Description

Features.

- Super high Flux output and high Luminance
- Designed for high current operation
- Low thermal resistance:12℃/W
- SMT solder bility
- RoHS compliant

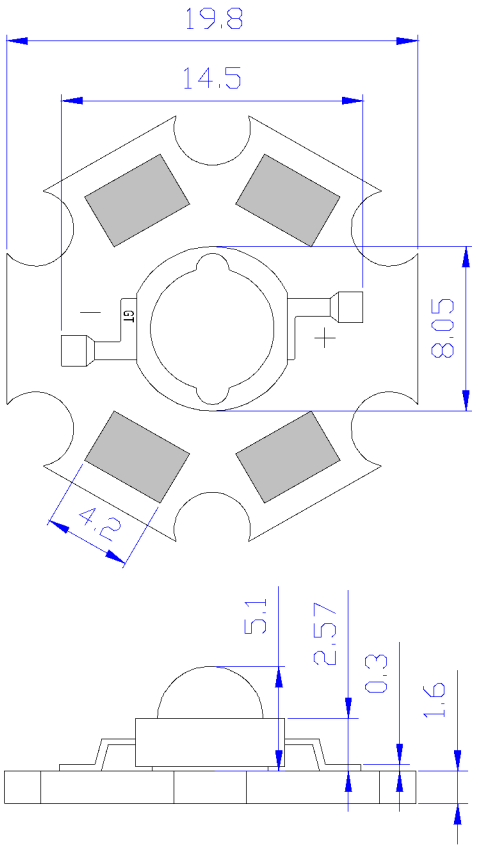
Applications.

- General Illumination
- Outdoor & Indoor architectural lighting
- Decorative lighting
- Portable lighting and Reading lighting
- Traffic signaling

Table of Contents

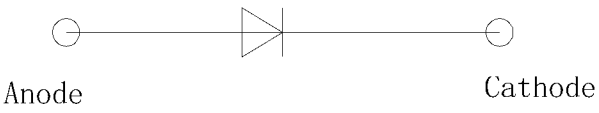
Outline Dimensions

1、Dome Type



2、Circuit diag ram

INRERNAL CIRCUIT DIAGRAM



Notes

1. All dimensions are in millimeters.(tolerance:±0.2)
2. Dimension Scale:1:1

*The appearance and specifications of the product may be changed for improvement without notice.

Parameters

Electrical-Optical Characteristics at IF=750mA，Ta=25℃

Parameter	Symbol	Min	Typ	Max	Unit
Radiation flux	Φe	900	~	1000	mw
Wavelength	λD	390	~	400	nm
Forward Voltage	V_F	3.5	~	4.5	V
Power Dissipation	P_D	2.63	~	3.38	W
View Angle	2θ1/2	~	120	~	deg.
Thermal Resistance	$R\theta_{J-B}$	~	12	~	℃/W

Absolute Maximum Ratings

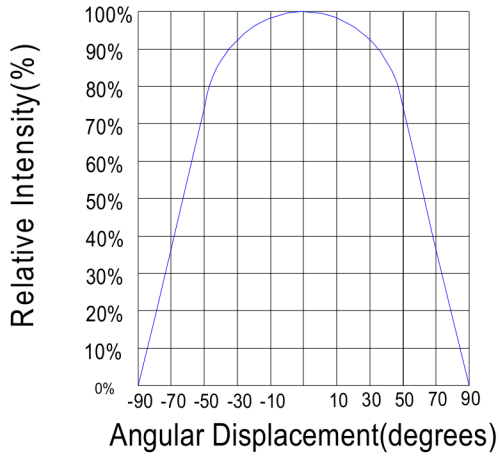
Parameter	Symbol	Value	Unit
Forward Current	I_F	750	mA
Junction Temperature	T_j	115	℃
Operating Temperature	T_{opr}	-40~+60	℃
Storage Temperature	T_{stg}	0~+60	℃
ESD Sensitivity	~	±2,000V HBM	~
Temperature Coefficient of voltage	~	-5	mV/℃
DC Pulse Current(@ 1 KHz,10% duty cycle)	I_{FP}	1000	mA
Reverse Voltage	V_R	Not designed for reverse operation	

*Notes

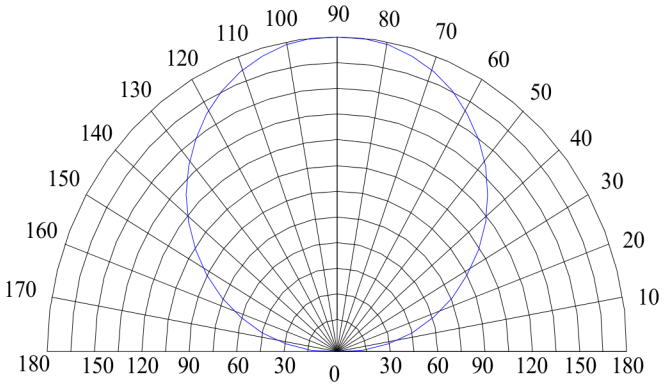
1. Tolerance of Luminous Flux is ±3%.
2. Tolerance of Forward Voltage is ±0.1V.

Typical Characteristic Curves(1)

1. Typical Light Distribution Curve

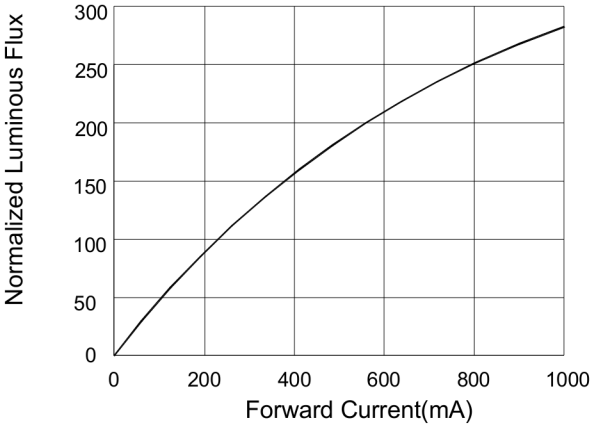


2. Typical Light-Emitting Angle Radiation Pattern

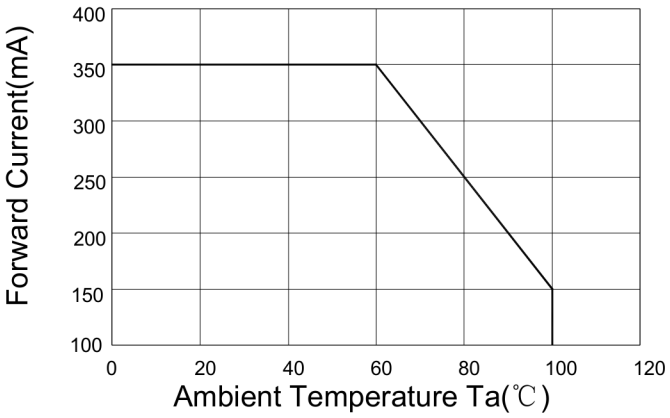


Typical Polar Radiation Pattern for White Lambertian

3. Forward Current vs.Relative Luminous Flux Curve

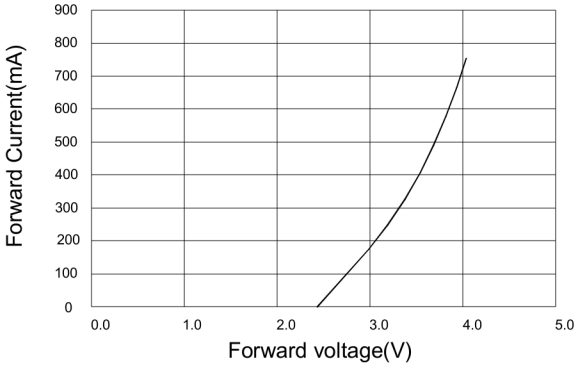


4. Forward Current Derating Curve,Derating based on Timax=125℃

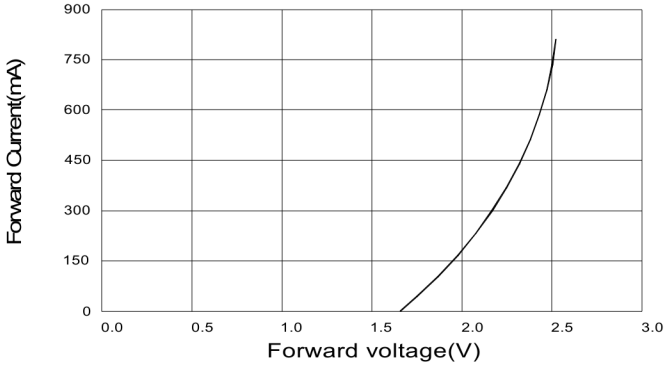


5. Electrical Characteristics Curve

5-1. White,Royal Blue , Blue, Green

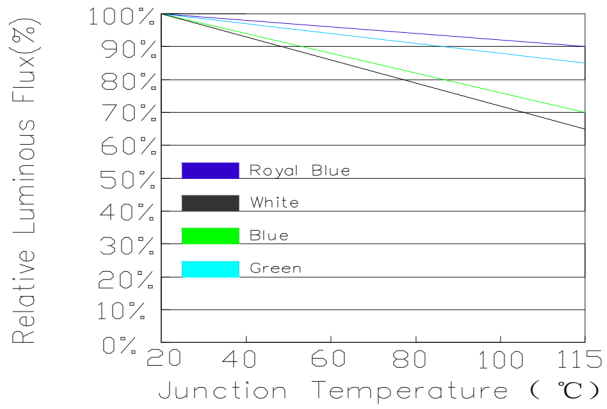


5-2. Amber, Red

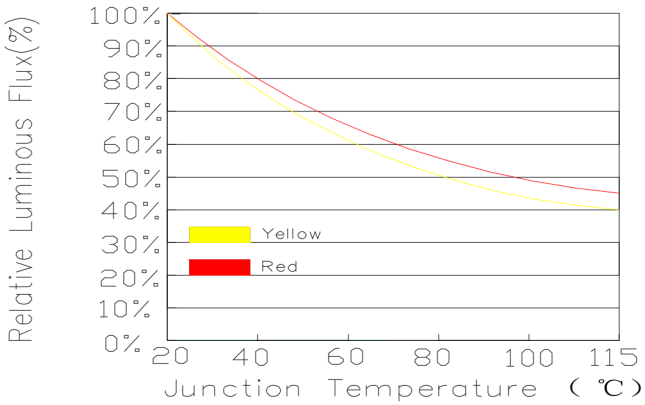


Typical Characteristic Curves(2)

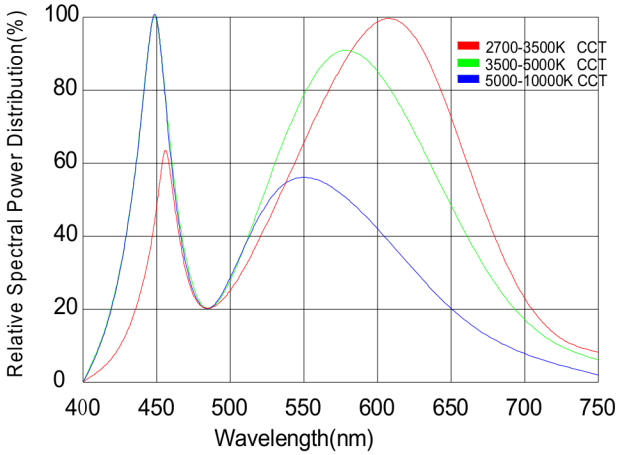
6-1. Relative Flux vs. Junction Temperature (If = 350 mA) White, Royal Blue, Blue, Green



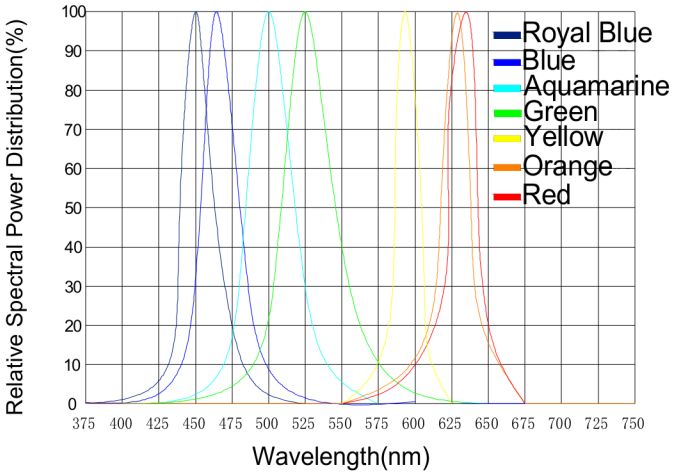
6-2. Relative Flux vs.Junction Temperature(If =400mA) Amber, Red



7. Typical white spectral distribution

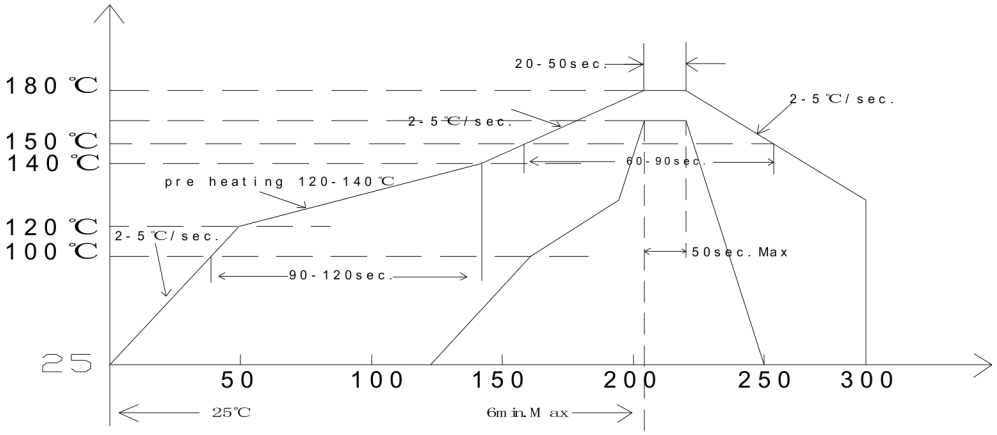


8. Relative Spectral Power Distribution



9. Reflow temperature time curve

Reflow Soldering Profile — Lead Free Solder



Reliability Test Items And Conditions

Test Items	Test Condition	Test Hours Cyles	Sample Size	Ac/Re
DC Aging	Ta=25℃ IF=750mA	1000H	22	0/1
Hot and cold shock	-40℃/30min +100℃/30min	100Cycles	22	0/1
High Temperature Storage	Ta=100℃	1000H	22	0/1
High Temperature High Humidity	85℃/85%RH	1000H	22	0/1
Low TemPerature Storage	Ta=-40℃	1000H	22	0/1
ESD(HBM)	2000V HBM	1Time	10	0/1

Criteria For Judging the Damage

Items	Symbol	Test Condition	Criteria For Judging Damage
Forward Voltage	V_F	I_F=750mA	Initial Data±10%
Reverse Current	I_R	V_R=5V	$I_R \leqslant 10\mu A$
Luminous Flux	ϕ_V	I_F=750mA	Average ϕ_V degradation≤20% Single LED ϕ_V degradation≤30%

Soldering Condition

Reflow Soldering			Manual Welding	
	High temperature PC lens	Molding products	Temperature	Soldering time
Preheat	100-140℃	180-200℃	Highest 350℃	3ses once
Heatup time	120sec Max	120sec Max		
Peak temperature	180℃ Max	260℃ Max		
Condition of Soldering time	50sec Max	10sec Max		

*Notes

Conventional PC lens products don't use reflow soldering.