

# 产品规格书

## SPECIFICATION FOR APPROVAL

<b>CUSTOMER</b> 客户名称		<b>MODEL NO.</b> 产品型号	GT-P100WB3450050750
<b>SAMPLE DATE</b> 送样日期		<b>DESCRIPTION</b> 产品描述	50W 蓝光模组光源

<b>CUSTOMER AUTHORIZED SIGNATURE</b> 客户承认签核		

Please return to us one copy of "SPECIFICATION FOR APPROVAL"

With you approved Signature.

客户签字确认、盖章后请回传一份承认书我司。

<b>ENGINEERING DEPARTMENT</b> 工程部		
<b>APPROVED</b> 核准	<b>CHECKED</b> 审核	<b>PREPARED</b> 制定

## Description

### 产品描述

#### Features.特性:

- ◆ Super high Flux output and high Luminance 高亮度、高发光效率
- ◆ Adapt to large current circuit 适合大电流应用电路
- ◆ Low thermal resistance:12°C/W 热阻低: 12°C/W
- ◆ Wide viewing angle , Integrated package 宽视角, 集成封装
- ◆ RoHS compliant 通过RoHS认证

#### Applications.应用:

- ◆ General Lighting 普通照明
- ◆ Architectural lighting 建筑照明
- ◆ Decorative lighting 装饰照明
- ◆ Landscape lighting 景观照明
- ◆ Traffic signaling 交通信号

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## Full Code of GT-Power LED Series 格天大功率LED系列产品型号说明

**Full code form 产品型号：** GT - P XX XX X X X X XX

1	2	3	4	5	6	7	8	9
GT	P	100W	B3	4	50	0	50	750

### Part Number 产品型号说明

1- GT: GeTian 格天光电

2- P : High Power LED 大功率LED

3- XX: Part sort 产品（支架）类型

P10: 10W Module holder 10W模组支架

P25: 25W Module holder 25W模组支架

P32: 32W Module holder 32W模组支架

P46: 46W Module holder 46W模组支架

P50: 50W Module holder 50W模组支架

P80: 80W Module holder 80W模组支架

P100: 100W Module holder 100W模组支架

P101: 101W Module holder 101W模组支架

P112: 112W Module holder 112W模组支架

P120: 120W Module holder 120W模组支架

P280: 280W Module holder 280W模组支架

P500: 500W Module holder 500W模组支架

P25RGB: 25WRGB Module holder 25WRGB模组支架

P100RGB: 100WRGB Module holder 100WRGB模组支架

4- XX: Emitted Color 发光颜色

R1: Red 红色625nm

V1: Violet 紫色360-365nm

B3: Blue 蓝色465nm

R6: Red 红色650nm

V2: Violet 紫色380-385nm

G6: Green 绿色525nm

Y2: Yellow 黄色590nm

V3: Violet 紫色395-405nm

A1: Amber 琥珀色600-610nm

B4: Blue 蓝色450-460nm

Va: violet 紫罗兰420-435nm

Aa: Amber 琥珀色595-605nm

W3: Warm White 暖白2900-3200K

W4: Neutral White 中性白4000-4500K

W6: White 正白6000-7000K

W7: Cool White 冷白7000-9000K

5- X : Wafer Size 晶片尺寸

2: 24mil 3: 30mil/35mil/38mil 4: 42mil/45mil 5: 54mil 6: 60mil

6- X : Wafer Quantity 晶片数量

10 - 10EA 30 - 30EA 50 - 50EA 100 - 100EA 400 - 400EA

7- X : Viewing Angle 发光角度

0: 120° /140°

8- X : Power 功率

10: 10W 30: 30W 50: 50W 100: 100W 400: 400W

9- XX: Brightness Grade 亮度等级

100: 100-200lm 200: 200-300lm 300: 300-400lm 400: 400-750lm

500: 500-600lm 600: 600-800lm 750: 750-1250lm 800: 800-900lm

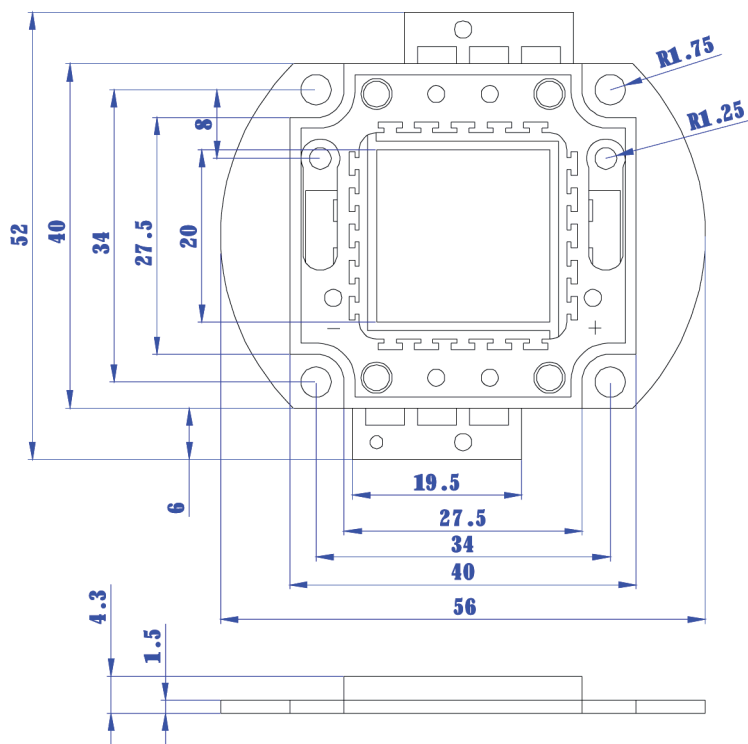
900: 900-1000lm 1A: 1000-1300lm 1B: 1500-2000lm 2A: 2300-2600lm

2B: 2500-3000lm 3A: 3000-3500lm 3B: 3500-4000lm 4A: 4000-4500lm

4B: 4500-5000lm 5A: 5000-5500lm 5B: 5500-6000lm 6A: 6000-6500lm

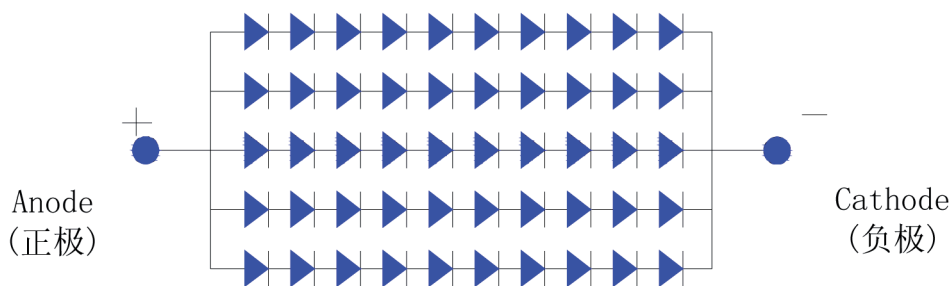
## Outline Dimensions 尺寸说明

### 1、Dome Type 支架尺寸规格



### 2、Circuit diagram 内部电路芯片排列方式

INTERNAL CIRCUIT DIAGRAM  
(内部电路图)



Notes 注释:

1. All dimensions are in millimeters.(tolerance:±0.2) 所有的尺寸都以毫米为单位(公差: ±0.2);
  2. Dimension Scale:1:1 尺寸比例为: 1: 1。
- \*The appearance and specifications of the product may be changed for improvement without notice.  
 产品外形和说明书如有更新, 恕不另行通知!

## Parameters

### 参数

#### Electrical-Optical Characteristics at Ta=25°C

#### 光电特性 Ta=25°C

Parameter 参数	Symbol 符号	Min 最小值	Typ 典型值	Max 最大值	Unit 单位
Luminous Flux 光通量	$\phi_v$	750	~	1250	lm
Wavelength 波长	$\lambda_D$	460	~	470	nm
Forward Voltage 正向电压	V <sub>F</sub>	30	~	36	V
Power Dissipation 耗散功率	P <sub>D</sub>	~	52.5	~	W
View Angle 发光角度	2 $\theta$ 1/2	~	120	~	deg.
Thermal Resistance 热阻	R $\theta$ J-B	~	12	~	°C/W

#### Absolute Maximum Ratings

#### 极限参数

Parameter 参数	Symbol 符号	Value 数值	Unit 单位
Forward Current 正向电流	I <sub>F</sub>	1750	mA
Junction Temperature 结点温度	T <sub>j</sub>	115	°C
Operating Temperature 工作温度	T <sub>opr</sub>	-40~+60	°C
Storage Temperature 储存温度	T <sub>stg</sub>	0~+60	°C
ESD Sensitivity 静电击穿电压	~	±2,000V HBM	~
Reverse Voltage 反向电压	V <sub>R</sub>	Not designed for reverse operation 禁止反向驱动	

\*Notes 注释:

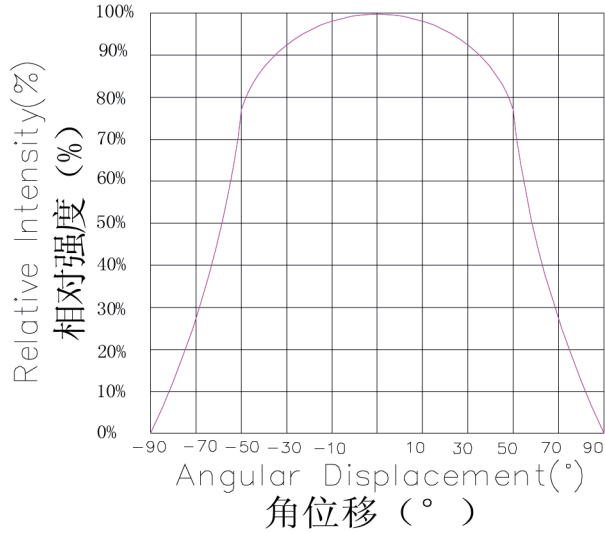
1. Tolerance of Luminous Flux is ±3%. 光通量的公差为±3%。
2. Tolerance of Forward Voltage is ±0.1V. 正向电压的公差为±0.1V。

## Typical Characteristic Curves(1)

### 典型特性曲线 (1)

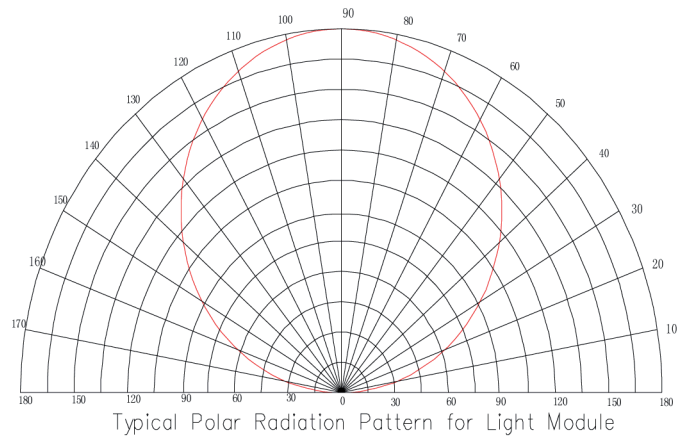
#### 1. Typical Light Distribution Curve

典型的光强分布曲线



#### 2. Typical Light-Emitting Angle Radiation Pattern

典型发光角度辐射图



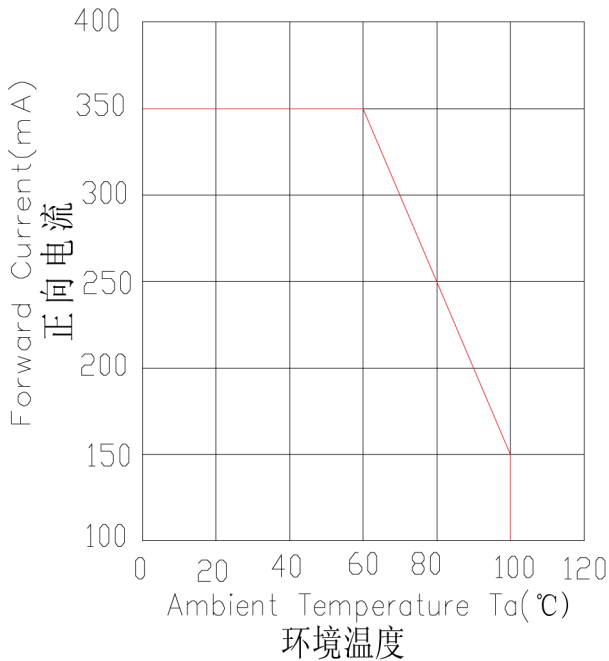
模组光源典型发光角度图

#### 3. Forward Current Derating Curve, Derating based on $T_{max}=115^{\circ}C$

正向电流降额曲线, 以  $T_{max}=115^{\circ}C$  为基准

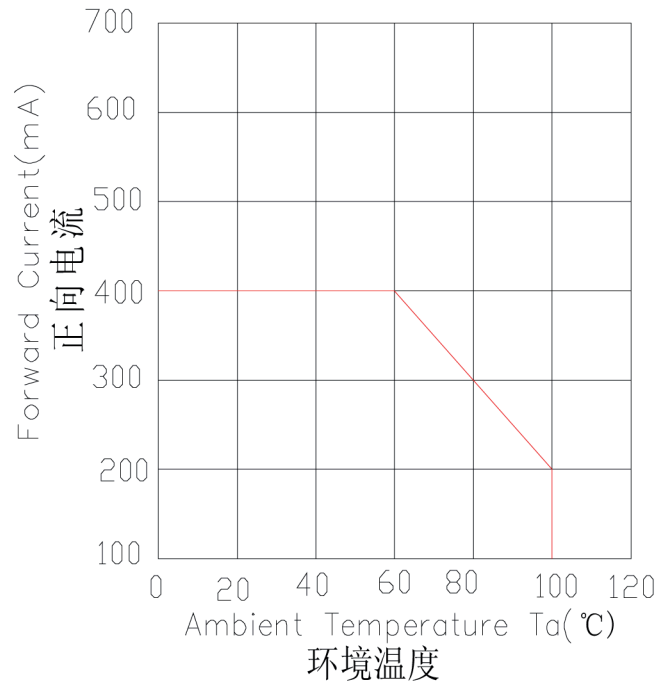
##### 3-1. White, Royal Blue, Blue, Green

白光、深蓝光、蓝光、绿光



##### 3-2. Amber, Red

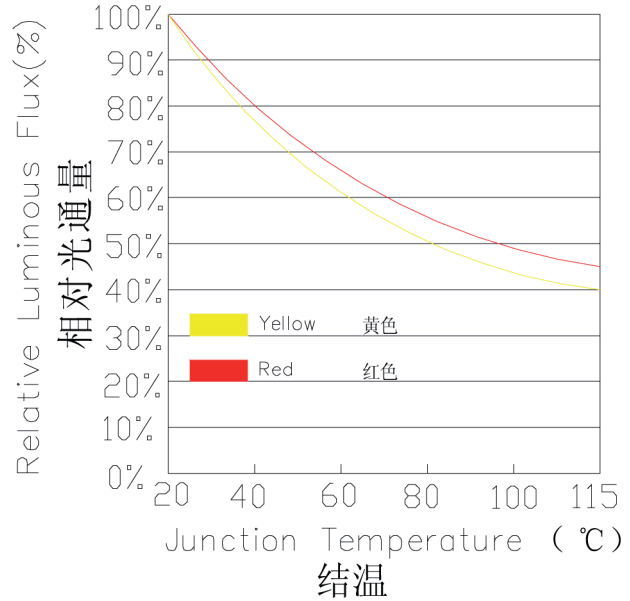
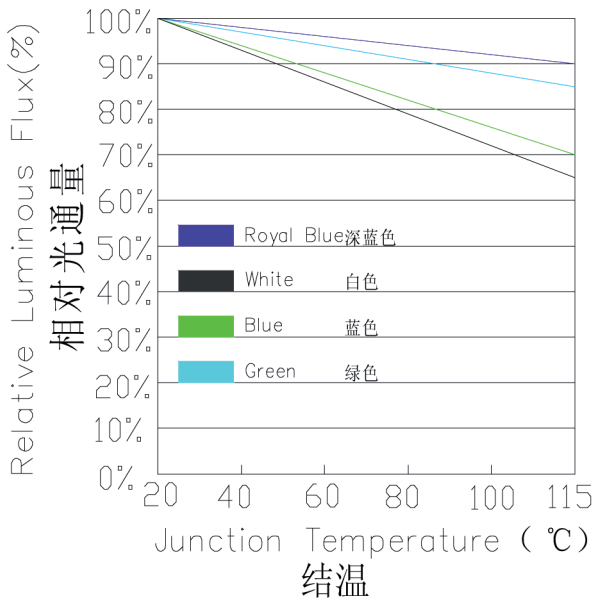
黄光、红光



## Typical Characteristic Curves(2) 典型特性曲线 (2)

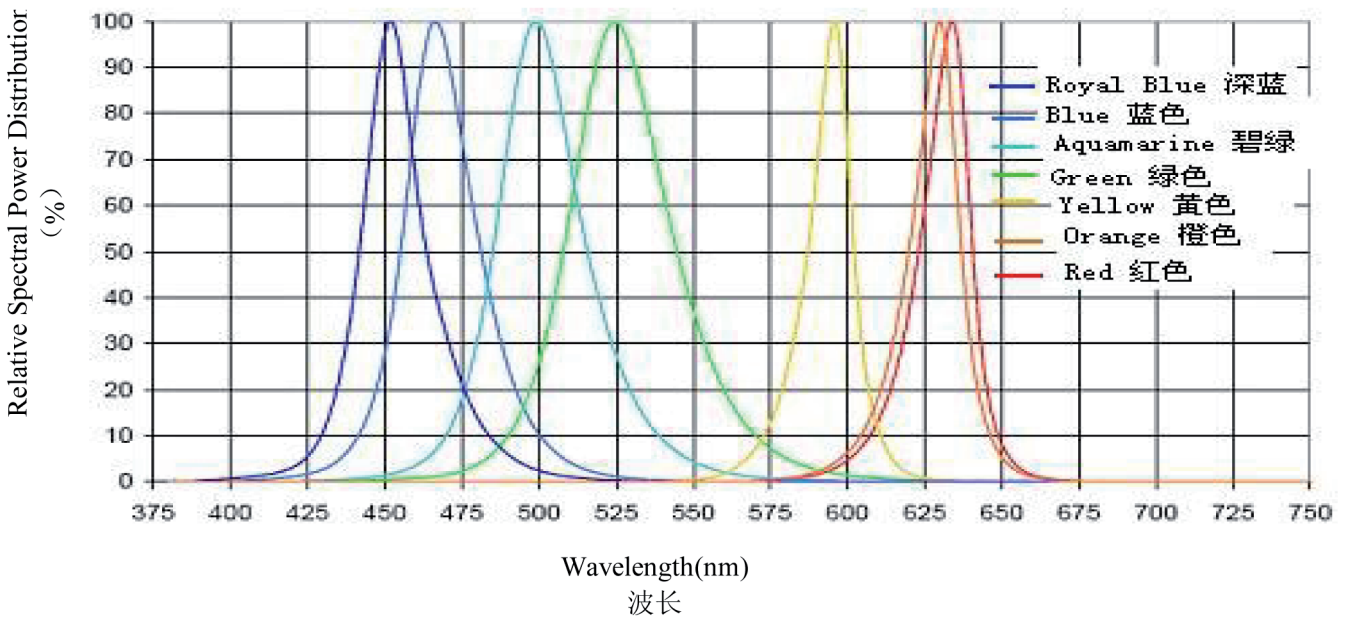
4-1. Relative Flux vs. Junction Temperature White, Royal Blue, Blue, Green 相对光通量与结温曲线图—白光、深蓝色、蓝光、绿光

4-2. Relative Flux vs. Junction Temperature Amber, Red 输出光通量与结温曲线图黄光、红光



## 5. Relative Spectral Power Distribution

相对光谱功率分布





## Reliability Test Items And Conditions

### 可靠性试验

Test Items 测试项目	Test Condition 测试条件	Test Hours Cyles 测试时间与周期	Sample Size 样品数	Ac/Re
<b>DC Aging</b> 直流老化	Ta=25°C IF=1750mA	1000H	22	0/1
<b>Hot and cold shock</b> 冷热冲击	-40°C/30min +100°C/30min	100Cycles 100次循环	22	0/1
<b>High Temperature Storage</b> 高温储存	Ta=100°C	1000H	22	0/1
<b>High Temperature High Humidity</b> 高温高湿	85°C/85%RH	1000H	22	0/1
<b>Low Temperature Storage</b> 低温储存	Ta=-40°C	1000H	22	0/1
<b>ESD(HBM)</b> 抗静电	2000V HBM	1Time 1次	10	0/1

## Criteria For Judging the Damage

### 失效判断标准

Items 项目	Symbol 符号	Test Condition 测试条件	Criteria For Judging Damage 判定标准
Forward Voltage 正向电压	V <sub>F</sub>	I <sub>F</sub> =1750mA	Initial Data±10% 初始值±10%
Reverse Current 反向电流	I <sub>R</sub>	V <sub>R</sub> =50V	I <sub>R</sub> ≤50μA
Luminous Flux 光通量	φ <sub>v</sub>	I <sub>F</sub> =1750mA	Average φ <sub>v</sub> degradation≤30% Single LED φ <sub>v</sub> degradation≤50% 平均 φ <sub>v</sub> 衰减≤30%，单个 φ <sub>v</sub> 衰减≤50%。





## Soldering Condition 焊接条件

Only By Manual Welding 只能人工焊接

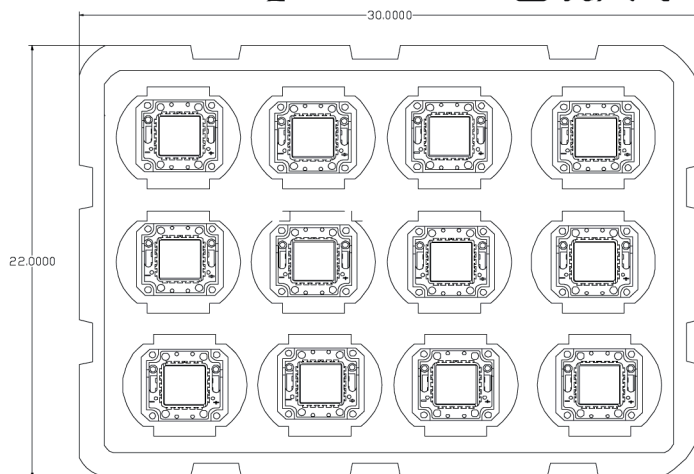
Temperature 温度	Soldering time 焊接时间
Highest 350°C 最高350°C	3ses once 3秒一次

\*Notes 注释:

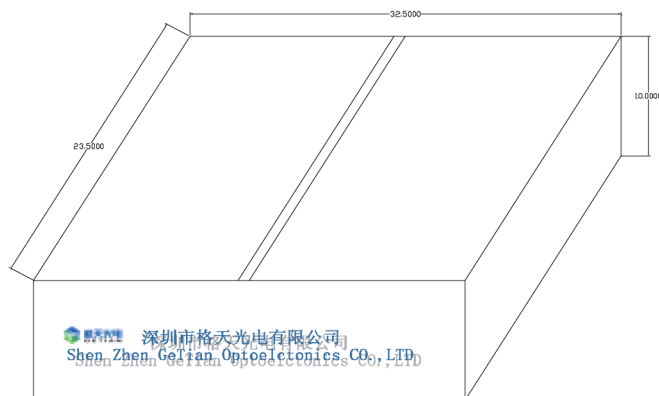
Module holder products don't use reflow soldering.

模组产品请勿使用回流焊焊接。

## Packing Dimention 包装尺寸



Inner pack 内包装



Outer pack 外包装

深圳市格天光电有限公司  
 Shen Zhen Ge Tian Optoelectronics CO., LTD