



# 深圳市两岸<sup>1</sup>光电科技有限公司

ShenZhen Liang An Photoelectricity Technology Co.,Ltd.

## 产品规格书

### SPECIFICATION

**Customer/ 客户名称:** \_\_\_\_\_

**Part NO./ 产品型号:** LA-DZT01W5W0503DH-R2

**Description /产品描述:** 5W 暖白COB

**Deliver date/送样日期:** \_\_\_\_\_

#### Engineering Department/工程部

Approved/制表	Checked/审核	Approved/核准
陈萌		

#### Customer confirm and sign/客户承认签核

Test /检测	Checked/审核	Approved/核准
Approved Result/承认结果	<input type="checkbox"/> OK	<input type="checkbox"/> NG
Remark/说明:		

Address/ 地址: 深圳市宝安区石岩第三工业区 1 号楼 6 楼

Tel/电话: 0755-36870390

Fax/传真: 0755-27655460

Http://www.aa-led.com

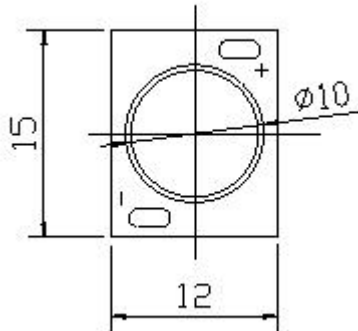


## Product Description 产品描述

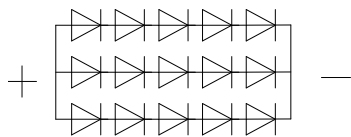
### Application 用途

- LED downlight 筒灯
- LED spotlight 射灯
- LED bulb 球泡灯

### 尺寸图



### 线路阵列图



5串3并

### Features 特征

- The latest flip chip no gold technology package  
最新倒装无金线工艺封装
- High strength, high insulation  
高强度、高绝缘性
- Silicone Packaging 采用硅胶封装
- Low thermal expansion coefficient  
低热膨胀系数
- Comply with European Union ROHS standards  
符合欧盟ROHS标准
- Long life-span, high performance.  
长寿命、高性能。
- Soft light, no glare.  
光源光线柔和、无眩光。

### 成品图



### Note :

- 1.All dimensions are in millimeters 所有的尺寸单位都是毫米
- 2.No proportional 无比例
- 3.This tolerances of the chart is just for reference 此尺寸图之公差仅供参考

### Caution:

- Several welding on one led is not advocated 不建议进行多次焊接  
t Can be hand soldering, but not reflow soldering 可以手焊，不能回流



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## ■ Absolute Maximum Rating at Ta=25°C (最大绝对参数)

Item	Symbol	Value	Unit
DC Forward Current 正向电流	IF	330	mA
Pulsed Current 脉冲电流	IFM	700	mA
Reverse Voltage 反向电压	VR	60	V
Power Consumption 消耗功率	PD	9	W
Electrostatic Discharge Level (HBM) 静电释放等级(人体模式)		Class 3	
Operation Temperature 工作温度范围	Top	-40~+80	°C
Storage Temperature 存放温度范围	Tstg	-40~+80	°C
Hand Soldering Temperature 手焊温度	Tsol	Max.300°C for 3sec	

### Notes:

- 1.1/10 Duty Cycle,0.1ms Push Width
- 2.1.29mm below package bash
- 3.ESD(HBM) : Class I:0-1999V ; Class II:2000-3999V; Class III:4000-8000V

## ■ Typical Optical/Electrical Characteristics at Ta=25°C

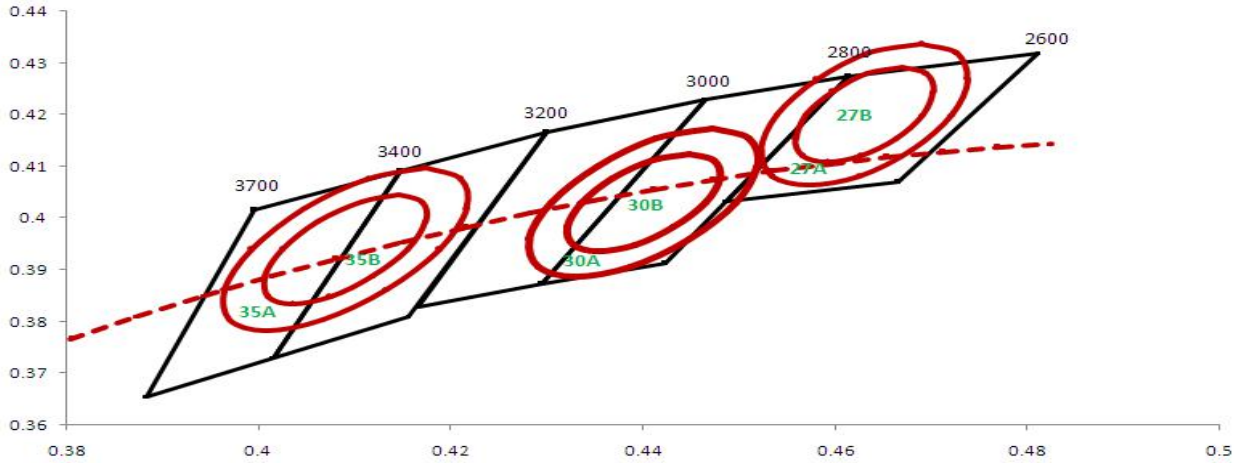
Item	Symbol	Condition	Min	Typ	Max	Unit
Forward Voltage 正向电压	V <sub>F</sub>	I <sub>F</sub> =330MA	15	17	18	V
Reverse Current 逆向电压	I <sub>R</sub>	V <sub>R</sub> =60V			60	uA
Viewing Angle 2 θ 1/2 发光角度		IF=330MA		140		deg
Luminous Flux 光通量	Φ <sub>v</sub>	CCT=3000K	500		700	lm
		CCT=4000K				lm
		CCT=6000K				lm
Thermal Resistance 热阻	R <sub>thj-b</sub>	IF=330MA		2		°C/W
Color Temperature 色温	T <sub>c</sub>	IF=330MA		3000		K
Luminous efficiency 光效	η	I <sub>F</sub> =330MA		110		lm/w
Color Rendering Index 显色指数	R <sub>a</sub>	IF=330MA		82		/
Color Gamut 色域	BIN	IF=330MA		30A		
Continuance Forward Current 持续正向电流	I <sub>F</sub> (RFC)	IF=330MA			700	mA

### Notes:

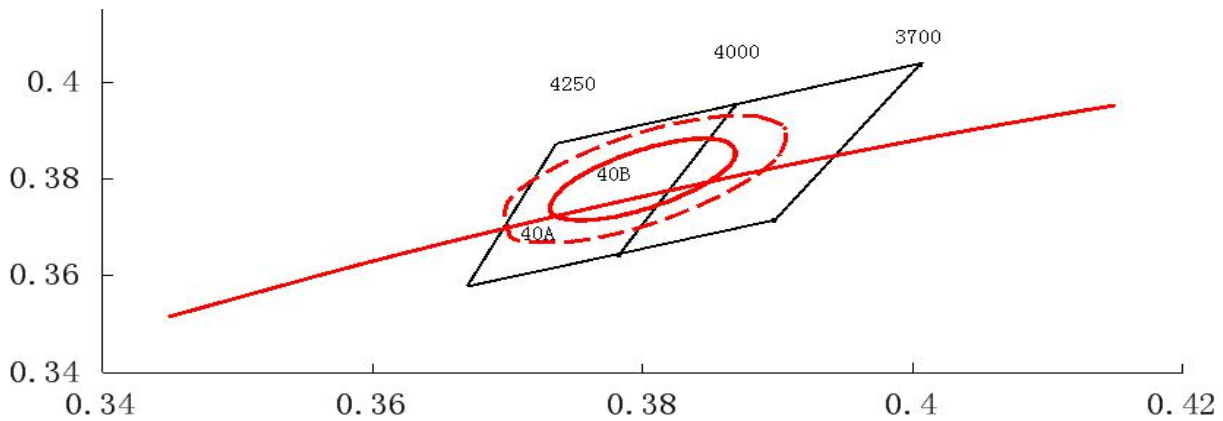
- 1.Metal Core PCB is mounted on the heat Fins 需安装在金属基板上来保证良好散热
- 2.The measurement of Tolerance for forward voltage: ±0.1V 电压测试误差±0.1V
3. The measurement of Tolerance for x/y: ±0.01 色坐标±0.01
4. The measurement of Tolerance for luminous intensity / luminous flux : ±5% 发光强度/光通量测试误差±5%.



## Color & Binning



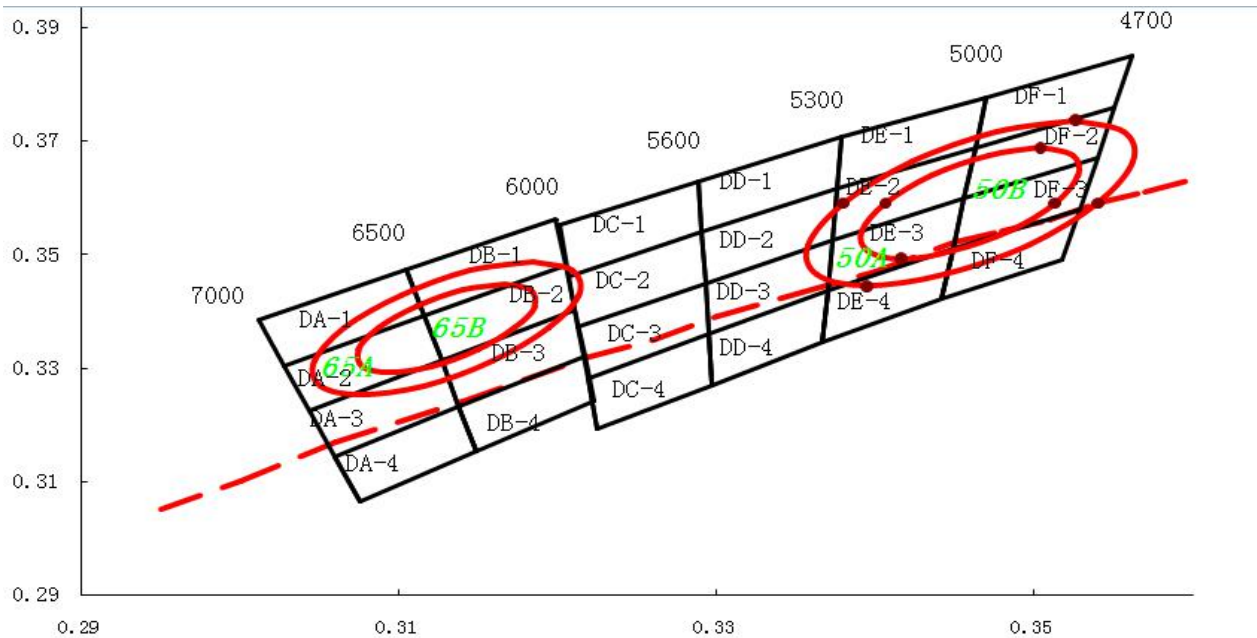
2600-2800		2800-3000		3000-3200		3200-3400		3400-3700	
X	Y	X	Y	X	Y	X	Y	X	Y
0.4614	0.4273	0.4465	0.423	0.4299	0.4165	0.4147	0.409	0.3996	0.4015
0.4487	0.4033	0.4295	0.3873	0.4165	0.3829	0.4015	0.373	0.3884	0.3655
0.4666	0.4069	0.4423	0.3912	0.4295	0.3873	0.4155	0.381	0.4015	0.373
0.481	0.4319	0.4614	0.4273	0.4465	0.423	0.4299	0.4165	0.4147	0.409
0.4614	0.4273	0.4465	0.423	0.4299	0.4165	0.4147	0.409	0.3996	0.4015



3700-4000K		4000-4250K	
X	Y	X	Y
0.3869	0.3955	0.3736	0.3874
0.3783	0.3646	0.367	0.3578
0.3898	0.3716	0.3783	0.3646
0.4006	0.404	0.3869	0.3955
0.3869	0.3955	0.3736	0.3874



## Color & Binning

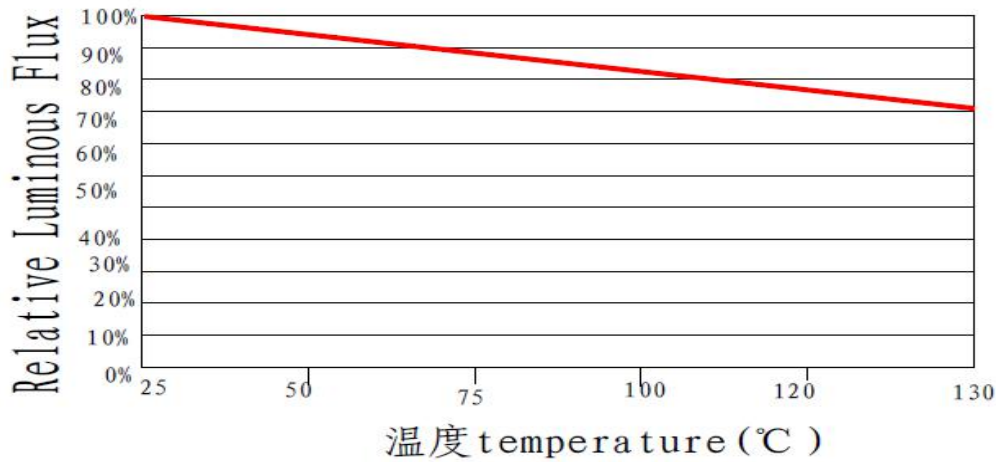
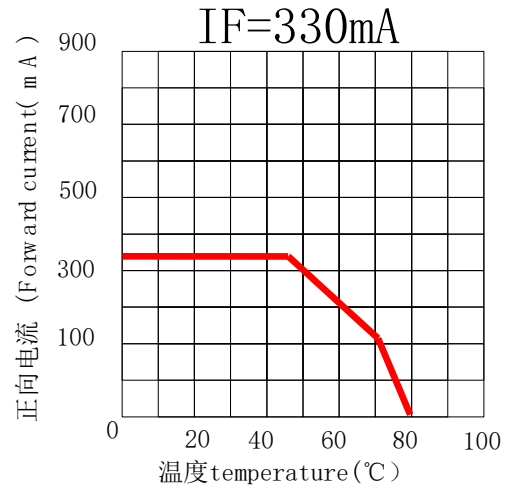
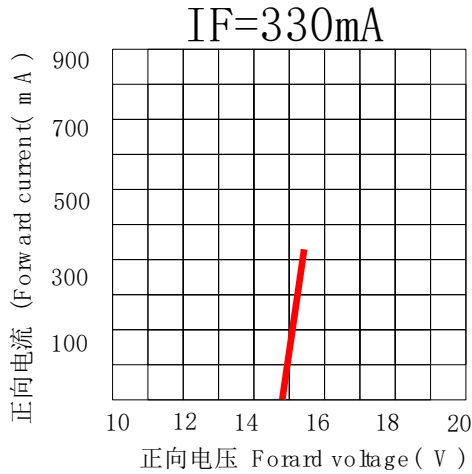


5500-6000K						6000-6500K					
CA-1		CA-2		CA-3		CB-1		CB-2		CB-3	
CIE-X	CIE-Y	CIE-X	CIE-Y	CIE-X	CIE-Y	CIE-X	CIE-Y	CIE-X	CIE-Y	CIE-X	CIE-Y
0.3213	0.3372	0.3219	0.3282	0.3225	0.3192	0.3127	0.3312	0.3138	0.3232	0.3149	0.3152
0.3207	0.3462	0.3213	0.3372	0.3219	0.3282	0.3116	0.3392	0.3127	0.3312	0.3138	0.3232
0.332	0.357	0.332	0.348	0.332	0.339	0.3205	0.3481	0.3211	0.3401	0.3217	0.3321
0.332	0.348	0.332	0.339	0.332	0.33	0.3211	0.3401	0.3217	0.3321	0.3223	0.3241
0.3213	0.3372	0.3219	0.3282	0.3225	0.3192	0.3127	0.3312	0.3138	0.3232	0.3149	0.3152
6500-7000K						6150-6700K		4700-5300K			
CC-1		CC-2		CC-3		65A		50A		50B	
CIE-X	CIE-Y	CIE-X	CIE-Y	CIE-X	CIE-Y	CIE-X	CIE-Y	CIE-X		CIE-Y	
0.3044	0.3224	0.306	0.3144	0.3076	0.3064	0.3077	0.3343	0.3527	0.3736	0.3504	0.3687
0.3028	0.3304	0.3044	0.3224	0.306	0.3144	0.3167	0.3448	0.3540	0.3590	0.3513	0.3590
0.3116	0.3392	0.3127	0.3312	0.3138	0.3232	0.3182	0.3396	0.3380	0.3590	0.3416	0.3493
0.3127	0.3312	0.3138	0.3232	0.3149	0.3152	0.3094	0.3293	0.3395	0.3444	0.3407	0.3590
0.3044	0.3224	0.306	0.3144	0.3076	0.3064						



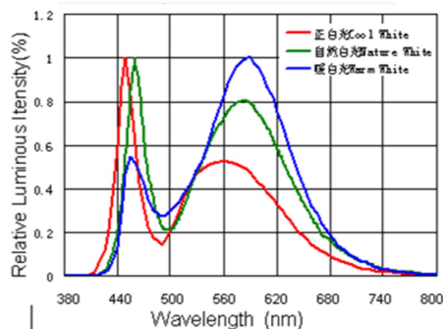
## Typical Characteristics

Typical Electrical/Optical Characteristic Curves(25 ° C Ambient Temperature Unless Otherwise Noted)

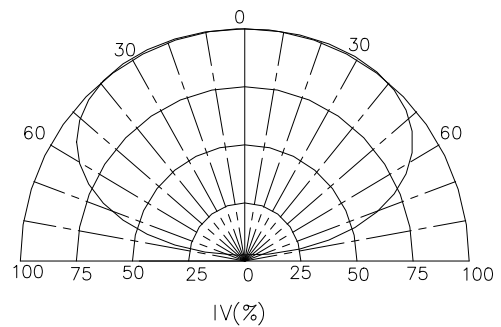


光谱特性图

Relative Spectral Distribution



PATIAL DISTRIBUTION(光分布)







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## 1. Test Items And Result

Test Classification 测试分类	Test Item 测试项目	Test Conditions 测试条件	Test cycle 测试周期	Sample quantity 样品数量	AC/RE 收/退
Life-span Test 寿命测试	Room Temperature DC Operating Life-span Test	Ta=25°C±5°C, IF=330MA	1000 hrs	5pcs	0/1
Configurable Test 结构性测试	Thermal Shock Test 热冲测试	-40°C±5°C←-25°C→+100°C±5°C 15min. 10sec. 15min.	50 cycles	5pcs	0/1
	Temperature Cycle Test 温度周期测试	-40°C±5°C←-25°C→+100°C±5°C 30min. 5min. 30min.	50 cycles	5pcs	0/1
	High Temperature & High Humidity Test 高温高湿测试	Ta=85°C ± 5°C RH =85% ± 5 %RH	1000 hrs	5pcs	0/1
	High Temperature Storage 高温储藏	Ta=100°C ± 5°C	1000 hrs	5pcs	0/1
	Low Temperature Storage 低温储藏	Ta=-40°C ± 5°C	1000 hrs	5pcs	0/1
	Hand Soldering test 手焊测试	Ta=300°C ± 5°C	3sec.	5pcs	0/1

## 2. Criteria for Judging The Damage

Item 项目	Symbol 标志	Test Conditions 测试条件	standard of Judgment 判断标准	
			Min.最小值	Max.最大值
Forward Voltage 正向电压	V <sub>F</sub>	I <sub>F</sub> =330MA		U.S.L.*1.2
Reverse Current 逆向电流	I <sub>R</sub>	V <sub>R</sub> =60V		U.S.L.*2.2
Luminous Intensity 发光强度	I <sub>v</sub>	I <sub>F</sub> =330MA	L.S.L.**×0.7	

U.S.L.\* : Upper Standard Level 高标准水平

L.S.L.\*\* : Lower Standard Level 低标准水平



## Precaution for use使用防范

### 1. 储存 Storage

1. 本产品使用密封防潮静电袋包装，并附有干燥剂及湿度卡

This product packaged with sealing moisture electrostatic bag ,and with desiccant and humidity card

2. 产品须存放在温度 $\leq 30^{\circ}\text{C}$ ，湿度 $\leq 60\%$ 环境中，开封后，应该在24H（1天）内使用完。如使用时间超过24H或包装失效，则须做以下烘烤处理才可使用，烘烤条件：从包装袋取出材料，把材料放在 $75 \pm 5^{\circ}\text{C}$ 烤箱，持续时间为12H。

The product should be stored in the environment of lower than  $30^{\circ}\text{C}$  temperature, humidity lower than 60%. After opening the bag, it should be used in the 24 hours (1 day), if more than 24 H or package failure, it have to be done the following baking processing before using, baking conditions: take out the materials from the bag, and put them in the oven under the temperature of  $75 \pm 5^{\circ}\text{C}$  and bake for 12 Hours.

### 2. 静电 Static Electricity

静电会导致产品特性发生改变，例如正向电压偏低等，如情况严重甚至会导致产品失效。故在使用时必须采取有效的防静电措施。

Static electricity will change the characteristics of product , such as low forward voltage, if the situation is serious, it will result in the failure of the product. So during using, we must take effective anti-static measures.

所有相关的设备和机器都应该正确接地，同时必须采取其他防止静电措施：如使用防静电手环、防静电垫子、工作服及手套等。

All of the relevant equipment and machines should correct grounding, and at the same time we must take other measures to prevent electrostatic, such as using the antistatic hand ring, anti-static mat, uniforms and gloves, etc.

### 3. 清洗 Cleaning

避免使用不明化学液体、酸性溶剂或有机溶剂（如丙酮、天那水等）作为清洗液，在使用溶剂前（如洗板水），请先确认其所含化学成分是否会对环氧树脂、有机硅、基钎镀银层造成腐蚀，并导致 LED 特性改变或功能损坏。本公司推荐使用乙醇作为清洁溶剂，先将灯体表面的杂质轻轻擦拭干净后（防止用力过度擦伤封装胶体或破坏灯体内部结构），放置常温下自然干燥，再开始使用。同时应注意避免将产品浸渍于乙醇溶液中

Avoid using unknown liquid chemical, acidic solvent or organic solvent (such as acetone, thinner etc) as cleaning solvent, before using (such as washing board water), please make sure if the chemicals will cause corrosion to epoxy resin, organic silicon, support silver layer, or cause the LED properties change or function damage.

We recommend using ethanol as cleaning solvent, first wipe gently clean impurities on the surface of the body of the lamp (prevent excessive force abrasions of package colloid or destroy scratch the light's internal structure), then place it under normal temperature, let them natural drying, after that it can be used. And we should avoid dipping the lights in ethanol solution.

### 4. 设计建议 Design Proposals

设计电路时，通过 LED 的电流不能超过规定的最大值，同时还需使用保护电阻，否则，微小的电压变化将会引起较大的电流变化，可能导致产品失效。

LED 的特性容易因为自身的发热和环境的温度的改变而发生改变。温度的升高会降低 LED 的发光效率，影响发光颜色等，所以在设计应充分考虑散热的问题。

When designing circuit, the current can not exceed the specified maximum Value, also required to protect





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resistance, otherwise, tiny voltage change will cause large current changes, may lead to product failure.

The characteristics of led is easy to be changed because of the change of heat from itself and the environmental temperature. Higher temperature will reduce the lighting efficiency of the LED and affect the emitting color. so when design we should fully consider the problem of heat.

### 5.焊接注意事项 Welding note

1、在操作第一步焊盘预粘焊锡时，如果焊锡粘不上，停止焊接，说明电极很有可能被污染，处理方式：A、停止加热（禁止长时间加热）。B、用壁纸刀刮掉电极表面的被污染层，直到露出银本色执行焊接操作流程。

1、in the first operation step on pad the sticky solder, if not solder sticky, stop welding, it means that electrode may be pollution. Handling: A、 stop heating (banned long time heating). B、 hang off the pollution layer on the electrode surface with the wallpaper knife till seeing the new silver ,and then execute the welding operation.

2、电烙铁建议温度：300-350°C/3sec，焊接用操作平台使用导热尽可能差的平台。（陶瓷导热很快，如果平台导热效果很好，就会导致电极焊接锡膏时温度过快导出去，焊盘温度达不到理想，一般这种情况下不能提高焊笔温度，给陶瓷背面垫个热阻很大的材料即可）

2、Recommended temperature of electric soldering iron : 300-350 °C/3sec , to operate welding with poor thermal conductive platform, (ceramic conducts heat quickly, if platform thermal conductivity effects very good, when electrode welding with the Tin Bar the temperature will be dissipated so fast that soldering pad can't reach idea temperature, in this case, we can't elevate temperature of the soldering mouth, but we can pad some material with high thermal resistance at the back of ceramic)