



PRODUCT SPECIFICATION

產品規格書

產品名稱 Description	產品料號 Part No.	圖號 Drawing No.
4191 Series	4191-MEC1SR	4191-D0000-001
	4191-PinS1C1R	4191-D0000-002
	4191-FxxHB	4191-D0000-003

PRODUCT NAME 產品名稱	DOCUMENT No.: 文件編號	Rev. 版本	OUPIIN
4191 Series	Q4191-PSS-001	B	歐品電子
	Approved 核准	Checked 審核	Prepared 制作
	Q.A. Section Chief	Joseph Yen	2016/12/28

1. SCOPE 適用範圍

This product specification defines the product performance and the test methods to ascertain the performance of the 4191 Series, which is designed and manufactured by Oupiin Electronic Co., Ltd. This product specification is applicable but not only for those part numbers which be shown in the cover page.

本產品規格書規定了由歐品電子有限公司設計生產的 4191 Series 型連接器產品的特性及測試方法。本產品規格書適用於但不局限於封面所顯示的產品料號。

2. REFERENCE DOCUMENTS 參考文件

MIL-STD-1344	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
JIS C 0051	Test method for electrical components 電子零件測試方法
MIL-G-45204C	Specification for gold plating 鍍金規格
IEC-512-3	IEC standard for current carrying capacity tests IEC電流測試標準
QQ-N-290A	Specification for nickel plating 鍍鎳規格
MIL-P-81728A	Specification for tin/lead plating 鍍錫鉛規格
MIL-T-10727B	Specification for tin plating 鍍錫規格
UL1977	UL standard for safety of attachment plug and receptacle UL安規要求標準

3. FEATURE & DIMENSIONS 特征及尺寸

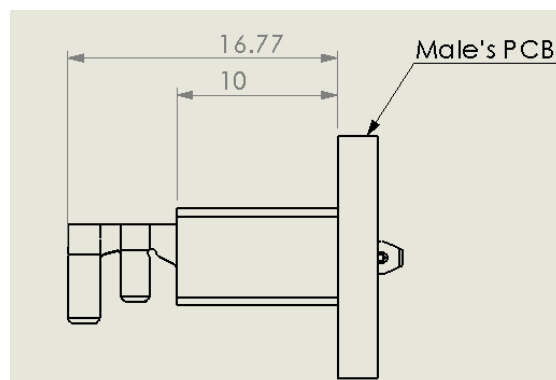
3.1. PRODUCT DIMENSION 產品尺寸

These connectors shall have the dimensions as shown in drawing.

本產品的相關尺寸參見圖面。

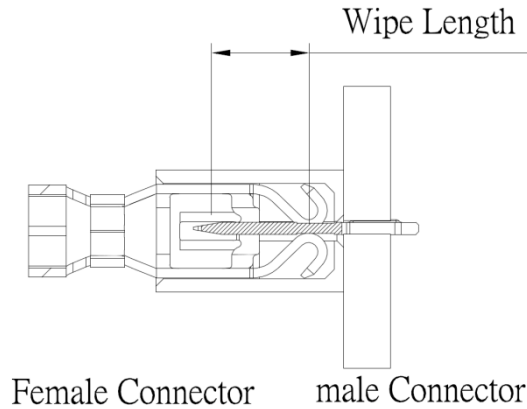
3.2.MALE AND FEMALE PRODUCT 公母產品裝配

3.2.1.Male female assembly dimension 公母產品裝配尺寸



3.2.2 Capability for products wipe length

產品接觸長度等級



CONTACT	MATING LEVEL	WIPE LENGTH(MIN)
Power Pin	1	5.38mm

3.3. 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 參見圖面。

3.4. BILL OF MATERIAL 材料清單

Harmful material controlling follows the requirements of RoHS. The bill of material 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見圖面。

3.5. 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參見圖面。

3.6. 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。

3.7 RATING CURRENT AND RATING VOLTAGE 額定電流與額定電壓

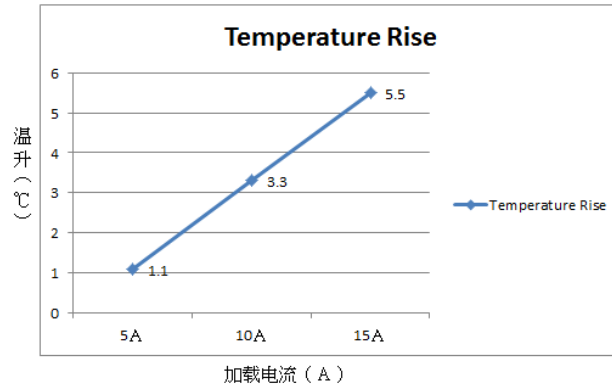
Rating Voltage:250VAC Rating Current:15A

額定电压：250VAC 額定电流：15A

3.8 TEMPERATURE RISE 溫升

1.Chart of Temperature rise vs current

加載電流對應溫升曲線圖



3.9 STORAGE AND OPERATING TEMPERATURE 存貯與使用溫度

Temperature range: $-40^{\circ}\text{C}\sim+65^{\circ}\text{C}$, including terminal temperature rise for rating current.

Storage Temperature : $0^{\circ}\text{C}\sim+40^{\circ}\text{C}$, Humidity: 80%RH under.

溫度範圍： $-40^{\circ}\text{C}\sim+65^{\circ}\text{C}$,包含接觸端子的額定電流溫升.

儲存溫度： $0^{\circ}\text{C}\sim+40^{\circ}\text{C}$ ，濕度：80%RH以下

4. PERFORMANCE AND TEST DESCRIPTION 性能及測試

4.1. 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列的機械，電氣及環境要求。

4.2. 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。

4.3. 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 at least.

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，每組測試至少有5個樣品。

Table I: Test Requirements and Methods

附表一：測試要求與方法

Items 項目	Requirements 要求	Test Methods 測試方法
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	Power pin: 5mΩ Max initial. Power pin 初始狀態 5mΩ Max	Subject mated contacts assembled in housing to closed circuit of 20 mA max. 所述固定端子連結到一個封閉回路中測試, 電流 20 mA max, 電壓 20 mV max。
	Per EIA 364 TP06 適用：EIA 364 TP06	
3. Contact Retention Force 端子保持力	50N/Pin Min 每支最小 50N	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。
	Per EIA-364-29 规范: EIA-364-29	
4. Total Mating /Un-mating Force 插入力/拔出力	Power Pin 插入力: 50N 最大 Power Pin 拔入力: 7N 最小	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
	Per EIA-364-37B 適用：EIA-364-37B	
5. Thermal Shock 溫度衝擊	After testing, no damage, Contact Resistance: Maximum Change: Power Contact: 1.0 milliohm. 測試後： 接觸阻抗電源PIN最大變化1.0mΩ。	Temperature range from -55°C to +105°C. Start from -55°C, after 30 minutes, change to +105°C; change time is no more than 5 minutes, total 5 cycles. EIA-364-32 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 5 分鐘，共 5 個循環。適用：EIA-364-32
	Per EIA-364-32 適用：EIA-364-32	



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<p>6. Humidity- Temperature Cycle 溫濕度循環</p>	<p>After testing, no damage, Contact Resistance: Maximum Change: Power Contact: 1.0 milliohm. 測試後: 接觸阻抗電源 PIN 最大變化 1.0mΩ。</p> <hr/> <p>Per EIA-364-31B 適用：EIA-364-31B</p>	<p>Subject product to 25~65°C, 50-80%.R.H Test time 240 hous. 產品置於 25~65°C,相對濕度：50-80%,测试时间 240 小时。</p>
<p>7. Salt Spray 鹽霧</p>	<p>After testing, no damage, Contact Resistance: Maximum Change: Power Contact: 1.0 milliohm. 測試後: 接觸阻抗電源 PIN 最大變化 1.0mΩ。</p> <hr/> <p>Per MIL-STD-202, Method 101, condition B 適用：MIL-STD-202，方法101，條 件B。</p>	<p>5±1% salt concentration(PH=7.0) ,48 hours 35±2°C:MIL-STD-202, Method 101, condition B. 鹽水濃度 5±1%(PH=7.0),時間 48 小時，溫度 35±2°C。適用：MIL-STD-202，方法 101，條件 B。</p>
<p>8.High Temperature Life 高溫老化</p>	<p>After testing, no damage, Contact Resistance: Maximum Change: Power Contact: 1.0 milliohm. 測試後: 接觸阻抗電源 PIN 最大變化 1.0mΩ。</p> <hr/> <p>Per MIL-STD-202 Method A 適用：MIL-STD-202，條件A。</p>	<p>Subject product to 125°C for 96 hours continuously. 產品置於 125°C 連續 96 小時。</p>



PRODUCT SPECIFICATION OF Oupiin

Material Housing : 004-PBT

[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 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 4130

說明 Description :

PBT-4130 複合材料包含 PBT 純樹脂、玻纖、溴化耐燃劑及少量添加劑。
PBT 4130 完全符合 RoHS 指令的規定。

The raw material of PBT-4130 compound contains PBT pure resin, glass fiber, flame retardant, and few of additives. Our PBT-4130 are completely up to the regulations specified in RoHS directive.

PBT 複合材料成分表

Chemical Composition of PBT Compound

組成		規格	4130	
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	40~56
2	玻璃纖維 Glass Fiber	$SiO_2 \cdot CaO \cdot Al_2O_3$	65997-17-3	30
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	12~17
4	耐燃劑 Flame Retardant	Sb_2O_3	1309-64-4	2~5
5	添加劑 Additives	N.A.	NA	0~6

供應商 MATERIAL SUPPLIER

Company: CHANG CHUN PLASTICS CO., LTD KAOHSIUNG FACTORY

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

Address: No.14 KUNG-YEH 1ST ROAD, JEN-WU INDUSTRIES DISTRICT,
KAOHSIUNG, TAIWAN, ROC.

Date: Sep.09, 2006





PRODUCT SPECIFICATION OF Oupiin

Material Housing :UL

UL iQ for Plastics Yellow Card

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QMFZ2 Component - Plastics

Monday, February 26, 2007

E59481

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

Material Designation: **4130 (a)**

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	0.40	V-0	4	0	75	75	75	-	-
	0.74	V-0	4	0	120	120	140	-	-
	1.5	V-0	3	0	120	120	140	-	-
	3.0	V-0	2	0	120	120	140	-	-

CTI: 2 IEC CTI (V): - HVTR: 4 D495: 7 IEC Ball Pressure (°C): 210

Dielectric Strength (kV/mm): 28 Volume Resistivity (10⁹ohm-cm): 14 Dimensional Stability(%): -
ISO Tensile Strength (MPa): - ISO Flexural Strength (MPa): - ISO Heat Deflection (°C): -
ISO Tensile Impact (kJ/m²): - ISO Izod Impact (kJ/m²): - ISO Charpy Impact (kJ/m²): -

(a) Ball pressure temperature of 210 C in accordance with IEC.695.10.2 and IEC 950.5.4.10

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 ULI.

[http://iq.ul.com/iq/ULiQ_MyLink/card.asp?\[card\]=246783](http://iq.ul.com/iq/ULiQ_MyLink/card.asp?[card]=246783)

2007/7/25

Material Pin-S1 : Copper Alloy (C18400)

[SGS Test Report Click here](#)

[如需 SGS 測試報告請點選此處](#)



INSPECTION REPORT

客戶名稱 CUSTOMER	弘振企業股份有限公司
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鎧蔚企業有限公司
METALEX ENTERPRISE CO., LTD
 No.108-3, Sec. 1, Guangfu Rd., SanChong District,
 New Taipei City 24158, Taiwan
 TEL : +886-2-2278-1989 FAX : +886-2-2999-9687

品名 PRODUCT	C18400-R540	母料號碼 LOT NO	C09I12-1F	日期 DATE	2014/10/23
規格 SIZE	0.64 X 310	重量 QUANTITY	1454 KG	序號 NO.	131000015

化學成份 CHEMICAL COMPOSITION

成分符號 ELEMENT	Cu	CR	ZR						
規格 SPEC (%)	MIN	0.2	0.03						
	MAX	1.2	0.3						
分析值 ANALYSIS VALUE	99.2250	0.5686	0.1509						

機械特性試驗 MECHANICAL TESTING

項目 ITEM	抗拉強度 Tensile Strength N/mm ²	屈服強度 Yield Strength N/mm ²	伸長率 Elongation %	導電率 Electrical Conductivity %IACS	硬度 Hardness (for reference only) HV
規格 MIN	540	500	4	83	150
SPEC MAX	630				190
實測值 MEASURED VALUE	555	510	9.5	90.12	156

尺寸量測 GEOMETRICAL DIMENSIONS

項目 ITEM	厚度 Thickness (mm)	寬度 Width (mm)	粗糙度 Ra um		
規格 MIN	0.610	309			
SPEC MAX	0.670	311	0.15		
實測值 MEASURED VALUE	0.640	310	0.07-0.08		

備註 REMARKS

*厚度 ≤ 0.12T 以下者, 硬度僅供參考.

責任者

品質擔當者

Theresa
2014.10.23
黃秀玲

柯智鴻 10/23

黃
2014-10-28
筱微

Material Pin-ME : Copper Alloy (Brass C2680)

[SGS Test Report Click here](#)

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REPORT OF MATERIAL TEST
材料測試報告

ISO 9001
ISO/TS 16949
IECQ QC080000
ISO 14001
OHSAS 18001 & TOSHMS

No.: 3C1556

DATE: DEC.26,2014

Customer 顧客名稱 : 歐品電子有限公司
Commodity 商品名稱 : C 2680 R BRASS STRIP (H)
Applied Standard 引用標準 : JIS H 3100 Copper and Copper alloy sheets, plates and strips

Manufacture No.	鋼捲號	3AA046A	
(Specification)	產品規格	Standard	
Thickness (mm)	產品厚度	0.400	
Width (mm)	產品寬度	27.500	
Length (mm)	產品長度		
(Chemical Analysis Test)	化生測試		
Cu(%)	銅	64.000-68.000	64.947
Fe(%)	鐵	max. 0.050	0.013
Pb(%)	鉛	max. 0.0500	0.0003
Zn(%)	鋅	REM.	REM.
(Mechanical & Physical Test)	物性測試		
Thickness Test (mm)	厚度測試	-0.015 +0.010	0.394
Width Test (mm)	寬度測試	-0.10 +0.00	GOOD
Tensile Strength (kgf/mm ²)	抗拉強度	42.00 - 55.00	51.06
Elongation (%)	伸長率	-	17.92
Hardness Test (Hv)	硬度	140.0 - 160.0	158.0 - 160.0
Grain Size (mm)	結晶粒度	-	0.015
Electric Conductivity (%)	導電率	-	26.20
(Other Information)	其他資訊		
Delivery No.	出貨單號	3CA079	
Customer Purchase Order	採購單號	PO.B02A14101603	



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