



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.
Centronic Connector Straight Type	5972-A40xxxA	5972D02009

PRODUCT NAME (產品名稱)	DOCUMENT No.: (文件編號)	Rev. (版本)	OUPIIN
Centronic Connector Straight Type (RoHS)	5972 spec-A	A1(I522)	(歐品)
	Approved (核準)	Checked (審核)	Prepared (製作)
	Q.A. Section Chief	Jack Hsing	2020.08.27



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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 Centronic Connector 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 Centronic Connector 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)

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 (額定電流)

Rating current is 5 A.

額定電流 5 A。

3.7 STORAGE AND OPERATING TEMPERATURE(儲存與使用溫度)

Temperature range: -55°C~+105°C, including terminal temperature rise for rating current.

溫度範圍：-55°C~+105°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)

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 235~245°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235~245°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.)



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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 5cycles 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5次，每組測試有5個樣品)



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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. (產品應符合適用產品圖紙的要求)	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) EIA-364-18
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迴路中測試：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. Condition B (500 V DC±10%). (測試產品端子間以及端子與接地間的電阻) (500V DC±10%)
4. Dielectric Strength (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)	EIA-364-20 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. Connector Mated / Unmated Force (產品插拔力)	Mated force : 0.35 Kgf max. Unmated force : 0.03 Kgf min. 插入力: 0.35 Kgf 最大 拔出力: 0.03 Kgf 最小	EIA-364-31 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)
6. Durability (Repeated Mating/Unmated) (耐久性)	Contact Resistance: 60 mΩ Max. after testing. (測試後接觸阻抗最大 60mΩ)	EIA-364-09B The sample should be mounted the tester and fully mated and unmated 500 cycles specified at the rate of 200±50 cycles/hour (重復進行配合產品 500 次插拔.)



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<p>7. Humidity (恆溫恆濕)</p>	<p>After testing, no damage, Contact Resistance 60 mΩ max.. Dielectric Strength should be OK, Insulation Resistance should be 1000 MΩ min. (測試後,產品無損壞, 接觸阻抗 : 60 mΩ 最大 ; 耐電壓測試 OK, 絕緣阻抗 1000MΩ 最小)</p>	<p>EIA-364-31 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. (時間 : 96 小時)</p>
<p>8.High temperature (高溫)</p>	<p>After testing, no damage, Contact Resistance 60 mΩ max. (測試後,產品無損壞, 接觸阻抗 : 60 mΩ 最大.)</p>	<p>EIA-364-17 Subject product to 105±2°C for 96 hours continuously. (產品置於 105±2°C 連續 96 小時)</p>
<p>9. Thermal shock (熱衝擊)</p>	<p>After testing, no damage, Contact Resistance 60 mΩ max. (測試後,產品無損壞, 接觸阻抗 : 60 mΩ 最大.)</p>	<p>EIA-364-32 Temperature range from -55°C to +105°C . Start from -55°C, after 30 min. change to +105°C; change time is no more than 30 seconds. Total 5 cycles. (溫度變化範圍 : -55°C~ +105°C ; 從 -55°C 開始 , 30 分鐘後換到+105°C ; 轉換時間不超過 30 秒 ; 共 5 個循環.)</p>
<p>10. 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>EIA-364-52 Soldering time: 3 to 5 Seconds (焊接時間 : 3~5 秒) Soldering Temperature: 240±5°C. (焊接溫度 : 240±5°C.)</p>
<p>11. Resistance to Wave Soldering Heat (耐焊接熱)</p>	<p>After testing, no damage. (測試後,產品無損壞.)</p>	<p>EIA-364-56 Solder Temp. : 260±5°C, 10±0.5sec. (焊錫溫度 : 260±5 °C , 10±0.5 秒)</p>



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Material Housing : I522-D-SUB 系列 藍

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長春人造樹脂廠股份有限公司

台北市 10477 松江路三零一號七樓

CHANG CHUN PLASTICS CO.,LTD.

TLX:2253 LONGLITE

NO.301 SONGKIANG ROAD, 7FL., TAIPEI, 10477 TAIWAN

FAX: (02)25033378

CABLE ADDRESS: LONGLITE TAIPEI

TEL: (02)25038131

材 質 證 明

MATERIAL FORMULATION CONFIDENTIAL REPORT

廠商 Customer :

材質名稱 Type of Material : PBT (Poly Butylene terephthalate)聚丁烯對苯二甲酸酯
規格 Grade : PBT 4830-NCB

說明 Description :

PBT 4830-NCB 複合材料包含 PBT 純樹脂、玻纖、溴化耐燃劑及少量添加劑。

The raw material of PBT 4830-NCB compound contains PBT pure resin, glass fiber, flame retardant, and few of additives.

PBT 複合材料成分表

Chemical Composition of PBT Compound

組成		規格		4830-NCB
Chemical Composition		Molecular formula	CAS Number	含量(%) Content (%)
1	PBT 樹脂 PBT resin	$(C_{12}H_{12}O_4)_n$	26062-94-2	45~63
2	玻璃纖維 Glass Fiber	$SiO_2 \cdot CaO \cdot Al_2O_3$	65997-17-3	28~32
3	耐燃劑 Flame Retardant	$(C_{18}H_{16}Br_4O_3)_n$ $(C_{16}H_{10}Br_4O_3)_n$	68928-70-1 71342-77-3	6~12
4	耐燃劑 Flame Retardant	Sb_2O_3	1309-64-4	2~4
5	添加劑 Additives	N.A.	NA	1~7

供應商 MATERIAL SUPPLIER

Company: CHANG CHUN PLASTICS CO., LTD. KAOHSIUNG FACTORY

Signature: Ching-Neng Tseng / Deputy Chief Manager / Technical Section

Address: No.14 KUNG-YEH 1ST ROAD, JEN-WU INDUSTRIAL DISTRICT,

KAOHSIUNG, TAIWAN, ROC.

Date: Feb. 22, 2006





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Material Housing :UL

iq.ul.com

Component - Plastics [\[guide info\]](#)

E59481

CHANG CHUN PLASTICS CO LTD

7TH FL, 301 SONGKIANG RD, TAIPEI 104 TW

4830

Polybutylene Terephthalate (PBT), glass reinforced, "LONGLITE", furnished as pellets

Color	Min Thk (mm)	Flame Class	HWI	HAI	RTI Elec	RTI Imp	RTI Str
ALL	3.0-3.2	V-0	0	1	75	75	75

Comparative Tracking Index (CTI): 3
 Dielectric Strength (kV/mm): -
 High-Voltage Arc Tracking Rate (HVTR): 2
 Dimensional Stability (%): -

Inclined Plane Tracking (IPT): -
 Volume Resistivity (10⁸ ohm-cm): -
 High Volt, Low Current Arc Resis (D495): 7

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: 1987-09-01

Last Revised: 2006-08-02

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IEC and ISO Test Methods

Test Name	Test Method	Units	Thk (mm)	Value
Flammability	IEC 60695-11-10	Class (color)	3.0-3.2	V-0 (ALL)
Glow-Wire Flammability (GWF1)	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 Contact : I522-C5191

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MINCHALI		REPORT OF MATERIAL TEST 材料測試報告		
No.: 4C1065		DATE: DEC.22,2015		
Customer 顧客名稱: 國泰精密股份有限公司 Commodity 商品名稱: C 5191 R PHOSPHOR BRONZE STRIP (H) Applied Standard 引用標準: JIS H 3110 Phosphor bronze sheets, plates and strips				
Manufacture No.	鋼捲編號	40C027A	40C027B	
(Specification)	產品規格	Standard		
Thickness (mm)	產品厚度	0.300	0.300	
Width (mm)	產品寬度	623.000	623.000	
Length (mm)	產品長度			
(Chemical Analysis Test)	化生測試			
P(%)	磷	0.030 - 0.350	0.065	0.065
Pb(%)	鉛	max. 0.0200	0.0024	0.0024
Zn(%)	鋅	max. 0.200	0.007	0.007
Fe(%)	鐵	max. 0.100	0.004	0.004
Sn(%)	錫	5.500 - 7.000	5.928	5.928
Cu+Sn+P(%)	銅錫磷	min. 99.500	99.970	99.970
(Mechanical & Physical Test)	物性測試			
Thickness Test (mm)	厚度測試	-0.010 +0.000	0.300	0.300
Width Test (mm)	寬度測試	-0.10 +0.00	6000	6000
Tensile Strength (kgf/mm ²)	抗拉強度	60.00 - 70.00	60.19	60.19
Elongation (%)	伸長率	min. 20.00	25.54	25.54
Hardness Test (Hv)	硬度	185.0 - 195.0	186.0 - 188.0	186.0 - 188.0
Grain Size (mm)	結晶粒徑	-	0.010	0.010
Electric Conductivity (%)	導電率	min. 13.00	14.40	14.40
Camber (mm/M)	彎曲度	-	-	-
(Other Information)	其他資訊			
Delivery No.	出貨單號	400449	400449	
2434 2580				
QA Supervisor: 黃志平		A040406 D4803702CH		MINCHALI METAL INDUSTRY CO., LTD. 名佳利金屬工業股份有限公司 11,Pei-Yuan Road, Chung-Li Dist, Tao-Yuan City, Taiwan, R.O.C. Tel : (03)4526141-5 (03)4526017-9 Fax : (03)4514870






PRODUCT SPECIFICATION OF OUPIIN

Material Shell : I522-L 片

[SGS Test Report Click here](#)

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		品質證明書 TEST CERTIFICATE		中國鋼鐵股份有限公司 CHINA STEEL CORPORATION 中華民國高雄市小港區中鋼路1號 1 CHUNG KANG ROAD HIAO KANG, KAOHSIUNG(K12) TAIWAN, REPUBLIC OF CHINA, TEL:(07)802-1111 FAX:(07)802-2511,(07)801-9427 FD112-01 0410																	
客戶名稱 SOLD TO				產品名稱 PRODUCT	CR SHEET-COIL																
規格名稱 SPEC	JIS G3141 SPCC-SD, OILED. (CQ2, UE)			發票號碼 INVOICE NO.	RW67381406																
檢驗 INSP.	CSC MILL INSPECTION	T/C	O2	客戶編號 CUSTOMER NO.	35489006																
				中鋼訂單編號 CSC ORDER NO.	DC3255D																
				交運日期 SHIPPING DATE	JAN. 02, 2007																
				證明書日期 T/C ISSUE DATE	JAN. 03, 2007																
項目 ITEM NO.	產品序號 LABEL NO.	尺寸 MATERIAL DESCRIPTION	爐號 HEAT NO.	鋼捲號碼 COIL NO.	試片編號 SAMPLE ID.	拉伸試驗 G.L.=50 Y.S. T.S. EL.	硬度 % RB	化學成份 CHEMICAL ANALYSIS %						備註 REMARK							
		厚度 THICK	寬度 WIDTH	長度 LENGTH	數量 QTY	重量 WGT			C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Al			
		MM	MM	MM		KGS			2	2	3				2			3			
									X10	X10	X10				X10			X10			
018	F008384	0.40	1218	COIL	1	10.02065205	331867	331867	168	32344.8	37									4.1	
	F009109	"	"	"	1	6.45040345	082832	082832	171	32043.8	36									4.1	
	F009111	"	"	"	1	11.18040345	082832	082832	171	32043.8	36									"	
	F009574	"	"	"	1	7.29840345	0828302	0828302	146	29046.8	33									"	
	F009575	"	"	"	1	7.41840345	0828302	0828302	146	29046.8	33									"	
	F878674	"	"	"	1	7.83665451	081385	081385	156	30645.1	33									53	
	F878675	"	"	"	1	7.81065451	081385	081385	156	30645.1	33									53	
	F878923	"	"	"	1	5.43840344	082831	082831	157	31044.8	36									56	
	F878924	"	"	"	1	6.71040344	082831	082831	157	31044.8	36									56	
						TOTAL:	9	70.150													
註釋 NOTES	*01 拉伸試驗 TENSILE TEST		*05 硬度試驗 HARDNESS TEST		KG/MM2 = N/MM2 / 9.80665 INF: FOR REFERENCE ONLY																
SURVEYOR TO	茲證明本表所列產品，均依材料規格製造及試驗，並符合規格之要求。 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.																 冶金技術處處長 GENERAL MANAGER, METALLURGICAL DEPARTMENT				