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DATA SHEET

PART NO. : L-C19DLBCT

REV : A / 0

CUSTOMER'S APPROVAL : _____ DCC : _____

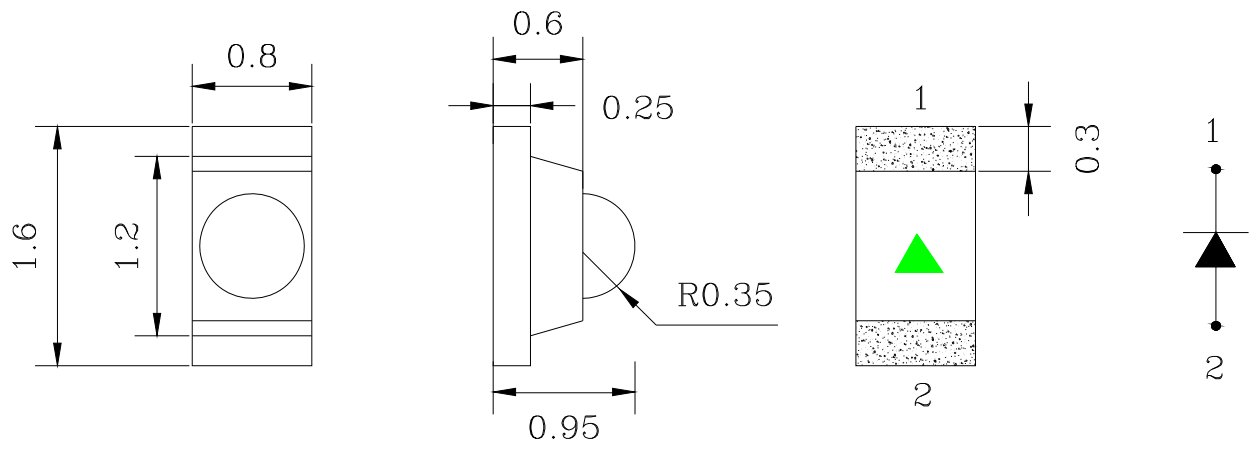


1.6*0.8*0.95 mm SMD LED

L-C19DLBCT

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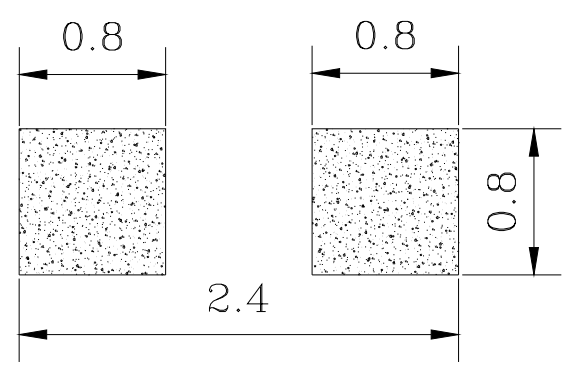
PACKAGE DIMENSIONS



NOTES :

- 1.All dimensions are in millimeters
- 2.Tolerances are ± 0.2 mm (0.008inch) unless otherwise noted
- 3.The Specifications in the datasheet are subject to change without notice.

Recommended Soldering Pattern (Unit: mm ; Tolerance: +/-0.1)



NOTES :

- 1.All dimensions are in millimeters
- 2.Tolerances are ± 0.1 mm (0.004inch) unless otherwise noted
- 3.The Specifications in the datasheet are subject to change without notice.



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FEATURES

- * 1.6*0.8*0.95 mm SMD LED
- * Long operating life
- * Low Power Consumption
- * Low voltage DC operated

CHIP MATERIALS

- * Dice Material : InGaN
- * Light Color : Blue
- * Lens Color : Water Clear

ABSOLUTE MAXIMUM RATING : (Ta = 25°C)

SYMBOL	PARAMETER	Rating	UNIT
If	Forward Current	30	mA
Ifp	Peak Forward Current (1/10 duty cycle 0.1ms)	100	mA
VR	Reverse Voltage	5	V
ESD	Electrostatic Discharge Threshold(HBM)	2000	V
Topr	Operating Temperature Range	-40 ~ + 90	°C
Tstg	Storage Temperature Range	-40 ~ + 90	°C
Tsld	Reflow Soldering	260°C for 10 secs	

ELECTRO-OPTICAL CHARACTERISTICS : (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	Iv	200	300		mcd	IF=20mA
Viewing Angle	2θ1/2		30		deg	IF=20mA
Spectral Line Half-Width	Δλ		25		nm	IF=20mA
Dominant Wavelength	λD		465		nm	IF=20mA
Forward Voltage	VF	2.9		3.4	V	IF=20mA
Reverse Current	IR			10	μA	VR=5V



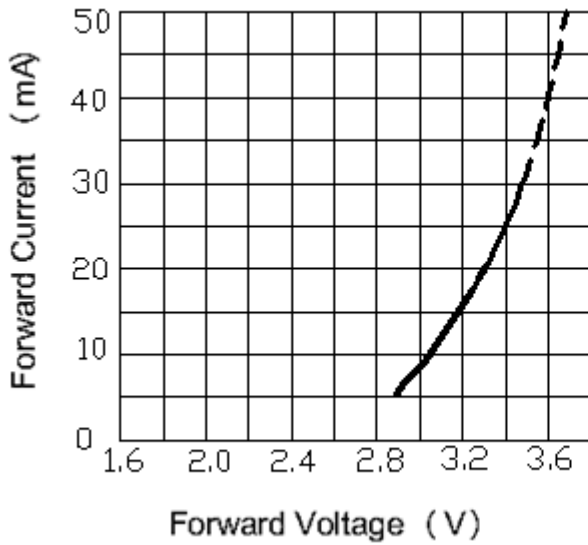
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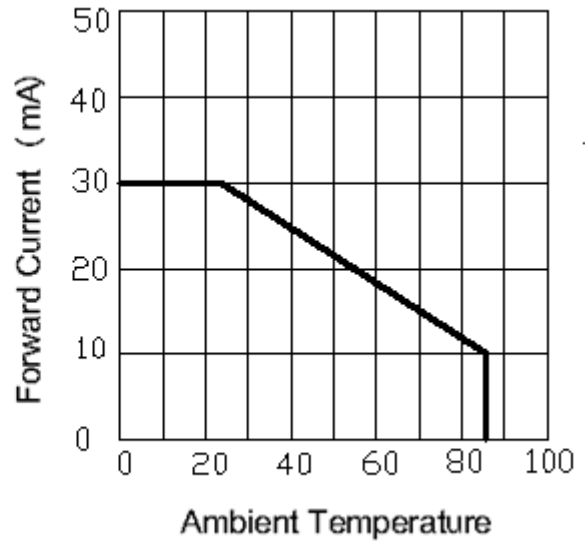
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Typical Electro-Optical Characteristics Curves
(25°C Ambient Temperature Unless Otherwise Noted)

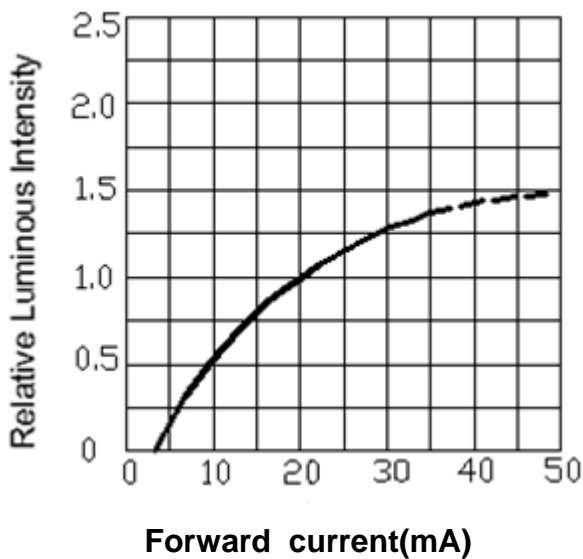
Forward Current vs. Forward Voltage



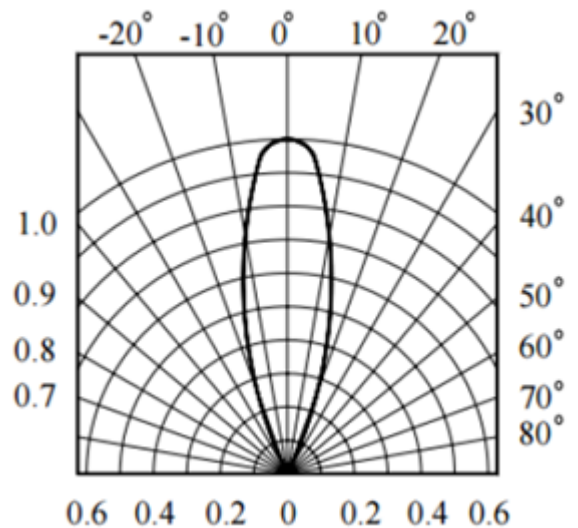
Forward Current vs. Ambient Temperature



Relative Luminous Intensity vs Forward Current



Radiation Diagram





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Bin Range of Luminous Intensity

Bin Code	Min.	Max.	unit	Condition
L1	200	400	mcd	IF = 20mA

Note: Tolerance of Luminous Intensity: $\pm 15\%$

Bin Range of Dominant Wavelength

Bin Code	Min.	Max.	unit	Condition
B1	460	462	nm	IF = 20mA
B2	462	464		
B3	464	466		
B4	466	468		
B5	468	470		
B6	470	472		

Note: Tolerance of Dominant Wavelength: $\pm 1\text{nm}$

Bin Range of Forward Voltage

Bin Code	Min.	Max.	unit	Condition
V1	2.9	3.0	V	IF = 20mA
V2	3.0	3.1		
V3	3.1	3.2		
V4	3.2	3.3		
V5	3.3	3.4		

Note: Tolerance of Forward Voltage: $\pm 0.1\text{V}$

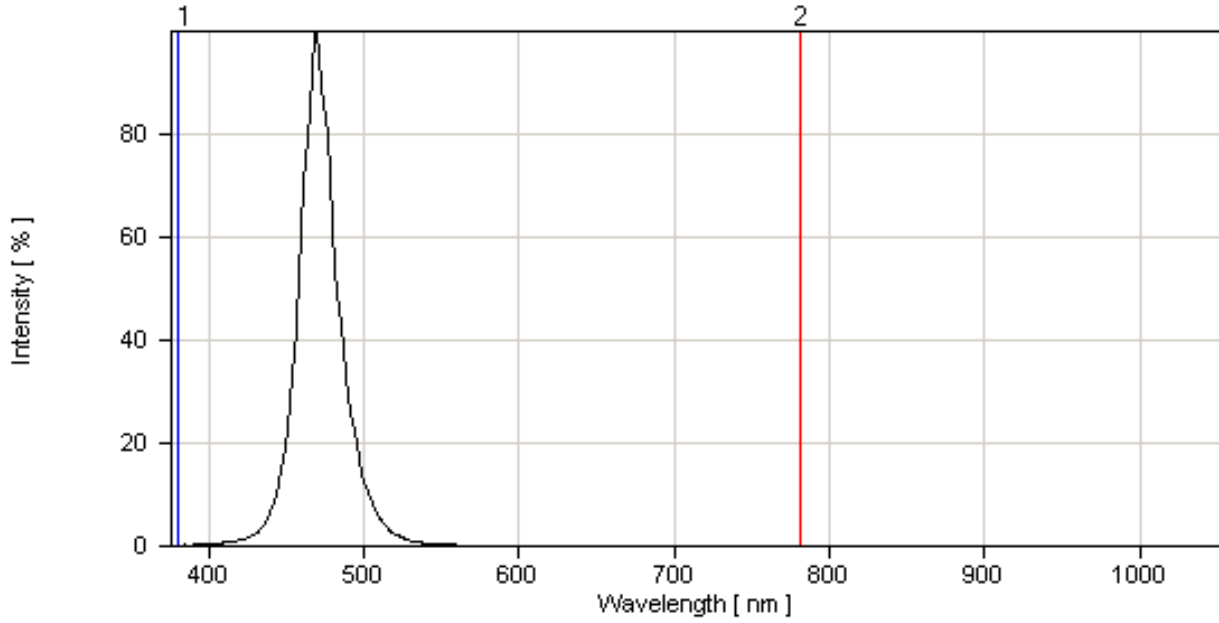


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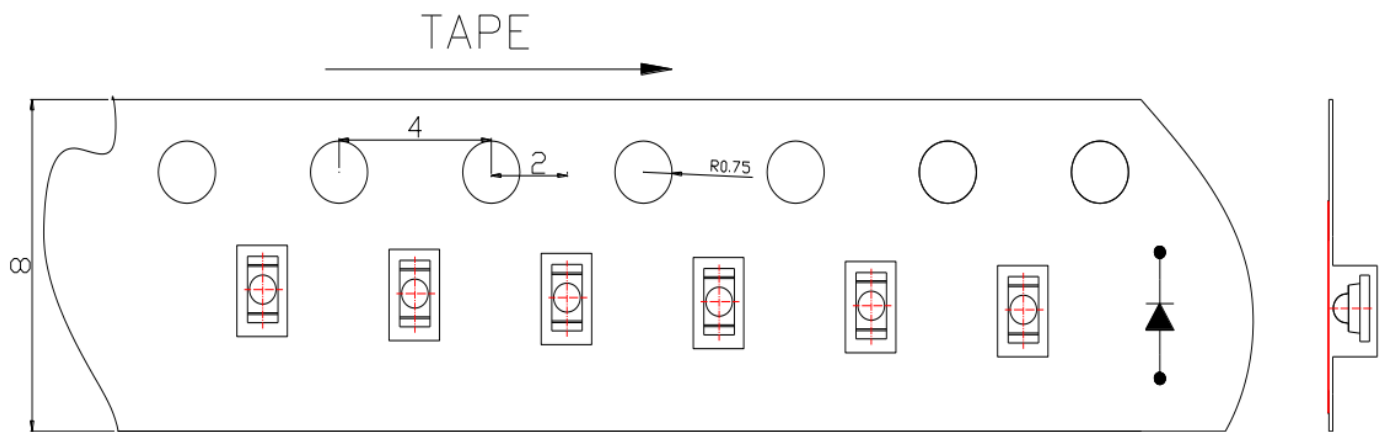
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Spectrum Distribution



Taping Specification: 3,000pcs/Reel



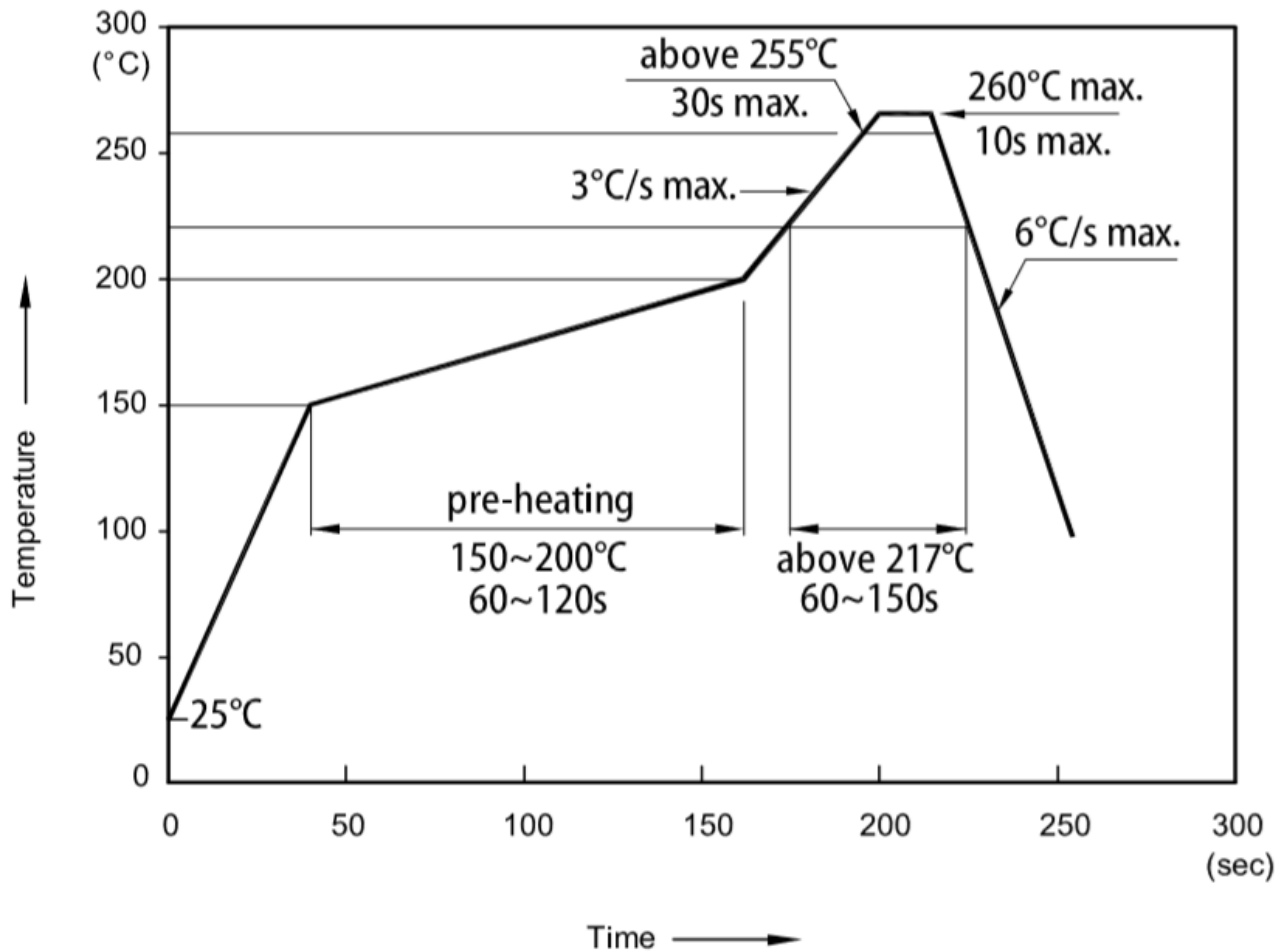


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Reflow Soldering Profile for Lead-Free SMD Process



- Don't cause stress to the LEDs while it is exposed to high temperature.
- The maximum number of reflow soldering passes is 2 times.
- Reflow soldering is recommended. Other soldering methods are not recommended as they might cause damage to the product.



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Precautions

1.Storage

- Moisture proof and anti-electrostatic package with moisture absorbent material is used, to keep moisture to a minimum.
- Before opening the package, the product should be kept at 30°C or less and humidity less than 60% RH, and be used within a year.
- After opening the package, the product should be stored at 30°C or less and humidity less than 10%RH, and be soldered within 24 hours (1day). It is recommended that the product be operated at the workshop condition of 30°C or less and humidity less than 60%RH.
- If the moisture absorbent material has faded away or the LEDs have exceeded the storage time, baking treatment should be performed based on the following condition: (70±5)°C for 24 hours.

2.Static Electricity

Static electricity or surge voltage damages the LEDs. Damaged LEDs will show some unusual characteristic such as the forward voltage becomes lower, or the LEDs do not light at the low current. even not light.
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.

3.Vulcanization

LED curing is due to sulfur being in bracket and the +1 price of silver in the chemical reaction generated Ag₂S in the process. It will lead to the capacity of reflecting of silver layer reducing, light color temperature drift and serious decline, seriously affecting the performance of the product. So we should take corresponding measures to avoid vulcanization, such as to avoid using sulphur volatile substances and keeping away from high sulphur content of the material.