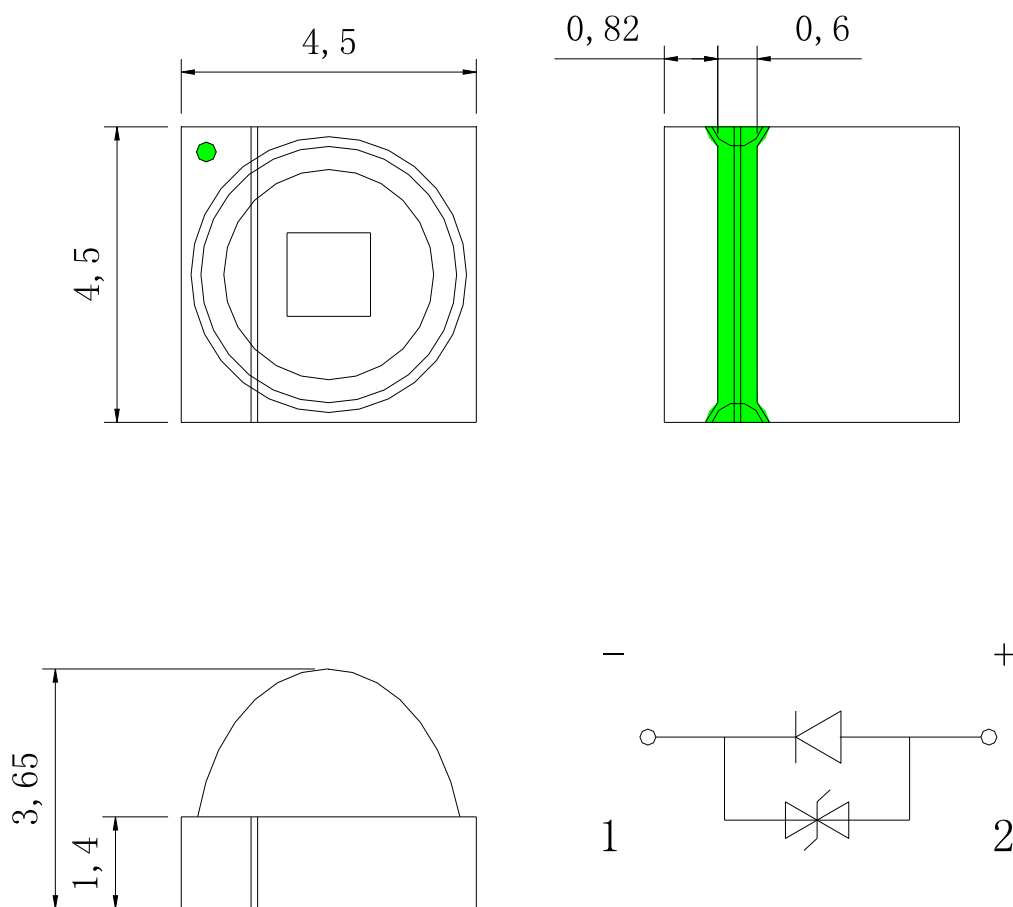
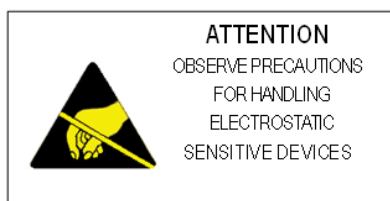


Description

- ◆ Viewing angle:120 deg
- ◆ The materials of the LED dice is GaN
- ◆ 4.5mm×4.5mm×3.65mm
- ◆ RoHS compliant lead-free soldering compatible

RC45L6-UBW-AR

Package Outline



NOTES:

1. All dimensions are in millimeters (inches);
2. Tolerances are $\pm 0.3\text{mm}$ (0.012inch) unless otherwise noted.

Absolute maximum ratings at Ta=25°C

Parameter	Symbol	Value	Unit
Forward DC current	If	500	mA
Reverse DC voltage	Vr	5	V
Operating temperature range	Top	-40~+100	°C
Storage temperature range	Tstg	-40~+100	°C
Peak pulsing current	Ifp	1000	mA
ESD Classification	ESD	8000	V
Thermal resistance	θ_{th}	6	°C/W

Electro-optical characteristics at Ta=25°C

Parameter	Test Condition	Symbol	Value			Unit
			Min.	Typ.	Max.	
Forward voltage	If=500mA	Vf	3.4	--	4.4	V
Peak wavelength	If=500mA	WLP	365	--	370	nm
Optical power	If=500mA	P0	--	400	--	mW
Viewing angle at 50% Iv	If=500mA	$2\theta_{1/2}$	--	52	--	Deg
Reverse current	V _R =5V	IR		--	10	μA

NOTE: (Tolerance: $\Phi \pm 10\%$, Vf $\pm 0.1V$)

IFP Conditions : Pulse Width $\leq 10\text{msec.}$ and Duty $\leq 1/10$.

Optical characteristics curves

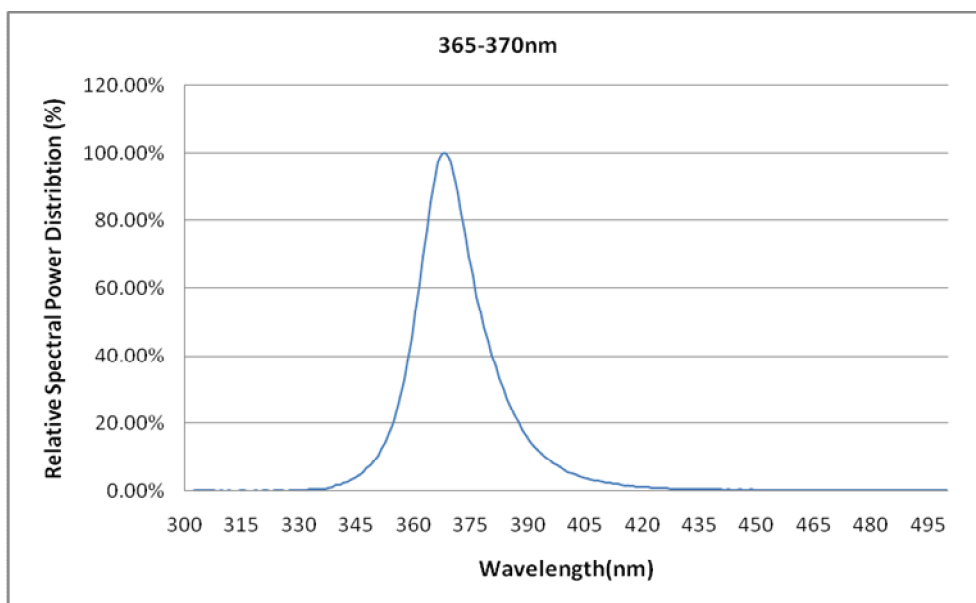
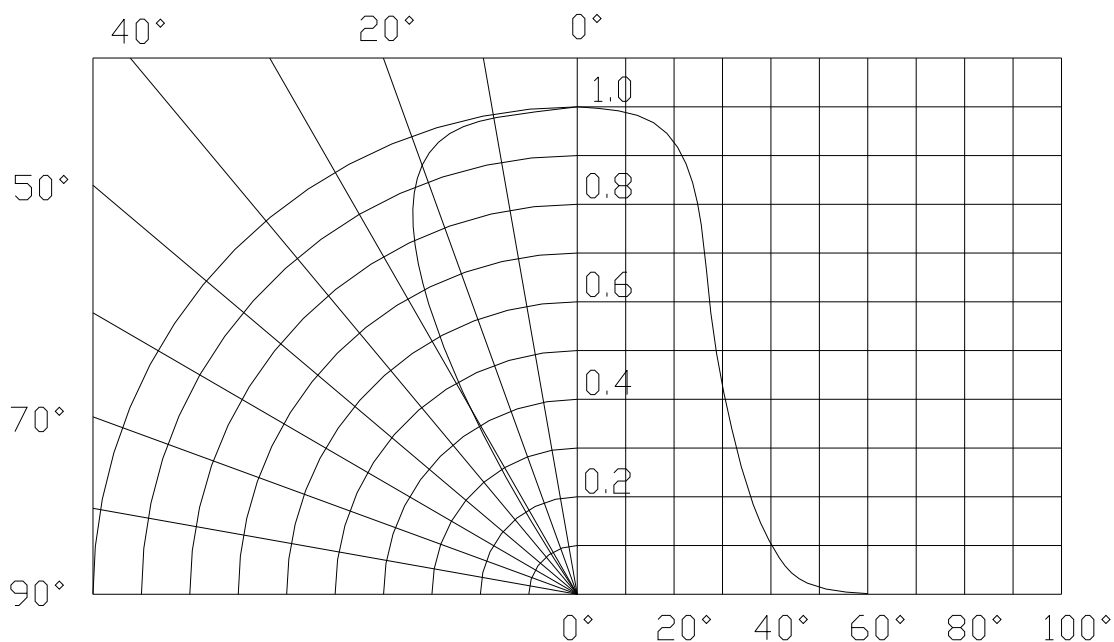
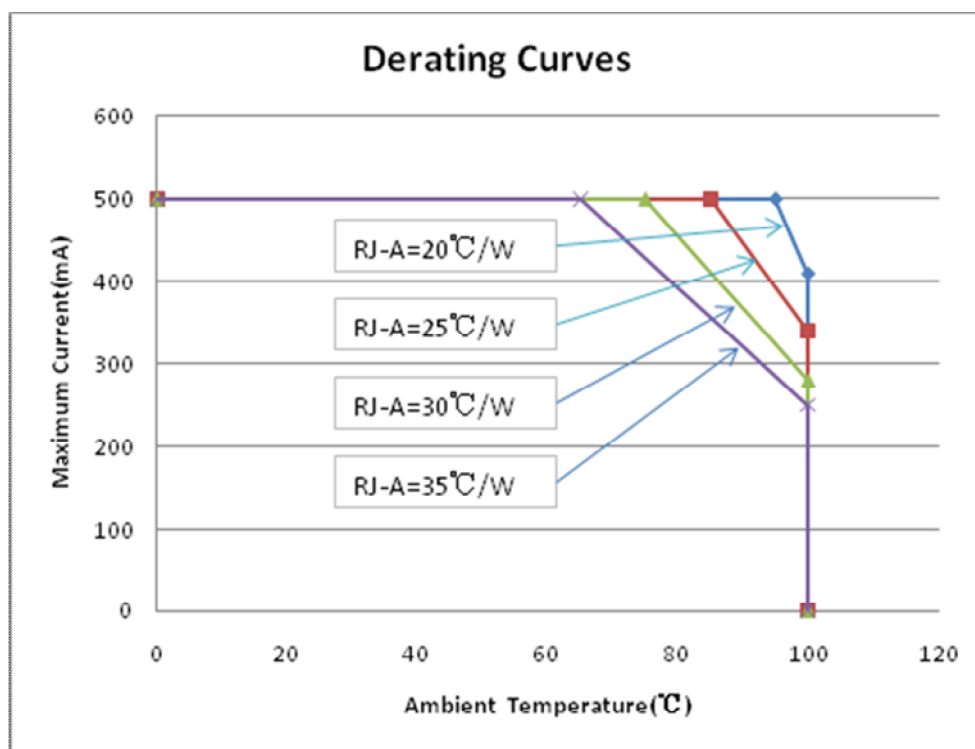


Diagram characteristics of radiation

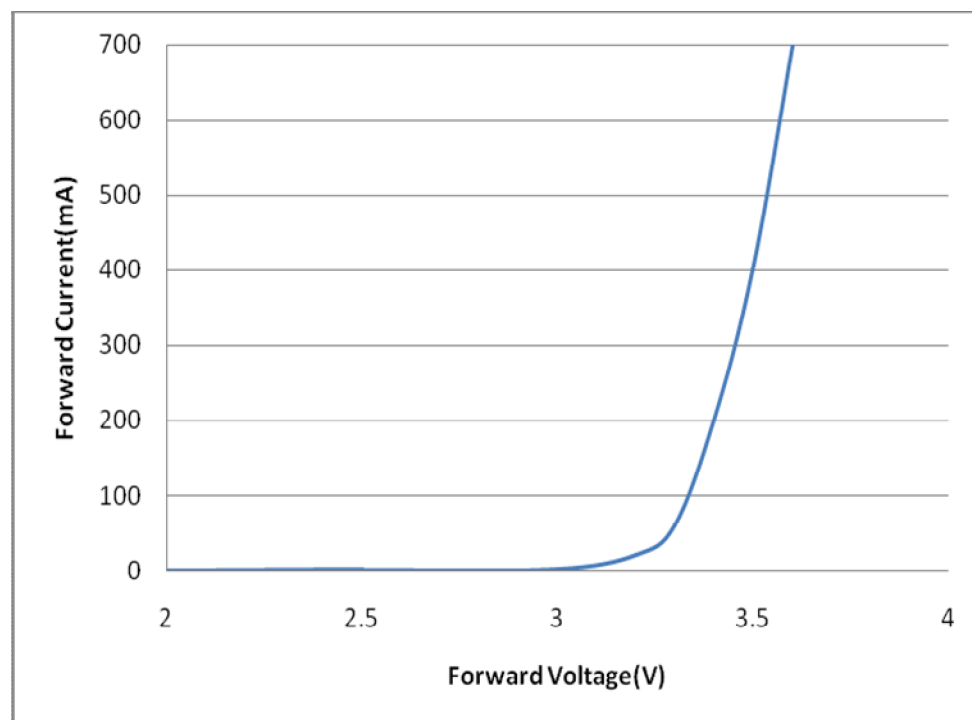
Diagram characteristics of radiation



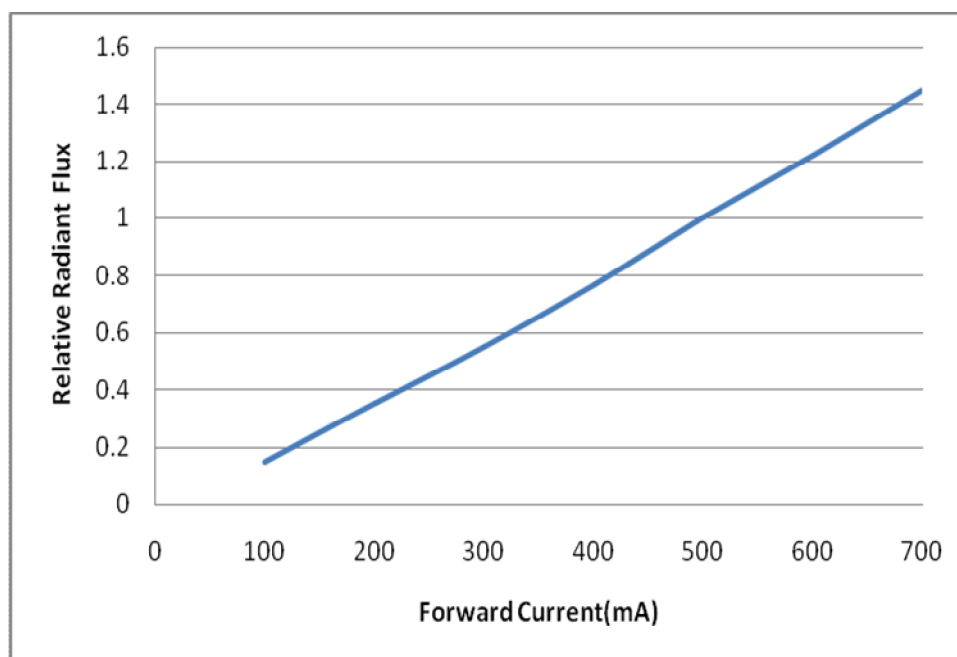
Ambient Temperature vs. Maximum Forward Current



Forward Voltage vs. Forward Current(Ta=25°C)



Relative Intensity vs. Forward Current($T_a=25^{\circ}\text{C}$)



Reflow profile

■ Soldering condition

- Recommended soldering conditions

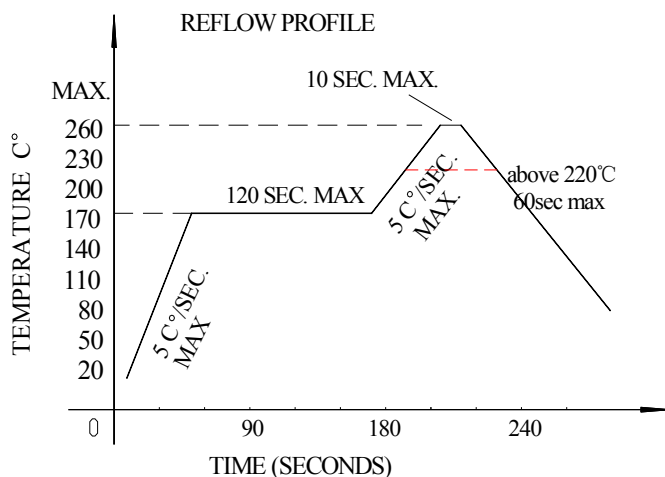
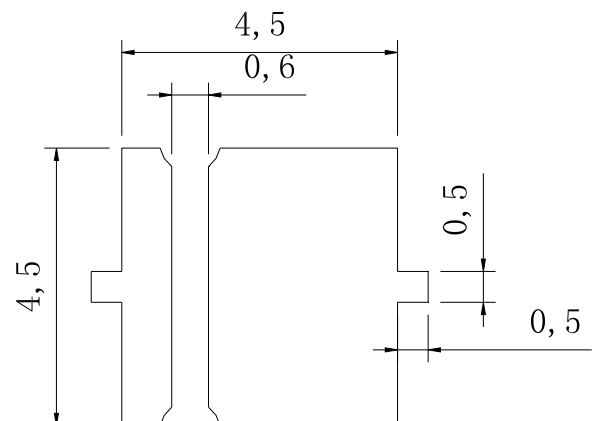
Reflow Soldering		Hand Soldering	
Pre-heat	160~180℃	Temperature	300℃ Max.
Pre-heat time	120 seconds Max.	Soldering time	3 second Max. (one time only)
Peak temperature	260℃ Max.		
Soldering time	10 seconds Max.		
Condition	Refer to Temperature-profile		

- After reflow soldering rapid cooling should be avoided

■ Temperature-profile (Surface of circuit board)

Use the following conditions shown in the figure.

RECOMMEND PAD DESIGN (Units: mm)



1. Reflow soldering should not be done more than two times
2. When soldering, do not put stress on the LEDs during heating

■ Soldering iron

1. When hand soldering, keep the temperature of the iron under 300℃, and at that temperature keep the time under 3 sec.
2. The hand soldering should be done only a time
3. The basic spec is ≤5 sec. when the temperature of 260℃, do not contact the resin when hand soldering