

LED-5060UBC3 Blue (H236B, 3-chip)

Features

- Extremely wide viewing angle
- Suitable for all SMT assembly and solder process
- Available on tape and reel
- Moisture sensitivity level: Level 4
- Package: 1000 pcs/reel
- RoHS compliant.

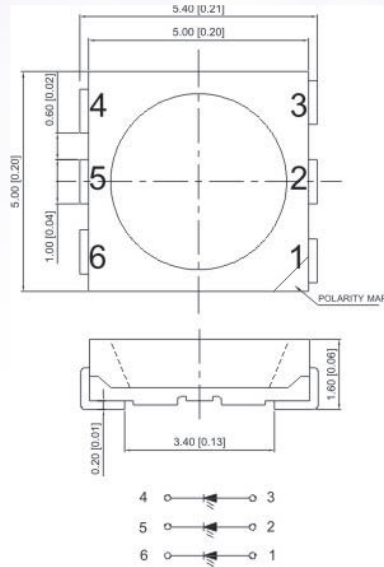
Description

- The Blue source color devices are made with InGaN on
- Substrate Light Emitting Diode

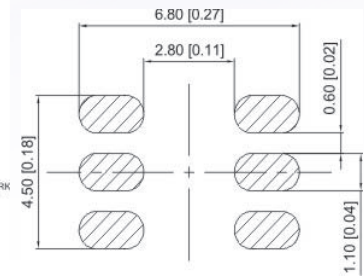
Application

- Optical indicator
- Indoor display
- Interior automotive lighting
- Backlight for LCD, switch and Symbol, display
- Light pipe application
- General use

Package Dimensions



Recommended Soldering Pattern



1. All dimension units are millimeters.
2. All dimension tolerance is $\pm 0.15\text{mm}$ unless otherwise noted.

LED Part No.	Dice	Lens Type	Luminous intensity(mcd) @ 20mA*3			Viewing Angle 2 θ 1/2
			Rank	Min.	Max.	
LED-5060UBC3 Blue (H236B, 3-chip)	Blue (InGaN)	Water Clear	P	460	600	120°
			Q	600	780	
			R	780	1015	

Notes

1. θ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. The above luminous intensity measurement allowance tolerance $\pm 10\%$.

Electrical / Optical Characteristics at Ta=25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Forward Voltage	VF	3.0	3.2	-	V	IF=20mA *3
Reverse Current	IR	-	-	10	mA	VR = 5V
Dominate Wavelength	λ_d	470	475	-	nm	IF=20mA *3

Absolute Maximum Rating at Ta=25°C

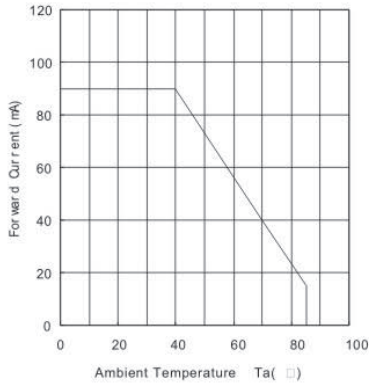
Parameter	White	Units
Power Dissipation	315	mW
DC Forward Current per chip	30	mA
Peak Forward Current [1]	300	mA
Reverse Voltage	5	V
Electrostatic discharge (HBM)	1000	V
Operating Temperature	-40~+85	°C
Storage Temperature	-40~+100	°C

Note:

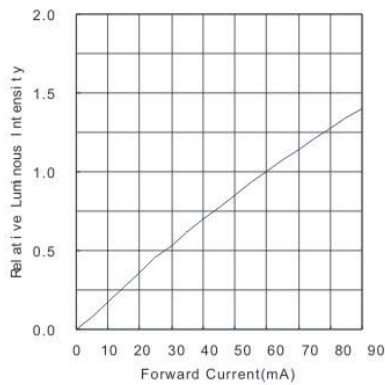
1. 1/10 Duty Cycle, 0.1ms Pulse Width.

Typical optical characteristics curves

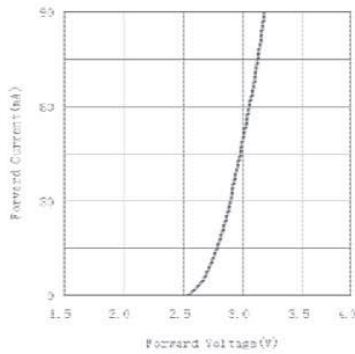
Ambient Temperature VS. Forward Current



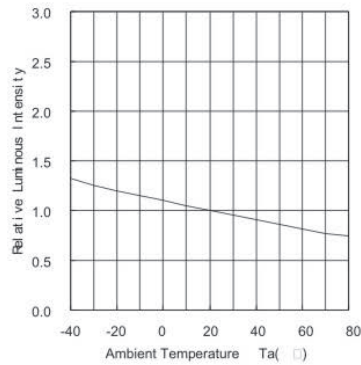
Forward Current VS. Relative Intensity



Forward Voltage VS. Forward Current



Ambient Temperature VS. Relative Intensity



Relative spectral emission

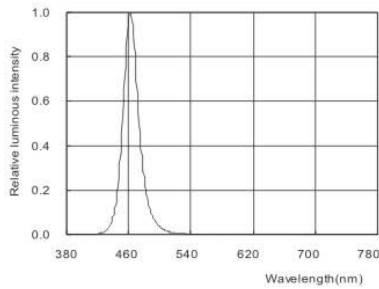
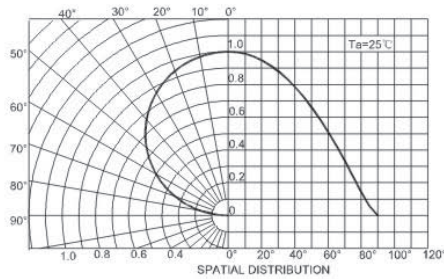


Diagram characteristics of radiation



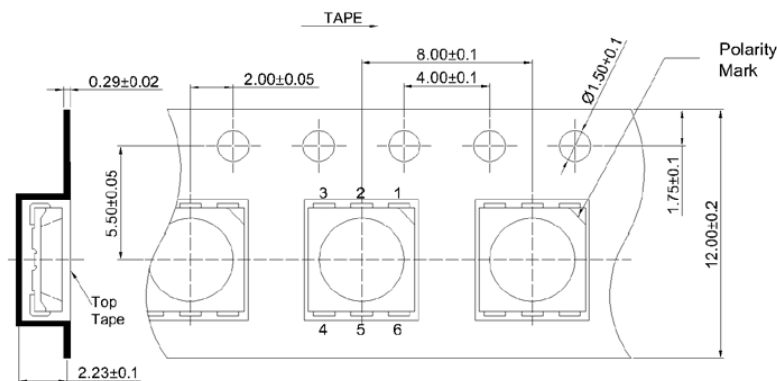
Reliability Test Items And Conditions

The reliability of products shall be satisfied with items listed below.

Confidence level: 90%

LTPD: 10%

Tape Specifications (Units : mm)



No.	Items	Ref. Standard	Test Condition	Test Hours/ Cycles	Sample Size	Ac/Rc
1	Reflow	JESD22-B106	Temp: 260°C max T=10 sec	3 times.	22 Pcs.	0/1
2	Temperature Cycle	JESD22-A104	100°C ±5°C 30 min. 5 min -40°C ±5°C 30 min.	100 Cycles	22 Pcs.	0/1
3	Thermal Shock	JESD22-A106	100°C ±5°C 5 min. -40°C ±5°C 5 min.	100 Cycles	22 Pcs.	0/1
4	High Temperature Storage	JESD22-A103	Temp: 100°C±5°C	1000 Hrs.	22 Pcs.	0/1
5	Low Temperature Storage	JESD22-A119	Temp: -40°C±5°C	1000 Hrs.	22 Pcs.	0/1
6	DC Operating Life	JESD22-A108	Ta=25°C±5°C IF=60mA	1000 Hrs.	22 Pcs.	0/1
7	High Temperature/ High Humidity	JESD22-A101	85°C±5°C / 85%RH IF=15mA	1000 Hrs.	22 Pcs.	0/1

*The technical information shown in the data sheets are limited to the typical characteristics and circuit examples of the referenced products. It does not constitute the warranting of industrial property nor the granting of any license.

SMT Reflow Soldering Instructions

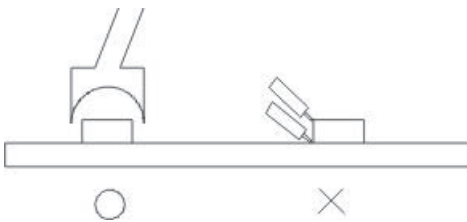
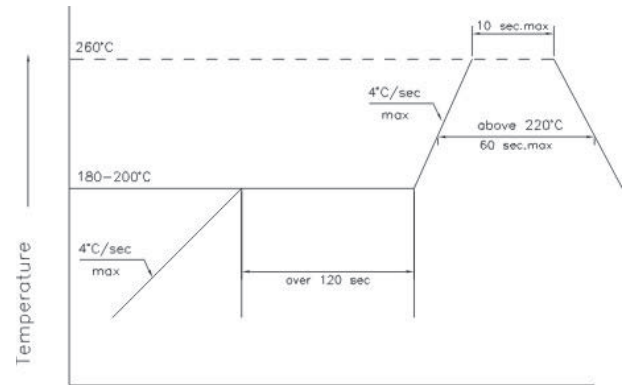
1. Reflow soldering should not be done more than two times.
2. When soldering, do not put stress on the LEDs during heating.

Soldering iron

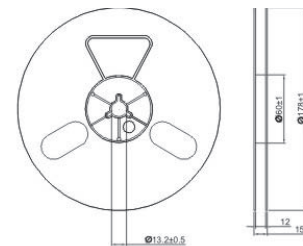
1. When hand soldering, the temperature of the iron must less than 300 for 3 seconds.
2. The hand solder should be done only one times.

Repairing

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of LEDs will or will not be damaged by repairing.



Moisture Resistant Packaging



Reel Dimensions

