



SPECIFICATION



ATTENTION

OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES

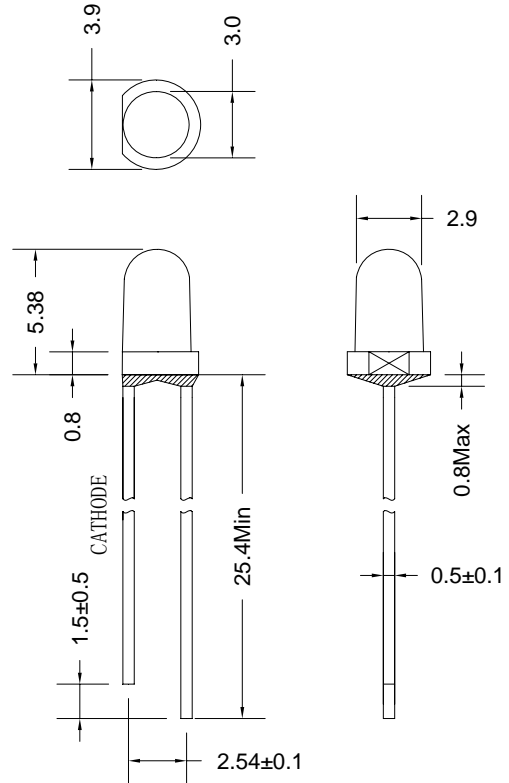
Part No./型号: 330LB7C

Features/特征:

- Single color/单色
- High bright output/高亮度输出
- Low power consumption/低功耗
- High reliability and long life/
可靠性高, 寿命长

Descriptions/描述:

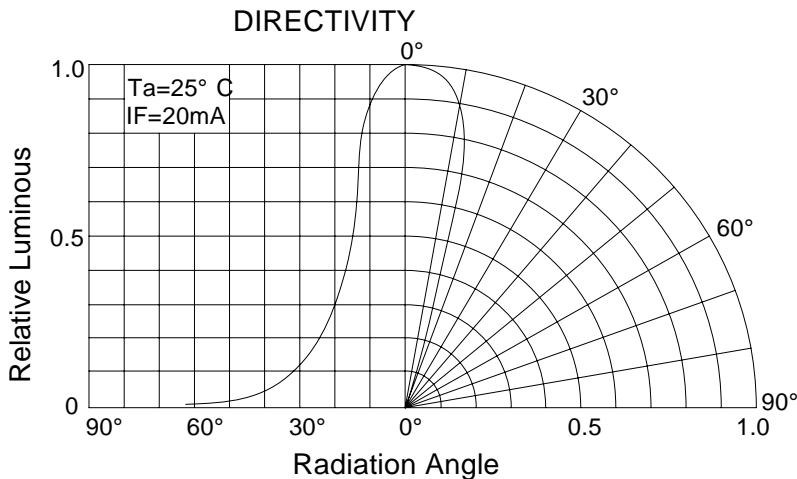
- Dice material/芯片材质: InGaN
- Emitting Color/发光颜色:
Blue/蓝色
- Device Outline/产品外形:
φ 3mm Round Type/3mm 圆形
- Lens Type/胶体颜色:
Water Clear/ 无色透明



NOTE/备注:

- All dimensions are millimeters/单位: mm.
- Tolerance is +/-0.20mm unless otherwise noted
没有标注的公差均为±0.20mm.

Directivity/指向特性:





➤ **Absolute maximum ratings/极限参数 (Ta = 25°C)**

Parameter 参数	Symbol 符号	Test Condition 测试条件	Values 数值		Unit 单位
			Min.	Max.	
Reverse Voltage 反向电压	VR	IR = 30 μ A	5	--	V
Forward Current 正向工作电流	IF	----	----	25	mA
Power Dissipation 损耗功率	Pd	----	----	90	mW
Pulse Current 正向峰值电流	Ipeak	Duty=0.1mS, 1kHz	----	100	mA
Operating Temperature 工作温度范围	Topr	----	-40	+85	°C
Storage Temperature 储存温度范围	Tstr	----	-40	+100	°C

➤ **Electrical and optical characteristics/光电参数 (Ta = 25°C)**

Parameter 参数	Symbol 符号	Test Condition 测试条件	Values 数值			Unit 单位
			Min.	Typ.	Max.	
Forward Voltage 正向电压	VF	IF = 20mA	----	2.8	3.2	V
Reverse Current 反向电流	IR	VR = 5V	----	----	30	μ A
Dominate Wavelength 主波长	λ d	IF = 20mA	----	470	----	nm
Peak Wavelength 峰值波长	λ p	IF = 20mA	----	468	----	nm
Spectral Line half-width 半波长宽度	Δ λ	IF = 20mA	----	20	----	nm
Luminous Intensity 发光强度	IV	IF = 20mA	----	3000	----	mcd
Viewing Angle 指向角度	2 θ 1/2	IF = 20mA	----	26	----	Deg.

➤ **Luminous Intensity Bins (Ta = 25°C)**

Unit:mcd

Bin	U	V	W	X
Min	1520	2130	3000	4180
Max	2130	3000	4180	5860

➤ **Dominate Wavelength Bins**

Unit:nm

Bin	B4	B5
Min	465	470
Max	470	475



BIN ranking for LEDs

BRIGHTNESS BIN

Bin Code	IV(mcd)	Bin Code	IV(mcd)	Bin Code	IV(mcd)	Bin Code	IV(mcd)
A	0-5.0	H	37.2-52.0	Q	390-550	X	4180--5860
B	5.0-7.0	J	52.0-72.8	R	550-770	Y	5860-8200
C	7.0-9.8	K	72.8-102	S	770-1100	Z1	8-10cd
D	9.8-13.7	L	102-145	T	1100-1520	Z2	10-12cd
E	13.7-19.0	M	145-200	U	1520-2130	Z3	12-14cd
F	19.0-26.6	N	200-280	V	2130-3000	Z4	14-16cd
G	26.6-37.2	P	280-390	W	3000-4180	Z5	16-18cd

WAVELENGTH BIN

Ligth Col.	Bin Code	Wavel. (nm)	Ligth Col.	Bin Code	Wavel. (nm)	
BLUE	B1	450-455	YELLOW GREEN	YG1	555-558	
	B2	455-460		YG2	558-561	
	B3	460-465		YG3	561-564	
	B4	465-470		YG4	564-567	
	B5	470-475		YG5	567-570	
	B6	475-480		YG6	570-573	
BLUE GREEN	G1	491-494		YG7	573-576	
	G2	494-497	YELLOW	Y1	582-585	
	G3	497-500		Y2	585-588	
	G4	500-503		Y3	588-591	
	G5	503-506		Y4	591-594	
	G6	506-509		Y5	594-597	
	PURE GREEN	G7	509-512	YELLOW ORANGE	YO1	597-600
		G8	512-515		YO2	600-603
G9		515-518	PURE ORANGE	YO3	603-606	
G10		518-521		YO4	606-609	
G11		521-524		RED	O1	609-612
G12		524-527	O2		612-615	
G13		527-530	O3		615-618	
G14		530-533	R1		618-621	
G15		533-536	R2		621-624	
G16		536-539	R3		624-627	
G17		539-542	R4	627-630		
G18		542-545	R5	630-633		
G19		545-548	R6	633-636		

FORWARD VOLTAGE (VF) BIN

Bin Code	VF (V)	Bin Code	VF (V)	Bin Code	VF (V)	Bin Code	VF (V)
V1	1.6-1.8	V5	2.4-2.6	V9	3.2-3.4	V13	4.0-4.2
V2	1.8-2.0	V6	2.6-2.8	V10	3.4-3.6	V14	4.2-4.4
V3	2.0-2.2	V7	2.8-3.0	V11	3.6-3.8	V15	4.4-4.6
V4	2.2-2.4	V8	3.0-3.2	V12	3.8-4.0	V16	4.6-4.8



➤ Typical electrical/optical characteristic curves/光电特性曲线:

Fig.1 正向电流 Vs. 正向电压

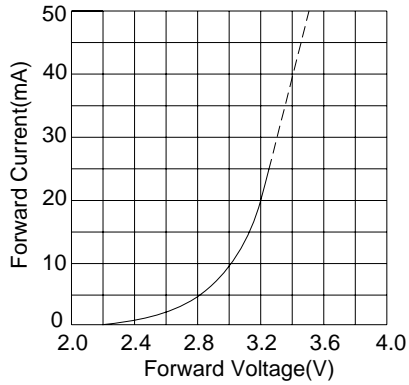


Fig.2 相对亮度 Vs. 正向电流

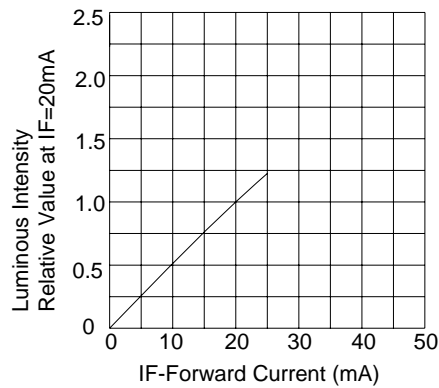


Fig.3 正向电流 Vs. 环境温度

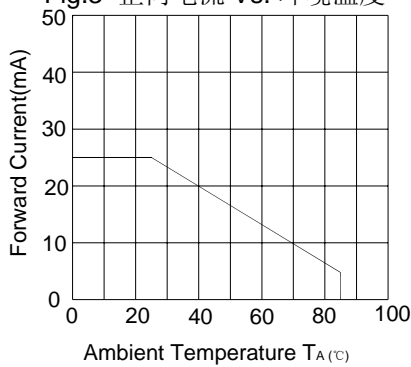
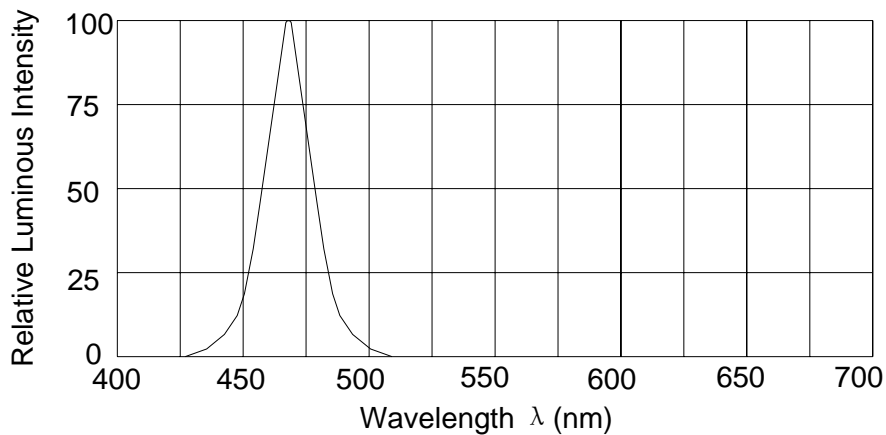
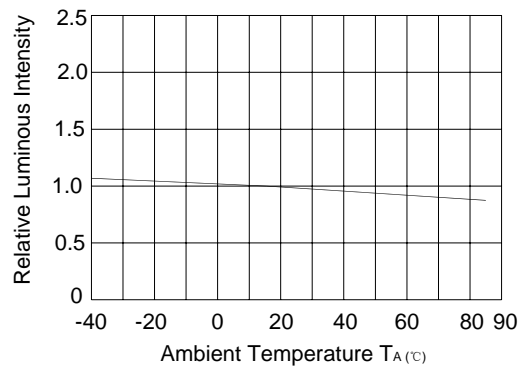


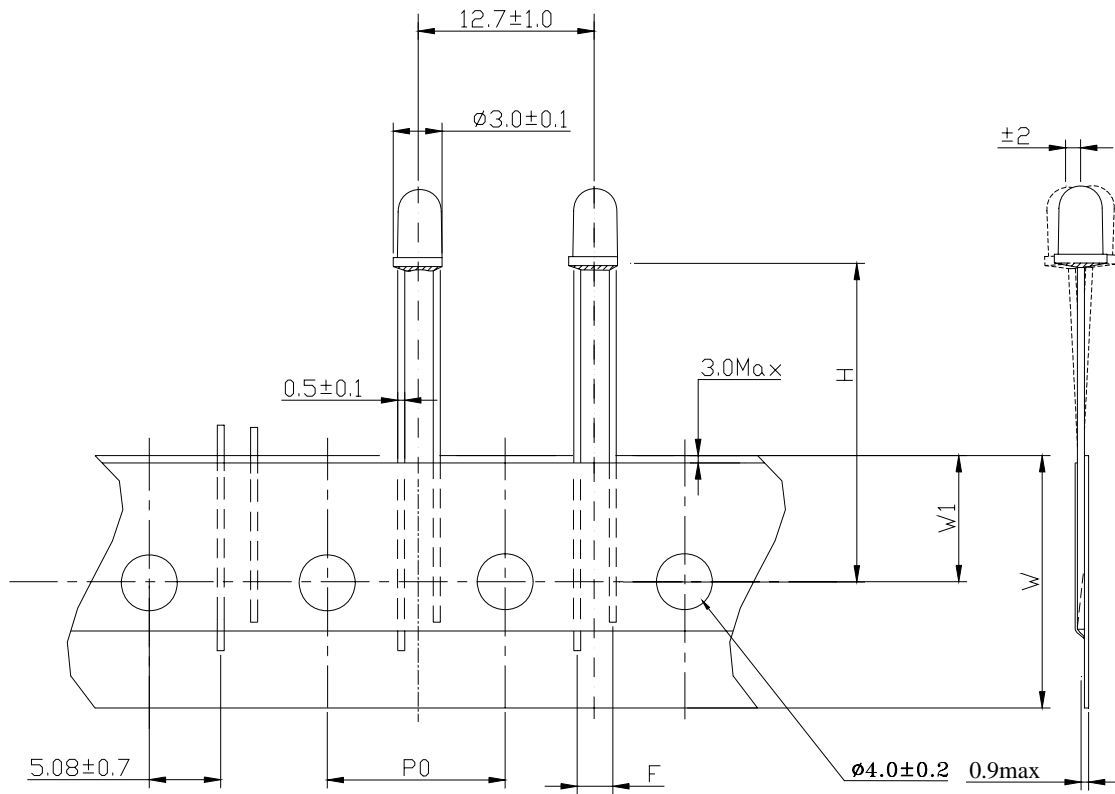
Fig.4 相对亮度 Vs. 环境温度





SPECIFICATION

Part No./型号: 330LB7C



12 型

H	W	W1	F	P0
22.0±0.5	18.0+1-0.5	9.0±0.5	2.54+0.6-0.1	12.7±0.2



➤ **Lead Forming/成形**

1. Any lead forming or bending must be done before soldering.

支架成形必须在焊接前完成。

2. When forming leads, there must be a minimum of 2mm clearance between the base of the LED lens and the lead bend.

必需离胶体 2 毫米才能折弯支架。

3. Avoid bending the leads at the same point more than once.

避免在管脚同一位置两次或多次弯。

4. During assembly onto PCB, the lead pitch of the LED must match the pitch of the mounting holes on the PCB during component placement.

支架成形需保证引脚和间距与线路板上一致。

➤ **Soldering Condition/焊接条件**

Careful attention should be paid during soldering. When soldering, leave more than 2mm from solder joint to case, and soldering beyond the base of the tie bar is recommended.

焊接时请特别注意，焊接点要离LED封装体底部2mm以上。

Avoiding applying any stress to the lead frame while the LEDs are at high temperature particularly when soldering.

在 LED 处于高温，特别是在焊接时，请避免对支架施压。

Recommended soldering conditions/推荐焊接条件:

Hand Soldering 手工焊接		DIP Soldering 浸焊	
Temp.at tip of iron 电烙铁温度	300°C Max.(30WMax.) 最高温度300°C（功率不超过30瓦）	Preheat temp. 预热温度	100°C Max. (60 sec Max.) 最高温度100°C（不超过60秒）



Soldering time 焊接时间	3 sec Max. 时间不超过3秒	Bath temp. 浸焊温度	260°C Max 最高260°C.
Distance 焊接位置	2mm Min.(From solder joint to case) 大于2毫米(从焊点到 胶体)	Bath time. 浸焊时间	3 sec Max. 不超过3秒
		Distance 浸焊位置	2mm Min 大于2毫米.

➤ **Cleaning/清洗**

1. Do not clean LEDs with water, Alcohol are recommended solvents for cleaning. When using other solvents, it should be confirmed beforehand whether the solvents will dissolve the resin or not.

不要用水清洗，推荐使用酒精清洗，当使用其他溶剂清洗时应事先确认该溶剂是否溶解树脂。

2. LEDs may be damaged by ultrasonic-washed. Before cleaning, a pre-test should be done to confirm whether any damage to the LEDs will occur.

LED有可能在超声波清洗过程中被破坏。为了保证安全，在清洗前，请先确认。

➤ **Storage/保存**

1. Environmental temperature: -40°C---100°C, Recommended: -20°C---50°C

环境温度：-40°C---100°C，推荐使用-20°C---50°C；

2. Environmental humidity: 30%---70%, Recommended: 40%---60%

环境湿度：30%---70%，推荐使用40%---60%；

➤ **Static Electricity/静电**

1. Static Electricity or power surge will damage the LED.



It is recommended that a wrist band or an anti-electrostatic glove be used when handling the LEDs.

静电或激增电压将损害 LED。

建议使用发光二极管时佩戴手腕带或防静电手套。

2. All production machinery and test instruments must be electrically grounded.

所有的生产机器和检测仪器，必须接地。

3. Maintain a humidity level of 50% or higher in production areas.

生产现场湿度必须保持在50%或者更高。

4. Use anti-static packaging for transport and storage.

使用防静电包装，运输和储存。

➤ **Notes/备注**

1. This datasheet will be update regularly, if there comes out any changes, pls confirmed by the latest datasheet.

以上规格书会定期进行更新，如有改动,以最新规格书为准。

2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. Hebei assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.

在使用本产品时，请注意参考规格书中的最大额定值和使用说明，如果没有遵照产品规格书中的最大额定值以及使用说明而产生的不良后果，不在赫备承诺范围之内。