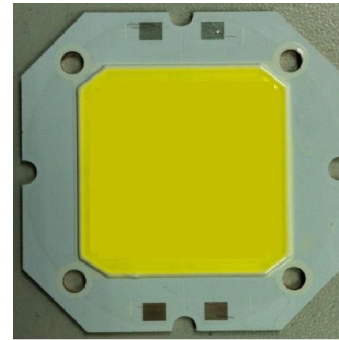


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**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
DISCHARGE  
SENSITIVE  
DEVICES



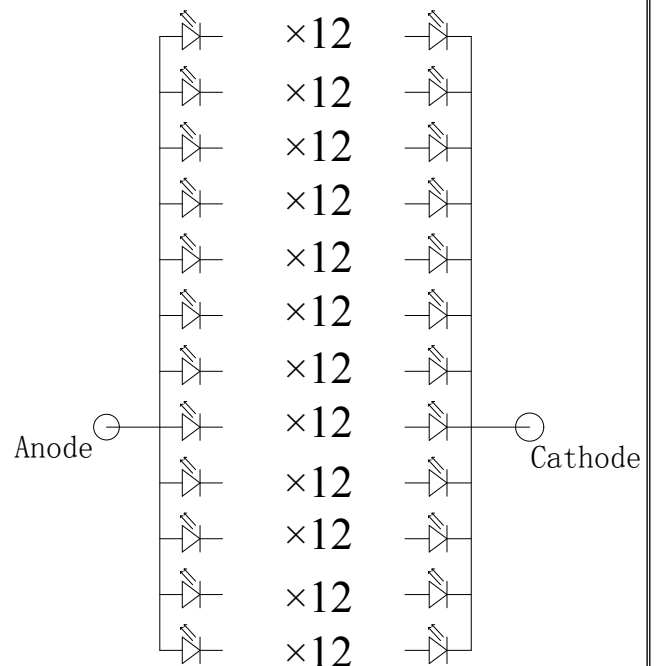
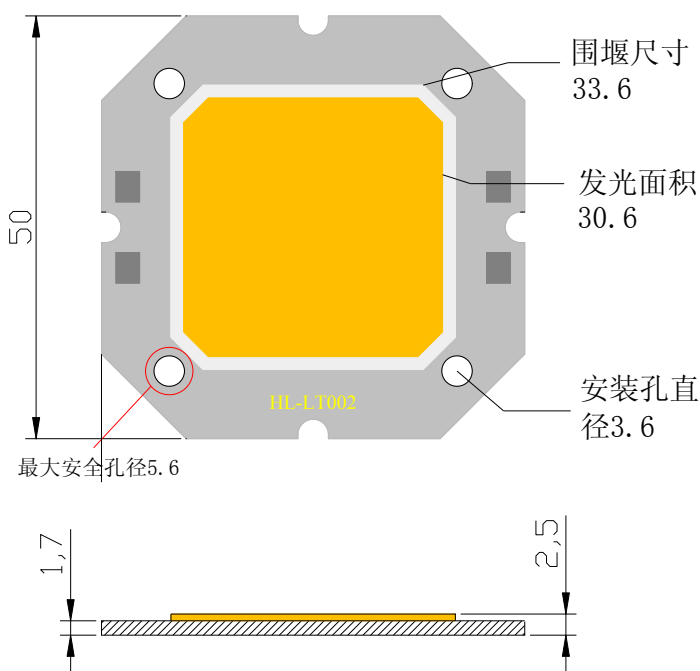
**Features 特点**

- Dimension 50.0mm×50.0mm×2.6mm  
尺寸50.0mm×50.0mm×2.6mm
- 150W high-power LED  
150W 大功率LED
- Luminous Flux: 15000lm @ 4.2 A
- CRI: Ra 70 min  
显色指数: 70 (最小)
- RoHS compliant (ROHS标准)

**Applications 应用**

- Street lights 路灯
- Floodlight 泛光灯
- Mining lamp 工矿灯
- Tunnel Light 轨道灯

**Package Dimensions 封装尺寸**



### Device Selection Guide 选择指南

Part No. 型号	Chip 芯片		Lens Type 胶体类型	
	Material 材质	Emitting Color 发光颜色		
HL-LT002F38W-150B12C12(Ra1)	InGaN	Blue	Cool White	Yellow Diffused

### Electrical / Optical Characteristics @T<sub>a</sub>=25°C 电学与光学特性

Parameter 参数	Symbol 符号	Min. 最小	Typ. 典型	Max. 最大	Units 单位	Test Conditions 测试条件
Color Temperature[2] 色温	TC	5665	—	6530	K	IF=4.2A
Color-rendering index 显指	Ra	70	—	—	—	IF=4.2A
Forward Voltage [2] 正向电压	VF	34	36	40	V	IF=4.2A
thermal resistance 热阻	Rth	—	0.126	—	°C/W	IF=4.2A
Luminous Flux[1] 光通量	Φ <sub>v</sub>	14000	15000	—	lm	IF=4.2A
Power dissipation 耗散功率	Pd	—	151.2	—	W	IF=4.2A

Note:

1. All high power LED products mounted on copper substrate can be lighted directly, but we do not recommend lighting the high power products for more than 5 seconds without a appropriate heat dissipation equipment.

所有高功率LED产品必须安装在散热板上点亮，同时我们不建议在没有一个合适的散热器时，点亮本产品超过5秒。

2. The tolerance of measurement at our tester is V<sub>F</sub>±3% , Φ<sub>v</sub>±10% and Ra±1.

测试仪测量的公差在电压值±3% , 流明值±10% 和显色指数值±1。

### Absolute Maximum Ratings @T<sub>a</sub>=25°C 绝对最大额定值

Parameter 参数	Symbol 符号	Rating 值	Units 单位
Input Power 最大输入功率	P <sub>i</sub>	195	W
DC Forward Current[1]额定电流	I <sub>F</sub>	4.2	A
Peak Forward Current (Duty 1/10@1KHZ)[1]峰值电流	I <sub>FP</sub>	5.4	A
Operating Temperature Range 操作温度	T <sub>opr</sub>	-20°C To +75°C	
Storage Temperature Range 储存温度	T <sub>stg</sub>	-40°C To +100°C	
Junction Temperature 结点温度	T <sub>j</sub>	120°C	

Note:

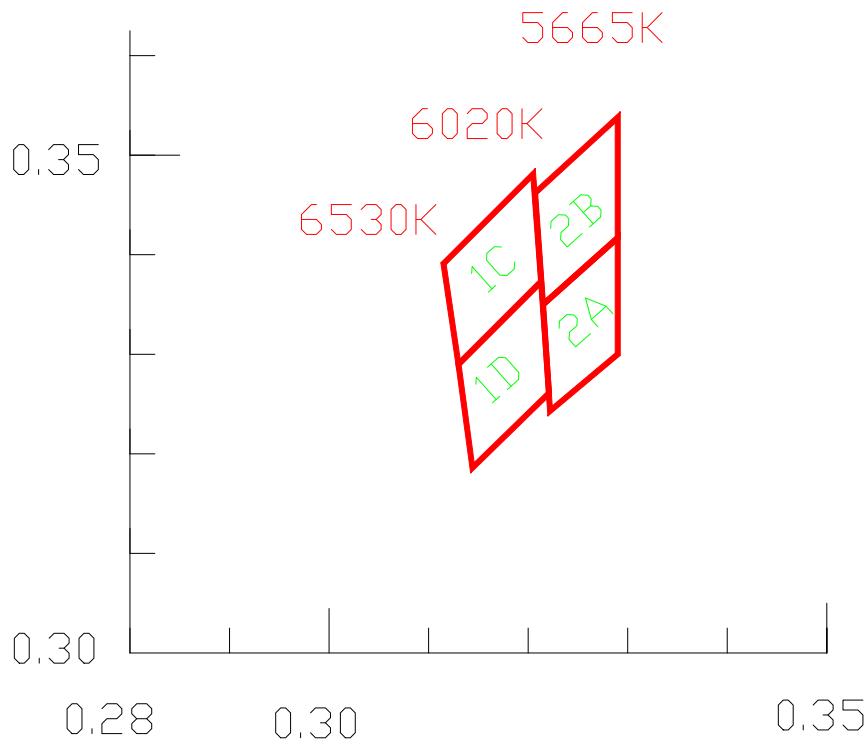
1. 1/10 Duty Cycle, 0.1ms Pulse Width. 脉冲宽度≤0.1毫秒 占空比≤1/10

2. Before use please tear the high-temperature protective film from the back of the product . 在使用前请从产品的背面撕掉高温保护膜。

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### Product bins

#### Chromaticity bins

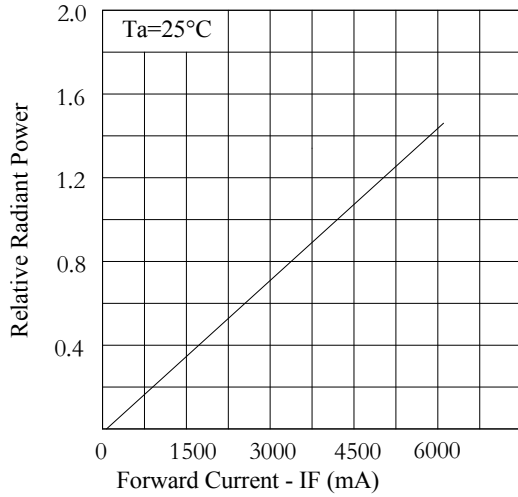


bin code	CIEX	CIEY
2A	0.3215	0.3350
	0.3290	0.3417
	0.3290	0.3300
	0.3222	0.3243
2B	0.3207	0.3462
	0.3290	0.3538
	0.3290	0.3417
	0.3215	0.3350
1C	0.3115	0.3391
	0.3205	0.3481
	0.3213	0.3373
	0.3130	0.3290
1D	0.3130	0.3290
	0.3213	0.3373
	0.3221	0.3261
	0.3144	0.3186

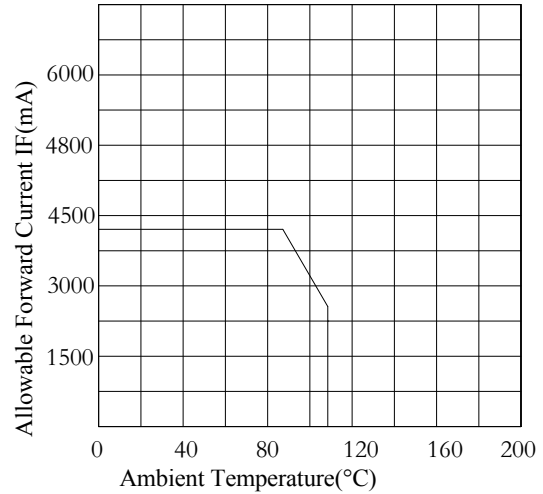
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## Spatial Distribution Graph 光学特性曲线分布图

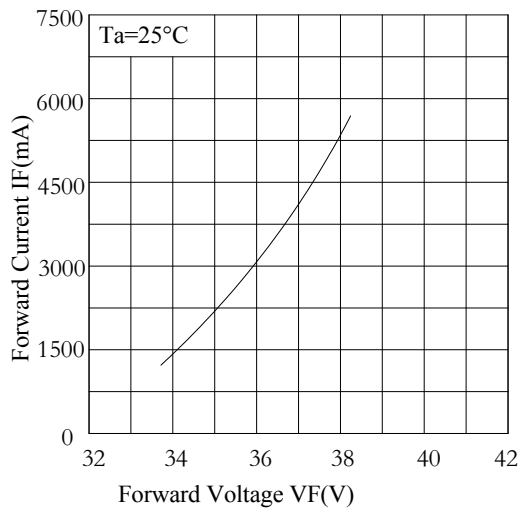
Relative Radiant Power - IF  
正向电流与相对辐射功率



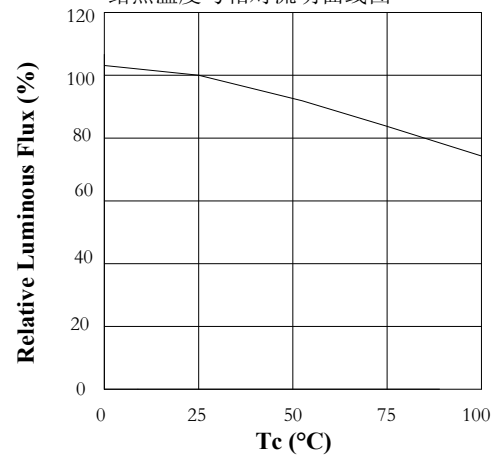
Allowable Forward Current - Ta  
环境温度与正向电流曲线图



IF - VF  
正向电压与正向电流曲线图

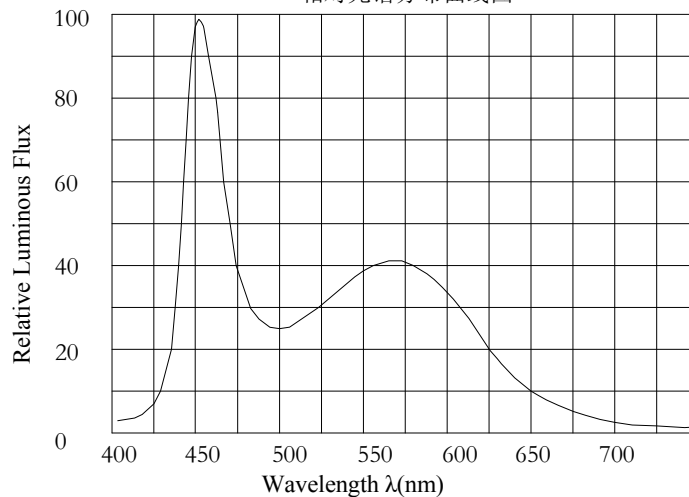


Case Temperature vs. Relative Luminous Intensity  
结点温度与相对流明曲线图  $I_f=4200\text{mA}$



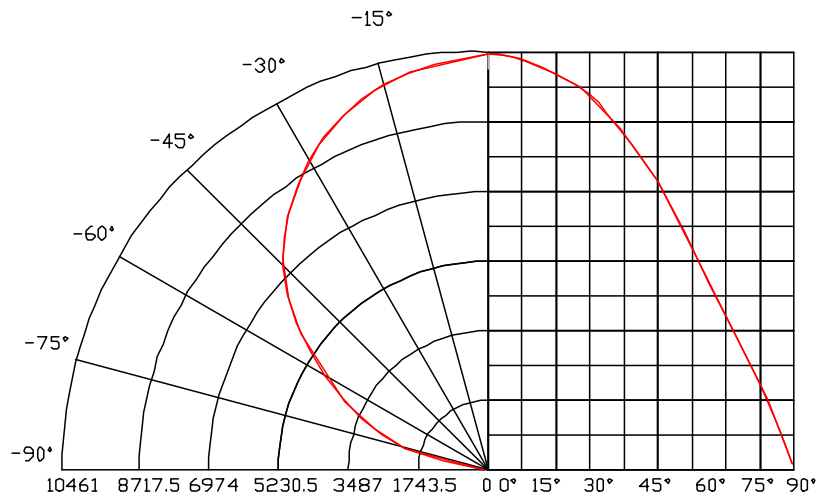
Wavelength Characteristics Ta=25°C

相对光谱分布曲线图

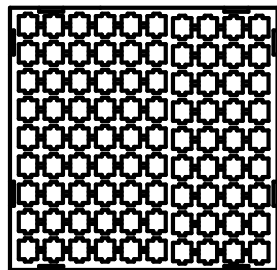


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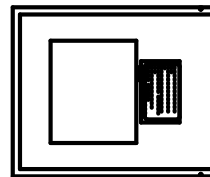
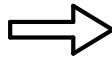
## Radiation diagram 辐射特性曲线图



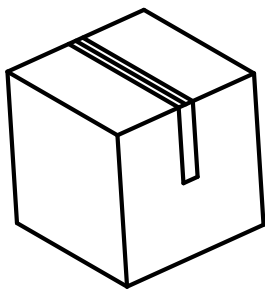
## Tape Specification 包装规范



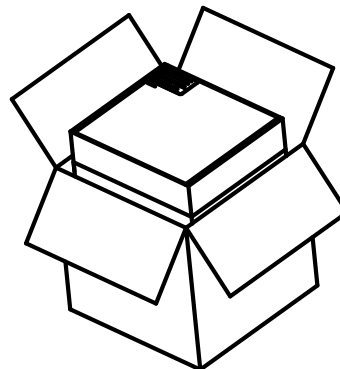
Tray: 25pcs



1Tray/ESD Shielding Bag: 50pcs



Outer Box: 250pcs



5Inner box/Outer Box: 250pcs

## Precaution for use (防护措施)

### 1. Storage 储存

To avoid the moisture penetration, we recommend storing LEDs in a dry box (or a desiccator) with a desiccant. The recommended conditions are temperature 5 to 30 degrees Centigrade. Humidity 60% maximum. 避免湿气的渗透, 我们建议 LED 存储在干燥的盒子里(或干燥器中)并放置干燥剂. 建议的条件是温度 5~30°C, 相对湿度不能超过 60%.

### 2. Precaution after opening packing 拆包后的注意事项:

#### 2.1. Soldering should be done right after opening the package (within 24Hrs).

拆包后 24 小时内必须焊接完成.

#### 2.2. Keeping of a fraction. 剩余部分

-Sealing. 密封

-Temperature: 5~30°C Humidity: less than 30%. 温度: 5~30°C, 相对湿度不能超过 30%

2.3. If the package has been opened than 1 week or the color of desiccant changed, components should be dried for 10-12 Hrs at 60±5°C. 如果开封超过一周或湿度标示卡发生改变, 元件必须在 60±5°C 条件下进行 12 小时除湿

### 3. Hand Soldering 手动焊接

Be careful because the damage of the product is often started at the time of the hand soldering. 产品的损害往往是在开始手动焊接时不小心导致的。在开始手动焊接时, 需小心避免对产品造成损害。

Stress on the LEDs should be avoided during heating in soldering process. Please do not force over 1000g impact or pressure diagonally on the silicone lens. It will cause fatal damage on this product. 在焊接加热过程中应避免应力作用在 LED 灯珠上。不要施加超过 1000 克的力于硅胶透镜上, 那样容易对产品造成损伤。

After soldering, do not deal with the product before its temperature drop down to room temperature. 焊接后, 不能将产品迅速冷却至室温。

This product is not adaptable reflow process. 此产品不能过回流焊

### 4. Cleaning 清洗

It is recommended that alcohol be used as a solvent for cleaning after soldering. Cleaning is to go under 30°C for 3 minutes or 50°C for 30 seconds. When using other solvents, it should be confirmed beforehand whether the solvents will dissolve the package and the silicone or not. 焊接后建议用酒精作为清洗溶剂, 清洗时应在 30°C 三分钟或 50°C 持续 30 秒, 当使用其它溶剂时, 应事先确认此溶剂是否会与产品有机硅发生溶解。

Ultrasonic cleaning is also an effective way for cleaning. But the influence of Ultrasonic cleaning on LED depends on factors such as ultrasonic power. Generally, the ultrasonic power should not be higher than 300W. Before cleaning, a pre-test should be done to confirm whether any damage to LEDs will occur. 超声波也是一种有效的清洗方式, 但超声波清洗的程度依赖于诸多因素, 比如超声波功率, 一般来说, 超声波功率不应超过 300W, 在清洗前请确认此清洗方法是否会对 LED 产品造成损害。

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### 5. Static Electricity 防静电保护

Static electricity or surge voltage damages the LEDs. Damaged LEDs will show some unusual characteristics such as the forward voltage becomes lower, or the LEDs do not light at the low current., even not light. 静电与冲击电压都会损坏LED产品，损坏后的LED灯将产生一系列的不良后果，如正向电压偏低、发光二极管漏电甚至死灯。

All devices, equipment and machinery must be properly grounded. At the same time, it is recommended that wrist bands or anti-electrostatic gloves, anti-electrostatic containers be used when dealing with the LEDs. 所有的设备器材都必须接地保护，同时，建议佩戴静电环或防静电手套，当使用LED灯时应使用防静电容器。

### 6. Design Consideration 设计考虑

In designing a circuit, the current through each LED must not exceed the absolute maximum rating specified for each LED. In the meanwhile, resistors for protection should be applied, otherwise slight voltage shift will cause big current change, burn out may happen. When the LEDs are illuminating, operating current should be decided after considering the plastic surface maximum temperature.

在设计电路时，电流通过每个LED灯时一定不能超过指定的最大额定值，同时应采用电阻保护，否则电压波动过大将导致涌浪电流，可能会使LED灯烧坏。LED点亮时，需考虑到LED可承受的最大胶面温度。

Viewing direct to the light emitting center of the LEDs, especially those of great Luminous Intensity, will cause great hazard to human eyes. Please be careful.

直接查看发光中的LED灯，特别是发光强度大的，对我们的眼睛会造成非常大的损害。

Thermal Design is paramount importance because heat generation may result in the Characteristics decline, such as brightness decreased, Color changed and so on. Please consider the heat generation of the LEDs when making the system design.

热设计是极为重要的，因为热量的产生可能导致产品性能衰减，如亮度下降、色偏移等。所以在设计LED灯具时，应考虑散热问题。

In the use of screws, you need to pay attention to LED damaged, need to be careful; installation, you can use clip-type to install, to avoid damage!

使用螺丝安装时请注意，方法不当可能导致LED灯的损害，您可以使用卡扣的方式来安装LED灯，以避免损坏LED。