



## SMD SPECIFICATION

Part No./型号 0603LBCT



**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
DISCHARGE  
SENSITIVE  
DEVICES

### 1、Features/特征:

- Emitting Color/发光颜色: Blue/蓝色
- Lens Type/封装特性: Water Clear/无色透明
- Device Outline/外形特征: 1.6×0.8×0.8mm
- RoHS compliant/符合 RoHS 标准

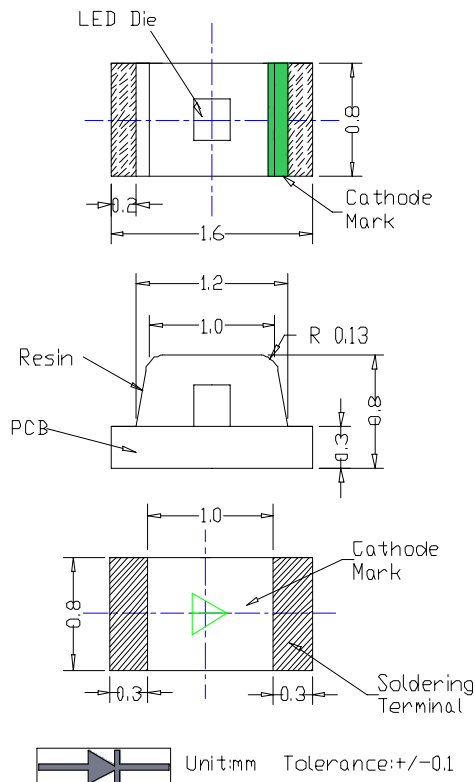
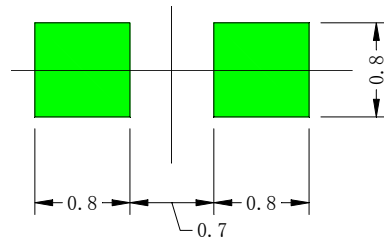
### 2、Applications/应用:

- Backlight for Mobile, Machine Vision, LCD Display/手机、电话、显示屏背光源
- Backlight in Dashboard and switch of Automotive/汽车仪表盘、记程器背光源

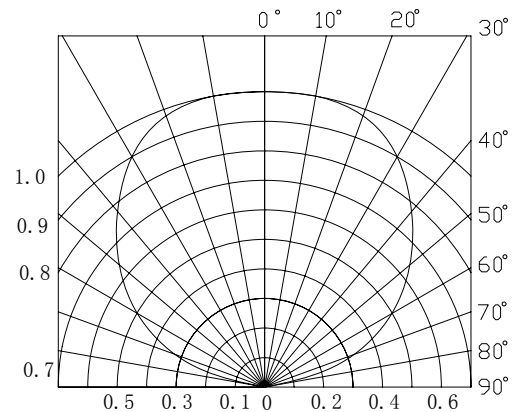
### 3、Outline Dimensions/产品外形尺寸:

被推荐的回焊焊盘尺寸:

Recommended Pad Size



SPATIAL DISTRIBUTION





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#### 4、Absolute maximum ratings/极限参数 (Ta = 25°C)

Parameter 参数	Symbol 符号	Test Condition 测试条件	Value 参数		Unit 单位
			Min.	Max.	
Power Dissipation 损耗功率	Pd	—	—	70	mW
Reverse Voltage 反向电压	VR	IR = 30 μ A	5	—	V
Pulse Current 正向峰值电流	IFp	Duty=0.1, 1kHz	—	100	mA
Forward Current 正向工作电流	IFm	—	—	20	mA
Operating Temperature 工作温度范围	Topr	—	-40	+85	°C
Storage Temperature 储存温度范围	Tstr	—	-40	+85	°C

#### 5、Electrical and optical characteristics/光电参数 (Ta = 25°C)

Parameter 参数	Symbol 符号	Test Condition 测试条件	Value 参数			Unit 单位
			Min.	Typ.	Max.	
Forward Voltage 正向电压	VF	IF =5mA	—	2.9	3.2	V
Reverse Current 反向电流	IR	VR=5V	—	—	30	μ A
Dominate Wavelength 主波长	λ d	IF=5mA	—	470	—	nm
Peak Wavelength 峰值波长	λ p	IF=5mA	—	465	—	nm
Spectral Line half-width 半波宽度	Δ λ	IF=5mA	—	20	—	nm
Luminous Intensity 发光强度	IV	IF=5mA		35	—	mcd
Viewing Angle 发光指向角	2 θ 1/2	IF=5mA	—	120	—	Deg.



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### 6、Intensity and color bin limits (亮度及颜色等级)

#### (1) Intensity bin limits (IF=5mA)

Rank	IV (mcd)	
	Min	Max
E	10	19
F	19	26.6
G	26.6	37.2
H	37.2	52
J	52	72.8

Tolerance:  $\pm 10\%$

#### (2) Color bin limits (IF=5mA)

Rank	$\lambda d$ (nm)	
	Min	Max
B7	460	465
B8	465	470
B9	470	475

Tolerance:  $\pm 1\text{nm}$

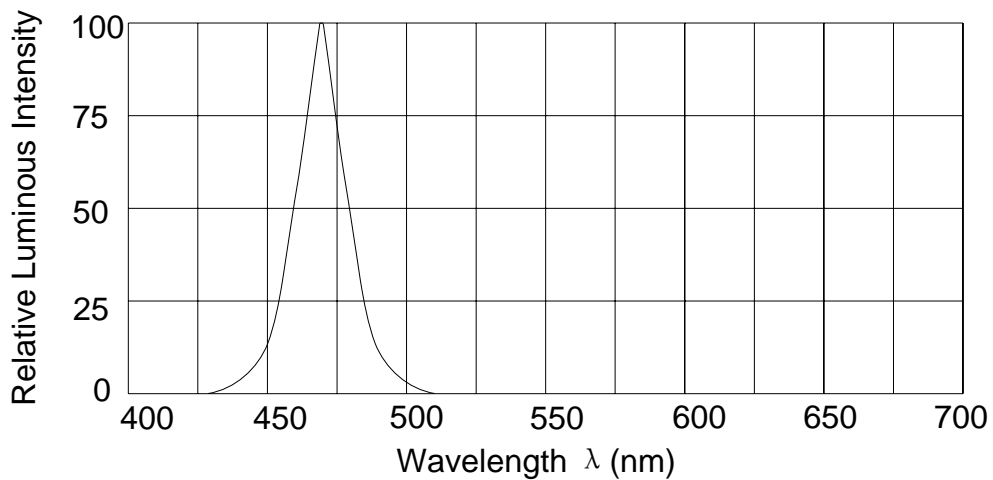
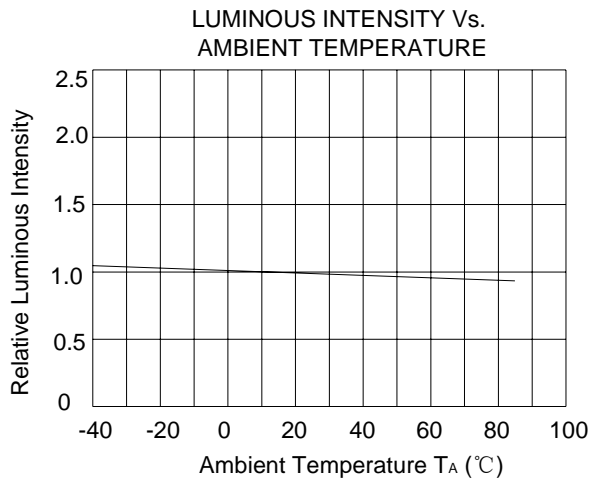
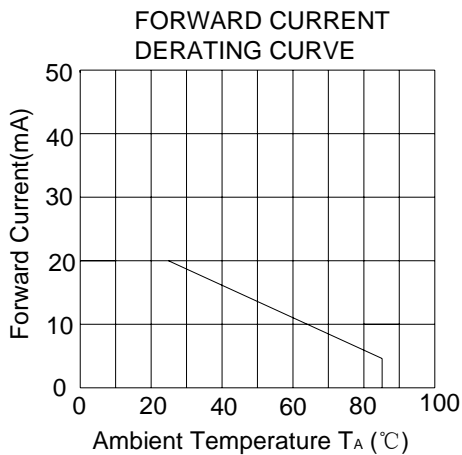
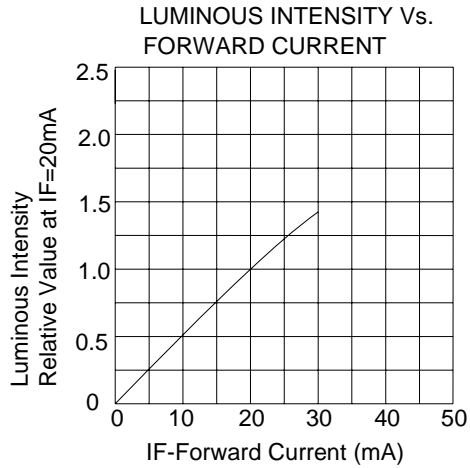
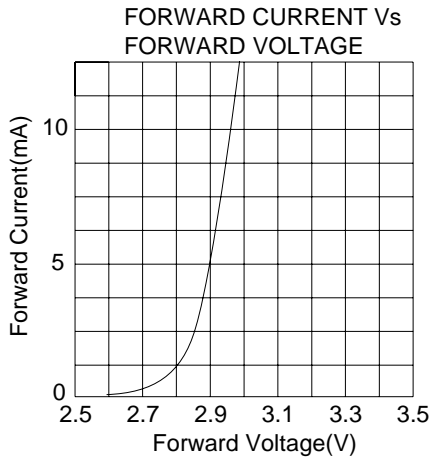
#### Forward voltage bin limits (IF=5mA) <VF 值等级>

Rank	VF (V)	
	Min	Max
H	2.6	2.7
J	2.7	2.8
L	2.8	2.9
N	2.9	3.0
Q	3.0	3.1

Tolerance:  $\pm 0.1\text{V}$



#### 7、Typical electrical/optical characteristic curves/光电特性曲线:





## 8、Reliability Analysis/可靠性分析

### 8.1 Test Items And Results/测试项目和结果

No.	Item/项目	Test Condition/测试条件	Spec. / 引用标准	Q' ty/ 数量	Time/时间	Standard/判定
1	IR Reflow (Reflow Soldering) /回流焊接	Tsld=260°C, 10sec	GB/T 4937, II, 2.2	20	2times	ALL PASS
2	Solder ability/可焊性	Tsld=235±5°C, 3sec			1times Over 95%	ALL PASS
3	Temperature Cycle/ 高低温循环	-40°C—— 100°C 30min ~ 30min The cut is not more than 1 min	GB/T 4937, III, 1	20	50cycles	ALL PASS
4	Moisture Resistance Cyclic /湿热循环	25°C/12hr~ 55°C/12hr 95%RH	GB/T 4937, III, 4	20	6cycles	ALL PASS
5	High Temperature Storage /高温储存	Ta=100°C	GB/T 4937, III, 2	20	1000hrs	ALL PASS
6	Low Temperature Storage /低温储存	Ta=-40°C	GB/T 4937, III, 2	20	1000hrs	ALL PASS
7	Steady State perating Life /电耐久性	IF=20mA Ta=25°C	GB/T18904.3 Part A	20	1000hrs	Iv decay <30%

### 8.2 Criteria For Judging Damage/判断标准

Item/项目	Symbol/符号	Test conditions /测试条件	Criteria for Judgement /判断标准	
			Min./最小值	Max./最大值
Luminous Intensity/亮度	Iv	IF=20mA	Iv*0.7	/
Forward Voltage/正向电压	VF	IF=20mA	/	U. S. L*1.1
Reverse current/反向电流	IR	VR=5v	/	U. S. L*2

\*U.S.L.: Upper Standard Level / 上限

\*L.S.L.: Lower Standard Level / 下限