

Product Name	DL20001 (PH) series	Rev.	A
Part Number.	20001	Date	2013-11-25
CONN TYPE	2.0mm WTB CONN	Page	1/8

Product Specification

Prepared by : Zhang Wen Jing

Date : 2016.03.10

Checked by : LIU BING

Date : 2016.03.10

Approved by : Ren An De

Date : 2016.03.10



Product Name	DL20001 (PH) series	Rev.	A
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Revision History

[illegible]

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1. SCOPE: (适用范围)

1.1 This specification covers production and inspection of Model PH Connector.

本规范内容适用于本公司 PH 型条形连接器产品的生产与检验.

2. Product Classification: (产品分类)

2.1 Poles: 2~18.

接触件数目: 2~18.

2.2 Catalog Identification:

产品型号示例:

10 female contact Housing: PH-10Y.

具有 10 个阴接触件的 PH 型连接器: PH-10Y.

10 male contact Wafer: PH-10AWB.

具有 10 个阳接触件的 PH 型连接器: PH-10AWB.

3. USE CONDITION: (使用条件)

3.1 Ambient temperature Range (环境温度): -25°C~+85°C.

3.2 Applicable Wire Sizes (适用线规): AWG#24~#30.

Insulation O.D. Ø0.9 to 1.5mm.

3.3 Applicable PC board thickness (适用 PC 板厚度): 0.8~1.6 mm.

4. Appearance and Dimension: (外观及尺寸)

4.1 Appearance (外观): Product surface without defect: dirt, crack, and mechanical damage, contact without rust, plating not oxidized and not peeled.

产品表面不应有对制品有害的缺陷、污垢、裂痕及机械损伤; 接触件无锈蚀、镀层氧化、脱落等现象.

4.2 Dimension (外形尺寸): According to drawings. 依照附图所示.

4.3 Exchangable (互换性): Exchangable with same specification products.

相同规格应能互换.

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5. Material: (材料)

P/N (零件名称)	Type (类型)	Material (材料)	Finish (表面处理)	Explain (说明)
Terminal	Contact (插簧)	Phosphor bronze (磷青铜)	Tin Plated.	RoHS Compliant
Wafer (针座)	Contact (插针)	Brass (黄铜)	Tin Plated over Nickel	
	Welding piece (焊片)	Brass (黄铜)	Tin Plated.	
	Plastic (塑壳)	LCP UL94V-0	Color:Nature (颜色: 本色)	
Housing (孔座)	Plastic (塑壳)	Nylon UL94V-0 (2)	Color:Nature (颜色: 本色)	

6、Electrical Performance: (电气性能)

NO. (序号)	Item (项目)	Requirement (技术要求)
6.1	Voltage Rated (额定电压)	100V AC.DC.
6.2	Current Rated (额定电流)	2A AC.DC.
6.3	Contact Resistance (接触电阻)	$\leq 20 \text{ m}\Omega$
6.4	Insulation Resistance (绝缘电阻)	$\geq 1000 \text{ M}\Omega$
6.5	Dielectric Strength (耐压)	800V AC/minute

7、Mechanical Performance: (机械性能)

NO. (序号)	Item (项目)	Requirement (技术要求)
7.1	Male contact Retention force (PIN 针固定力)	$\geq 12\text{N}$ (per pin)

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7.2	Female contact Retention force (端子固定力)	$\geq 10\text{N}$ (per pin)
7.3	Welding piece contact Retention force (焊片固定力)	$\geq 4\text{N}$ (per pin)
7.4	Plug-in force (插入力)	$\leq 6\text{N}$ (per pin)
7.5	Plug-out force (拔出力)	$\geq 2\text{N}$ (per pin)

8、Endurance Characteristics: (环境性能)

NO. (序号)	Item (项目)	Requirement (技术要求)
8.1	Soldering rest (可焊性)	Time (时间): $2.5 \pm 0.5\text{S}$; Temperature (温度): $235 \pm 5^\circ\text{C}$; Area of Soldering (焊锡面): $\geq 90\%$
8.2	Resistance to Soldering Heat (耐焊接热)	Time (时间): $5 \pm 1\text{S}$; Temperature (温度): $260 \pm 5^\circ\text{C}$; Appearance (外观): No Damage (无损坏)
8.3	Heat test (耐热性)	Time (时间): 96h Temperature (温度): $+85 \pm 3^\circ\text{C}$; Appearance (外观): No Damage (无损坏) Contact resistance (接触电阻): $\leq 40\text{ m}\Omega$
8.4	Cold test (耐冷性)	Time (时间): 48h Temperature (温度): $-25 \pm 3^\circ\text{C}$; Appearance (外观): No Damage (无损坏) Contact resistance (接触电阻): $\leq 40\text{ m}\Omega$

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8.5	Temperature Cycling (温度循环)	Low temperature (低温): $-25\pm3^{\circ}\text{C}$ High temperature (高温): $+85\pm3^{\circ}\text{C}$; For 5 cycles.test after keeping in Normal condition for 30 min. 5 次循环后, 放置在正常环境中 30 分钟, 再进行测试 Appearance (外观): No Damage (无损坏) Contact resistance (接触电阻): $\leq 40\text{ m}\Omega$
8.6	Invariablenes humidity (恒定湿热)	Temperature (温度): $60\pm2^{\circ}\text{C}$ Relative humidity (相对湿度): 90%-96% RH; Time (时间): 96h Appearance (外观): No Damage (无损坏) Contact resistance (接触电阻): $\leq 40\text{ m}\Omega$ Insulation Resistance 绝缘电阻: $\geq 1000\text{ M}\Omega$
8.7	Salt Spray (盐雾试验)	Salt concentration (浓度): $5\pm1\%$ Temperature (温度): $35\pm2^{\circ}\text{C}$ Testing time (时间): $24\pm2\text{h}$ After salt is removed by running wafer and a drop is removed , it is measured. 把试验样品从试验箱顶悬挂下来, 采用浓度为 $(5\pm1)\%$ 的氯化钠溶液, 连续雾化 24h, 试验后用流动的蒸馏水轻轻洗去表面沉积物. 在常温常驻湿条件下恢复 1-2h. 外观无明显损伤 Appearance (外观): 外观无明显损伤 Contact resistance (接触电阻): $\leq 40\text{ m}\Omega$

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9、Packaging Transportation Storage: (包装 运输 贮存)

9.1 Packaging (包装)

The inside plate is affixed with qualified certificate, indicating product name, specification, model and quantity production date.

内盘装贴合格证, 注明产品名称、规格型号、数量生产日期.

- (2) Exterior package is carton, facing the packing list, the packing list marked with product name, specification model, quantity, date of dispatch.

外包装为纸箱, 贴装箱单, 装箱单上注明产品名称、规格型号、数量、出货日期.

- (3) The product in the box must not rock.

产品在箱内不晃动.

9.2 Transportation (运输)

Allow for any way transportation, can't get wet and mechanical injury.

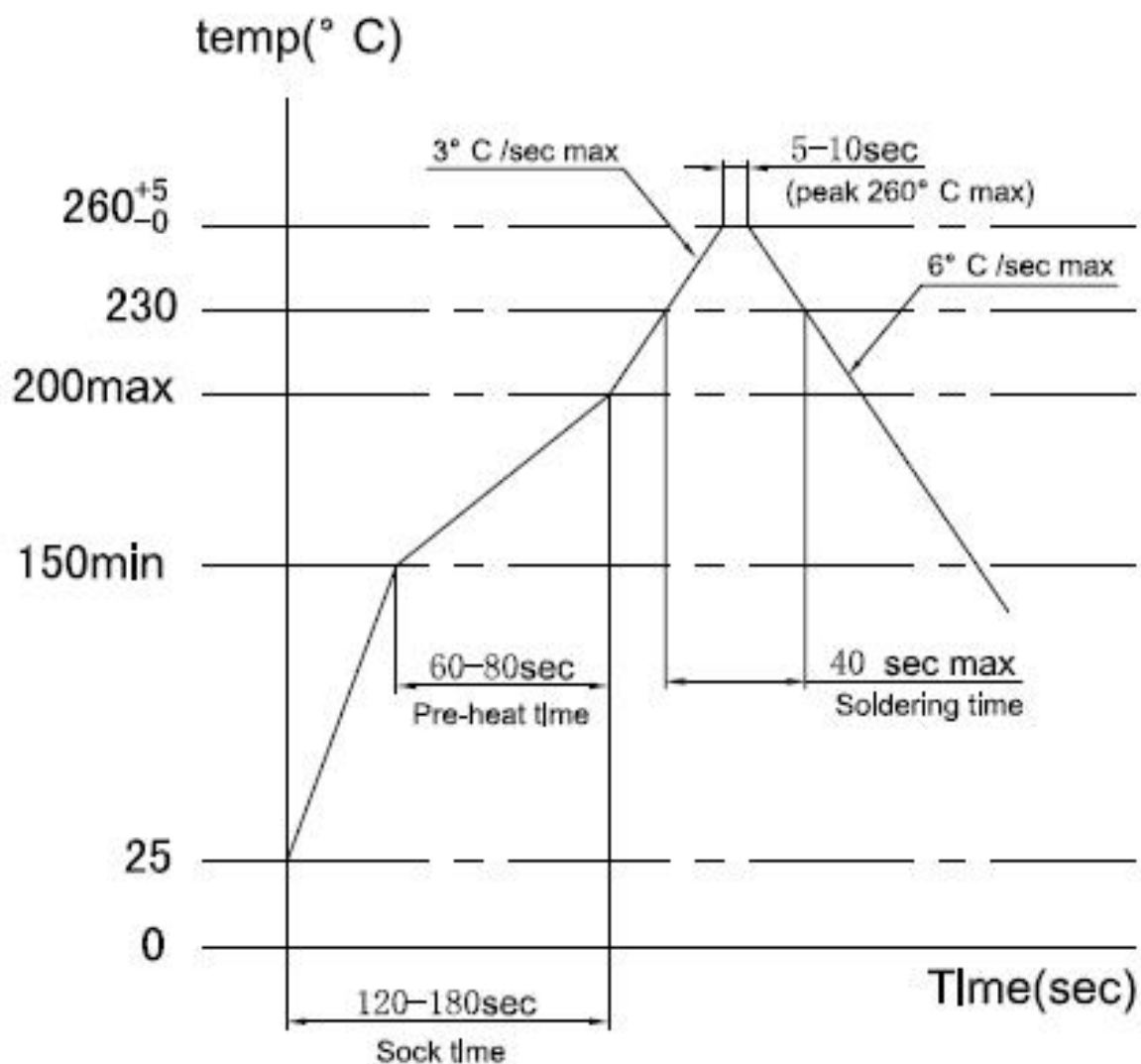
允许用任何方式运输, 勿淋湿及机械性损伤.

9.3 Storage (贮存)

The connector of packing finished should be in the ambient temperature between -10°C to $+40^{\circ}\text{C}$, relative humidity $\leq 80\%$. To store in storehouse does not have acidic, alkaline air and other corrosive gas in the ambient air.

包装完毕的连接器应在环境温度 $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$, 相对湿度 $\leq 80\%$, 周围空气中没有酸性, 碱性及其它腐蚀性气体的库房中贮存.

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回流焊温度曲线图

REV.	REVISION DESCRIPTION	DATE	APPD

NOTES

Available in 02 through 20 Circuits.
Match with DL20001 series housing.
Material : Nylon UL94V-0(2).
Accepts DL20001-T Crimp Terminal.

ORDERING INFORMATION

DL 20001	—	XX	Y	—	X	XX	—	XX
1		2	3		4	5		6

- PART NO.
- . NO. OF CIRCUIT
- CONN. TYPE
- MATERIAL: 0: PA66 V0 1: PA66 V1 2: PA66 V2
3: PA66 V0 750℃ 4: LCP 5: PBT 6:PA9T
- COLOR: NA:NATURE RE:RED BR:BROWN
GY:GREY BK:BLACK YE:YELLOW
BL:BLUE GR:GREEN PU:PURPLE PI:PINK
OR:ORANGE TR:TRANSPARENT OT:OTHER
- SERIAL NUMBER: 00.01.02.....

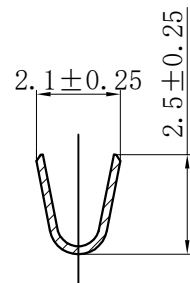
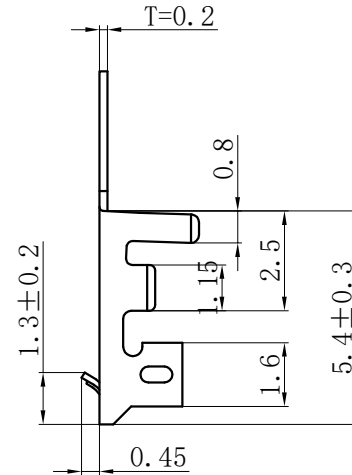
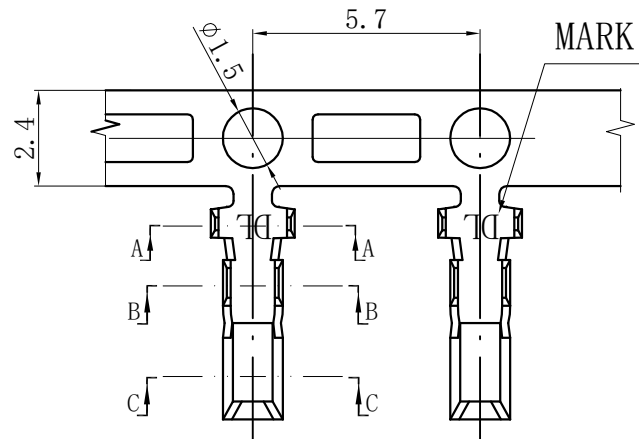
Circuits	Dimension mm			Circuits	Dimension mm		
	A	B	C		A	B	C
2	2.00	5.80	4.55	12	22.00	25.80	24.55
3	4.00	7.80	6.55	13	24.00	27.80	26.55
4	6.00	9.80	8.55	14	26.00	29.80	28.55
5	8.00	11.80	10.55	15	28.00	31.80	30.55
6	10.00	13.80	12.55	16	30.00	33.80	32.55
7	12.00	15.80	14.55	17	32.00	35.80	34.55
8	14.00	17.80	16.55	18	34.00	37.80	36.55
9	16.00	19.80	18.55	19	36.00	39.80	38.55
10	18.00	21.80	20.55	20	38.00	41.80	40.55
11	20.00	23.80	22.55	—	—	—	—

GENERAL TOLERANCES (UNLESS SPECIFIED)		ZHE JIANG DELI CONNECTORS CO.,LTD			
.X: ± 0.25	X° : ± 3.0°	PRODUCT NAME: DL20001-Y(PH-Y)		TITLE: 2.00 mm Pitch Housing	
.XX: ± 0.15	.X° : ± 2.0°			PART NO: DL20001-XXY-XXX-XX	
.XXX: ± 0.01	.XX° : ± 1.0°	DR:Chen Quan Long	DATE:20/08/01		
FINISH:		CHKD: Wu Hui	DATE:20/08/01	SCALE: N/A	PAGE: 1/1
DRAWING NO: GC-DL20001-XXY-XXX-XX		APPD:Ren An De	DATE:20/08/01	UNITS: mm	REV. : A

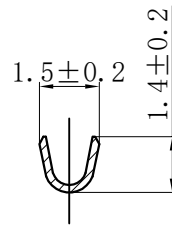
REV.	REVISION DESCRIPTION	DATE	APPD

NOTES

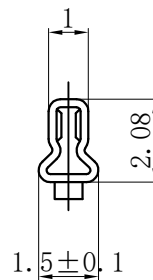
Used in DL20001-Y Series Housing.
Accepts AWG #30~24 Wire Range.
0.05~ 0.22 mm² .
Insulation O.D.=0.9~1.5 mm.
Material : Phosphor Bronze .
Finish: Tin plated.
Qty/Reel: 10,000 PCS.
Thickness: 0.2 mm.



SECTION A-A



SECTION B-B



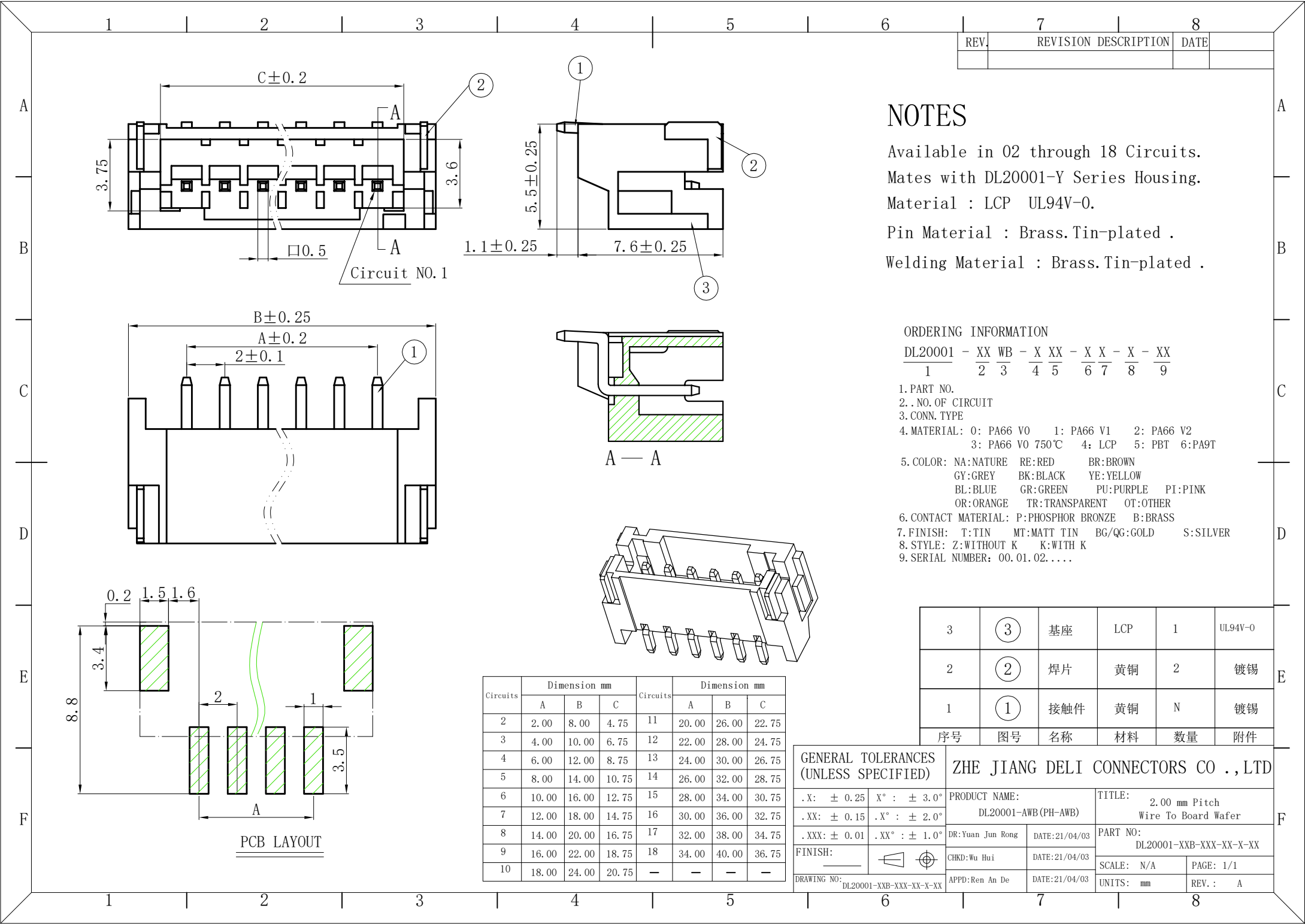
SECTION C-C

ORDERING INFORMATION

DL20001 - T - X - X - X - XX
1 2 3 4 5 6

- PART NO.
- TERMINAL CODE
- MATERIAL TYPE: 1: PHOSPHOR BRONZE 2: BRASS 3: IRON
4: STAINLESS STEEL 5: OTHER
- TECHNICS: 0: UNPLATED 1: FIRST PLATING 2: POST PLATING
3: OTHER
- FINISH: 1: TIN-PLATED 2: MATTE PLATED 3: NICKEL PLATED
4: PICKLING 5: SILVER PLATED 6: GOLD PLATED
7: GALVANIZED 8: OTHER
- SERIAL NUMBER: 00.01.02....

GENERAL TOLERANCES (UNLESS SPECIFIED)		ZHE JIANG DELI CONNECTORS CO., LTD			
.X: ± 0.25	X°: $\pm 3.0^\circ$	PRODUCT NAME: DL20001-T (PH-T)		TITLE: 2.00 mm Pitch Crimp Terminal	
.XX: ± 0.15	.X°: $\pm 2.0^\circ$				
.XXX: ± 0.01	.XX°: $\pm 1.0^\circ$	DR: Chen Quan Long	DATE: 20/01/26	PART NO: DL20001-T-X-X-X-XX	
FINISH:		CHKD: Wu Hui	DATE: 20/01/26		
DRAWING NO: GC-DL20001-T-X-X-X-XX		APPD: Ren An De	DATE: 20/01/26	SCALE: N/A	PAGE: 1/1
				UNITS: mm	REV.: A



REV.	REVISION	DESCRIPTION	DATE

NOTES

Available in 02 through 18 Circuits.
Mates with DL20001-Y Series Housing.
Material : LCP UL94V-0.

Pin Material : Brass.Tin-plated .

Welding Material : Brass.Tin-plated .

ORDERING INFORMATION

DL20001 - XX WB - X XX - X X - X - XX
1 2 3 4 5 6 7 8 9

1. PART NO.
2. . NO. OF CIRCUIT
3. CONN. TYPE
4. MATERIAL: 0: PA66 V0 1: PA66 V1 2: PA66 V2
3: PA66 V0 750℃ 4: LCP 5: PBT 6:PA9T
5. COLOR: NA:NATURE RE:RED BR:BROWN
GY:GREY BK:BLACK YE:YELLOW
BL:BLUE GR:GREEN PU:VIOLET PI:PINK
OR:ORANGE TR:TRANSPARENT OT:OTHER
6. CONTACT MATERIAL: P:PHOSPHOR BRONZE B:BRASS
7. FINISH: T:TIN MT:MATT TIN BG/QG:GOLD S:SILVER
8. STYLE: Z:WITHOUT K K:WITH K
9. SERIAL NUMBER: 00.01.02.....

3	③	基座	LCP	1	UL94V-0
2	②	焊片	黄铜	2	镀锡
1	①	接触件	黄铜	N	镀锡
序号	图号	名称	材料	数量	附件

Circuits	Dimension mm			Circuits	Dimension mm		
	A	B	C		A	B	C
2	2.00	8.00	4.75	11	20.00	26.00	22.75
3	4.00	10.00	6.75	12	22.00	28.00	24.75
4	6.00	12.00	8.75	13	24.00	30.00	26.75
5	8.00	14.00	10.75	14	26.00	32.00	28.75
6	10.00	16.00	12.75	15	28.00	34.00	30.75
7	12.00	18.00	14.75	16	30.00	36.00	32.75
8	14.00	20.00	16.75	17	32.00	38.00	34.75
9	16.00	22.00	18.75	18	34.00	40.00	36.75
10	18.00	24.00	20.75	—	—	—	—

GENERAL TOLERANCES (UNLESS SPECIFIED)		ZHE JIANG DELI CONNECTORS CO., LTD			
.X: ± 0.25	X° : ± 3.0°	PRODUCT NAME: DL20001-AWB(PH-AWB)		TITLE: 2.00 mm Pitch Wire To Board Wafer	
.XX: ± 0.15	.X° : ± 2.0°	DR:Yuan Jun Rong		DATE:21/04/03	
.XXX: ± 0.01	.XX° : ± 1.0°	CHKD:Wu Hui		DATE:21/04/03	
FINISH:		APPD:Ren An De		DATE:21/04/03	
DRAWING NO: DL20001-XXB-XXX-XX-X-XX				SCALE: N/A	
				PAGE: 1/1	
				UNITS: mm	
				REV.: A	

7		8	
REV.	REVISION DESCRIPTION	DATE	APPD.
B	更改产品外观结构	19.3.12	Wu

NOTES

Available in 02 through 18 Circuits.
Mates with DL20001-Y Series Housing.
Material : LCP UL94V-0.
Pin Material : Brass.Tin-plated .
Welding Material :Brass.Tin-plated .

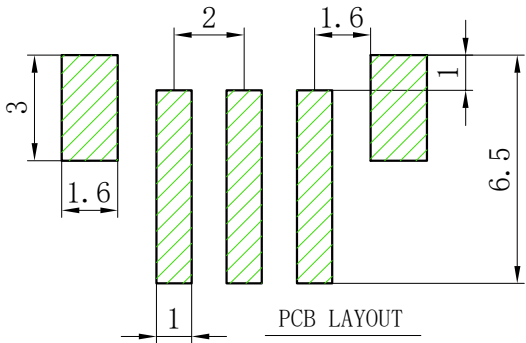
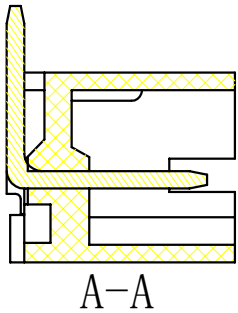
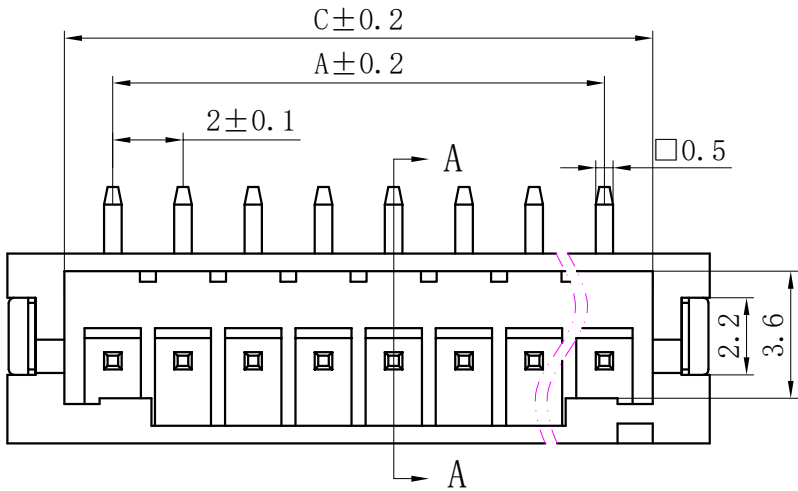
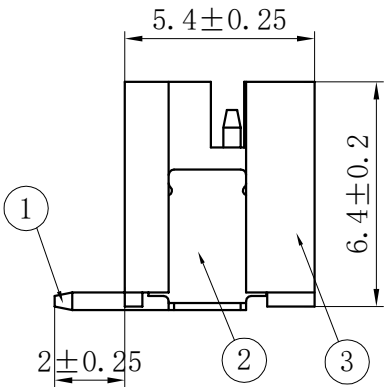
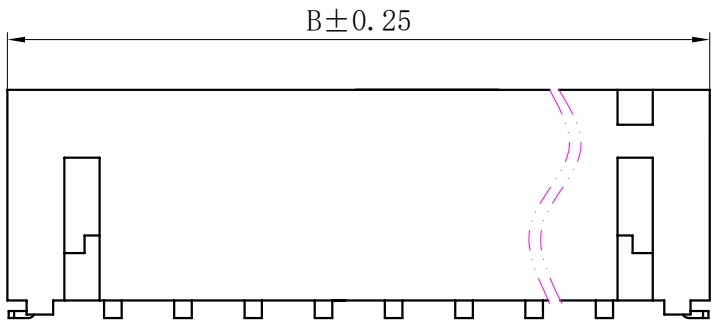
ORDERING INFORMATION

DL20001 - XX B - X XX - X X - X - XX
1 2 3 4 5 6 7 8 9

1. PART NO.
2. .NO. OF CIRCUIT
3. CONN. TYPE
4. MATERIAL: 0: PA66 V0 1: PA66 V1 2: PA66 V2
3: PA66 V0 750℃ 4: LCP 5: PBT 6:PA9T
5. COLOR: NA:NATURE RE:RED BR:BROWN
GY:GREY BK:BLACK YE:YELLOW
BL:BLUE GR:GREEN PU:PURPLE PI:PINK
OR:ORANGE TR:TRANSPARENT OT:OTHER
6. CONTACT MATERIAL: P:PHOSPHOR BRONZE B:BRASS
7. FINISH: T:TIN MT:MATT TIN BG/QG:GOLD S:SILVER
8. STYLE: Z:WITHOUT K K:WITH K
9. SERIAL NUMBER: 00.01.02.....

3	③	底座	LCP	1	UL94V-0
2	②	焊片	黄铜	2	镀锡
1	①	接触件	黄铜	N*	镀锡
序号	图号	名称	材料	数量	附件

GENERAL TOLERANCES (UNLESS SPECIFIED)		ZHE JIANG DELI CONNECTORS CO ., LTD			
.X: ± 0.25	X° : ± 3.0°	PRODUCT NAME: DL20001-AB (PH-AB)		TITLE: 2.00 mm Pitch Wire To Board Wafer	
.XX: ± 0.15	.X° : ± 2.0°	DR: Yuan Jun Rong		DATE:21/12/03	
.XXX: ± 0.01	.XX° : ± 1.0°	CHKD: Wu Hui		DATE:21/12/03	
FINISH:		APPD: Ren An De		DATE:21/12/03	
DRAWING NO: GC-DL20001-XXB-XXX-XX-X-XX		SCALE: N/A		PAGE: 1/1	
		UNITS: mm		REV.: B	



孔位 poles	A	B	C	孔位 poles	A	B	C
2	2.00	8.00	4.75	11	20.00	26.00	22.75
3	4.00	10.00	6.75	12	22.00	28.00	24.75
4	6.00	12.00	8.75	13	24.00	30.00	26.75
5	8.00	14.00	10.75	14	26.00	32.00	28.75
6	10.00	16.00	12.75	15	28.00	34.00	30.75
7	12.00	18.00	14.75	16	30.00	36.00	32.75
8	14.00	20.00	16.75	17	32.00	38.00	34.75
9	16.00	22.00	18.75	18	34.00	40.00	36.75
10	18.00	24.00	20.75	—	—	—	—