



SMD LED

Product Data Sheet

LTST-C190CBKT

Spec No.: DS22-2000-172

Effective Date: 06/12/2001

Revision: -

LITE-ON DCC

RELEASE

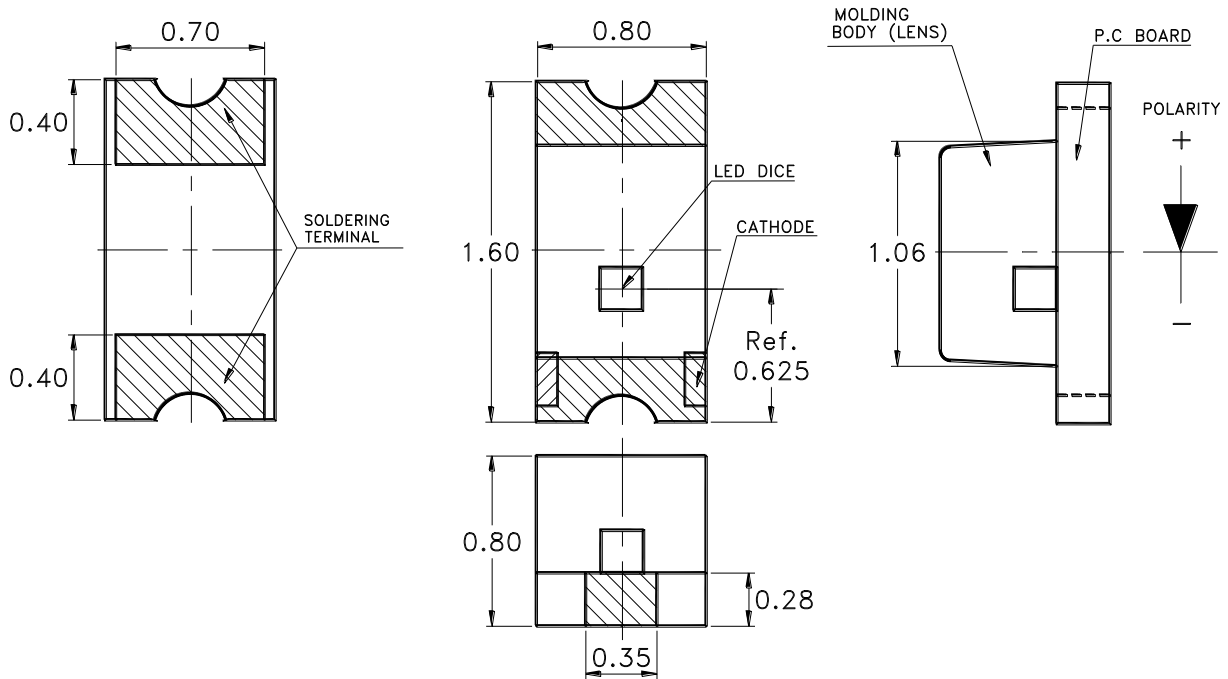
BNS-OD-FC001/A4

Property of Lite-On Only

Features

- * Package in 8mm tape on 7" diameter reels.
- * Compatible with automatic placement equipment.
- * Compatible with infrared and vapor phase reflow solder process.
- * EIA STD package.
- * I.C. compatible.

Package Dimensions



Part no.	Lens	Source Color
LTST-C190CBKT	Water Clear	InGaN on SiC Blue

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.1\text{mm}$ (.004") unless otherwise noted.

Property of Lite-On Only

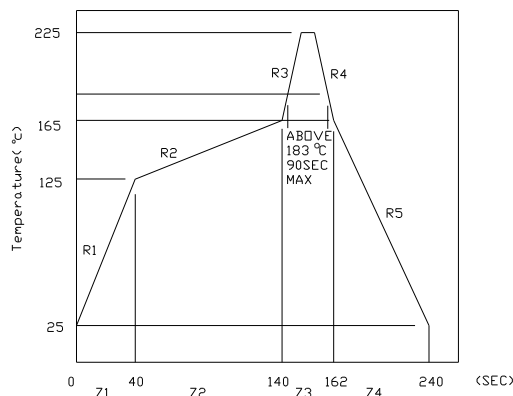
Absolute Maximum Ratings At Ta=25°C

Parameter	LTST-C190CBKT	Unit
Power Dissipation	120	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	100	mA
Continuous Forward Current	30	mA
Derating Linear From 30°C	0.5	mA/°C
Reverse Voltage	5	V
Electrostatic Discharge Threshold(HBM) ^{Note A}	1000	V
Operating Temperature Range	-20°C to + 80°C	
Storage Temperature Range	-30°C to + 100°C	
Wave Soldering Condition	260°C For 5 Seconds	
Infrared Soldering Condition	260°C For 5 Seconds	
Vapor Phase Soldering Condition	215°C For 3 Minutes	

Note A :

HBM : Human Body Model. Seller gives no other assurances regarding the ability of to withstand ESD.

Suggest IR Reflow Condition :



Property of Lite-On Only

Electrical Optical Characteristics At Ta=25°C

Parameter	Symbol	Part No. LTST-	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	IV	C190CBKT	15.0	20.0		mcd	IF = 20mA Note 1
Viewing Angle	$2\theta 1/2$	C190CBKT		130		deg	Note 2 (Fig.6)
Peak Emission Wavelength	λ Peak	C190CBKT		468		nm	Measurement @Peak (Fig.1)
Dominant Wavelength	λ d	C190CBKT		470		nm	Note 3
Spectral Line Half-Width	$\Delta \lambda$	C190CBKT		26		nm	
Forward Voltage	VF	C190CBKT		3.7	4.0	V	IF = 20mA
Reverse Current	IR	C190CBKT			100	μ A	VR = 5V

Notes: 1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.

2. $\theta 1/2$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

3. The dominant wavelength, λ d is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

4. Caution in ESD:

Static Electricity and surge damages the LED. It is recommend to use a wrist band or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.

Property of Lite-On Only

Typical Electrical / Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)

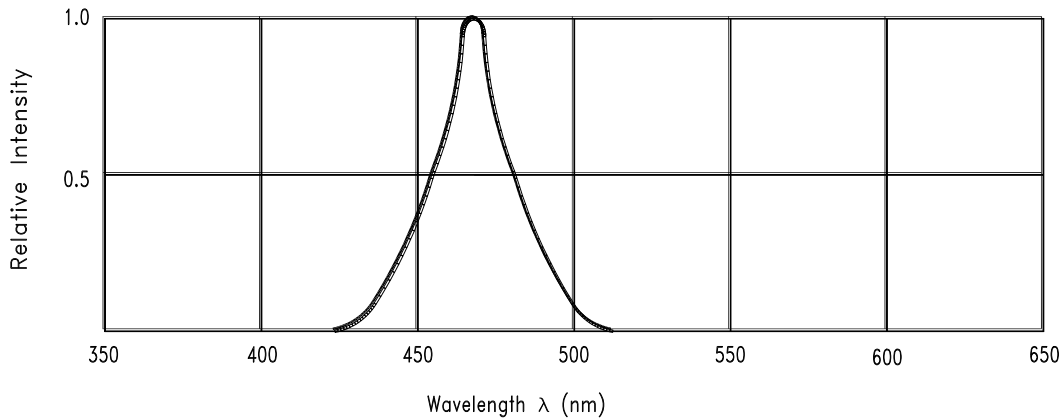


Fig.1 Relative Intensity vs. Wavelength

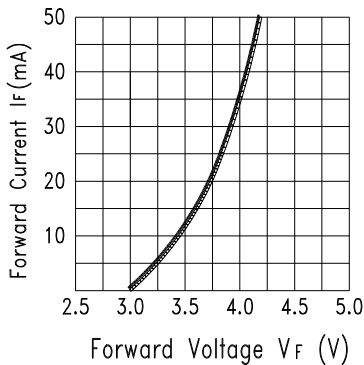


Fig.2 Forward Current vs. Forward Voltage

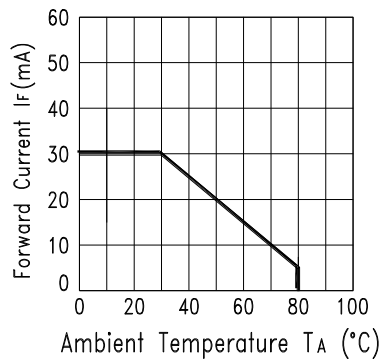


Fig.3 Forward Current Derating Curve

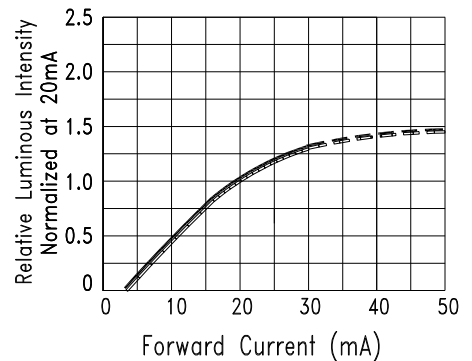


Fig.4 Relative Luminous Intensity vs. Forward Current

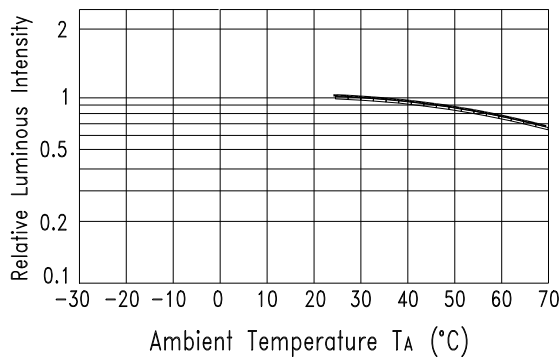


Fig.5 Luminous Intensity vs. Ambient Temperature

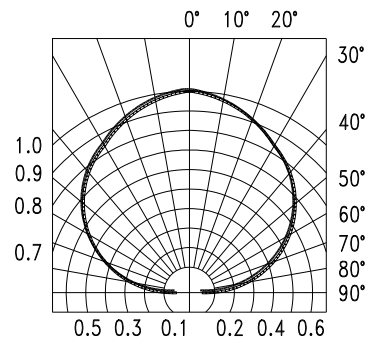


Fig.6 Spatial Distribution

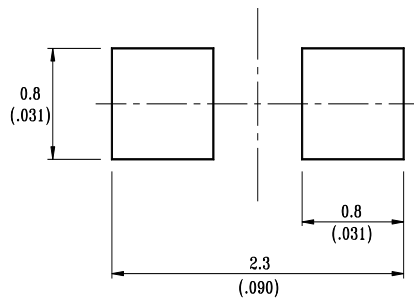
Property of Lite-On Only

Cleaning

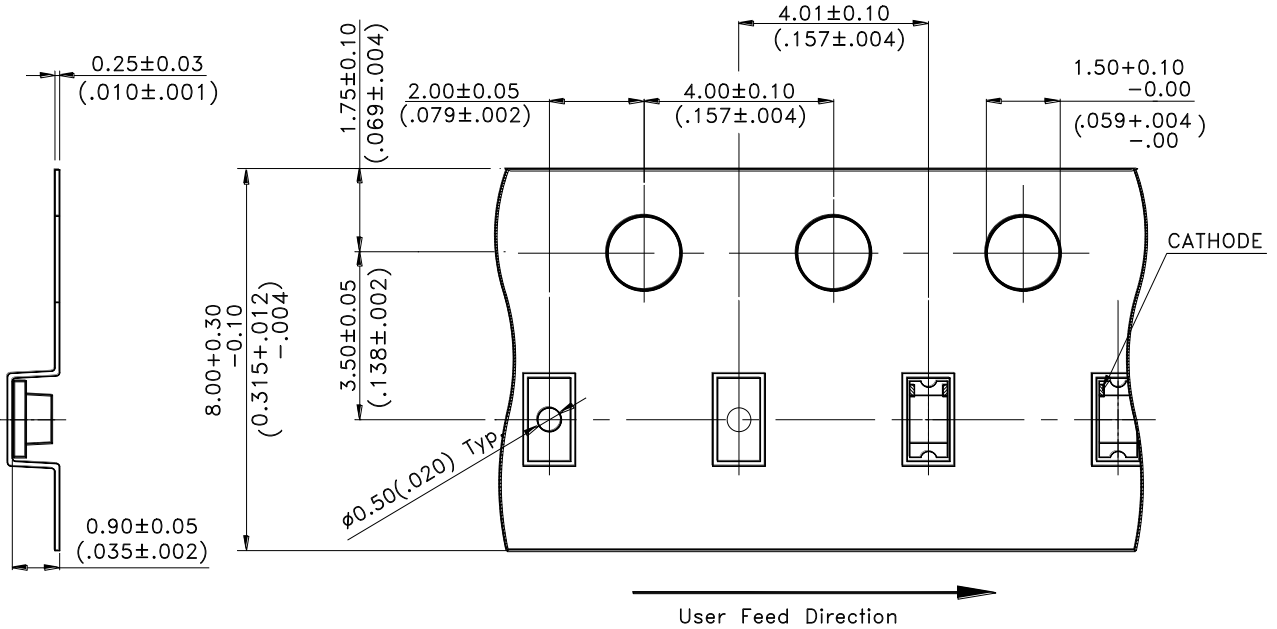
Do not use unspecified chemical liquid to clean LED they could harm the package.

If clean is necessary, immerse the LED in ethyl alcohol or in isopropyl alcohol at normal temperature for less one minute.

Suggest Soldering Pad Dimensions



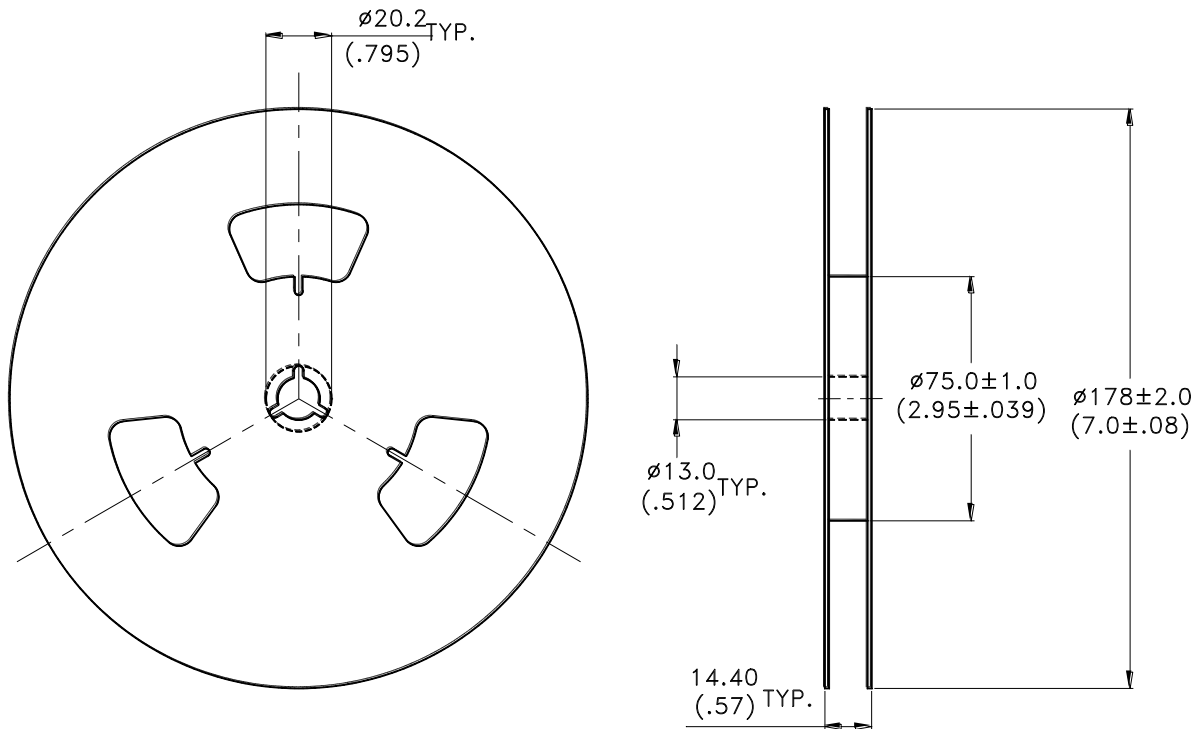
Package Dimensions Of Tape And Reel



Notes:

1. All dimensions are in millimeters (inches).

Property of Lite-On Only



Notes:

1. Empty component pockets sealed with top cover tape.
2. 7 inch reel-3000 pieces per reel.
3. The maximum number of consecutive missing lamps is two.
4. In accordance with ANSI/EIA 481-1-A-1994 specifications.