIIN

Material Shell : Steel (Shell-Nickel)

[SGS Test Report Click here](#)

[如需 SGS 測試報告請點選此處](#)



品質證明書  
TEST CERTIFICATE

中國鋼鐵股份有限公司  
CHINA STEEL CORPORATION  
中華民國台北市大港街中興路  
TAIPEI, REPUBLIC OF CHINA  
TEL: 88620 2311 1111 FAX: 88620 2311 4090-9127

客戶名稱 YUNG FA STEEL & IRON INDUSTRY CO., LTD.		產品名稱 CR SHEET-COIL																					
規格名稱 JIS G3141 SPCC-SU, OILED, (G&Z, UE)		件號號碼 ZY7444H360	證明書編號 9300680160																				
R-35		客戶編號 35A89006	中鋼分庫編號 LC5003C																				
CSC MILL INSPECTION		交還日期 JUN 01, 2004	證明書日期 JUN 01, 2004																				
T/C 01		客戶打單編號 01000000																					
項目	產品序號	尺寸	規格	爐號	鋼捲號碼	試片號碼	拉伸試驗	#05	化學成份														
NO	NO	厚度 MM	寬度 MM	長度 MM	重量 KGS	HEAT NO	COIL NO.	SAMPLE ID.	Y.S.	T.S.	EL.	PH	C	Mn	P	S	Si	NI	Cr	Mo	Al	...	
SPECIFICATION																							
002	F405280	0.40	1215	COIL	10.734A095	100830	100836	176	31642.5	41			3	13	12	10							61
	F405640	"	"	"	10.740R530	A48058	A48058	166	31642.5	35			3	13	12	10							53
	F743356	"	"	"	10.658R530	A48058	A48058	179	31642.5	37			4	14	12	10							53
	F743357	"	"	"	10.688R530	A48059	A48059	172	31641.5	37			4	14	12	10							53
004	F748818	0.50	1215	COIL	10.688R530	A48059	A48059	172	31641.5	37			3	12	12	10							53
	F748819	"	"	"	10.538R538	120768	120768	161	30345.5	43			3	12	12	10							53
003	F743381	0.20	1215	COIL	10.658R200	A48209	A48209	102	30848.5	38			3	12	12	10							48
	F745415	"	"	"	10.710H374	114994	114994	173	31744.5	41			3	12	12	10							57
			TOTAL:		9.95.680								2	16	10	8							48
													2	17	12	8							57
註釋	#01 拉伸試驗		TENSILE TEST												KG/MM2 = N/MM2 / 9.80665								
NOTE	#05 硬度試驗		HARDNESS TEST												(IMP. FOR REFERENCE ONLY)								
SURVEYOR TO		茲證明本表所列產品，均經材料規格製造及試驗，其符合規格之要求。 WE HEREBY CERTIFY THAT MATERIAL DESCRIBED HEREIN HAS BEEN MANUFACTURED AND TESTED WITH SATISFACTORY RESULTS IN ACCORDANCE WITH THE REQUIREMENT OF THE ABOVE MATERIAL SPECIFICATION.																					
		YC Huang for 冶查技術處處長 GENERAL MANAGER METALLURGICAL DEPARTMENT																					



# PRODUCT SPECIFICATION OF OUPIIN

Material Screw : Copper Alloy (Brass-C3604)

[SGS Test Report Click here](#)

[如需 SGS 測試報告請點選此處](#)

MAR 10 2007 10U 11:29 AM

A0004/011717

P. 003

元祥金屬工業股份有限公司  
 YUANG - HSIAN METAL INDUSTRIAL CORP.  
 彰化市 50042 彰水路 175 號  
 175, CHANG SHOEI ROAD, CHANG HUA TAIWAN R. O. C.  
 TEL : (04)7524626-8 FAX : 886-4-7611717

## 試驗報告表

CE/2007/41609

廠商名稱					日期	2007年04月18日
試材名稱	銅合金 (Copper Alloys)	合金編號	C3604-3A	炉次編號	20070402AB05	
化學試驗 (Chemical Testing)						
試驗方法	X-線光譜分析法					
使用儀器名稱	X光電腦分析儀 (VACUUM X RAY SPECTROGRAPH)					
元素名稱	標準含量(%)	試片含量(%)	元素名稱	標準含量(%)	試片含量(%)	
銅 (Cu)	57.0-61.0	58.8	錫 (Sn)	Fe+Sn<1.2	0.3	
鋅 (Zn)	REM	REM	鐵 (Fe)	<0.5	0.3	
鉛 (Pb)	<3.5	2.5	錳 (Mn)	————	————	
鎘 (Cd)	<0.0050	<0.0050	銻 (Sb)	————	————	
汞 (Hg)	<0.0075	<0.0075	鋁 (Al)	————	————	
六價鉻 (Cr <sup>6</sup> )	<0.0075	<0.0075	其他(Others)	————	————	
備註	DIA. 13.0 mm (C3604BD)					
分析員	蔡聰銘		主管	張國桐		