



## **SMD LED**

# **Product Data Sheet**

## **LTST-S320YKT**

Spec No.: DS-22-99-0179

Effective Date: 04/09/2000

Revision: -

**LITE-ON DCC**

**RELEASE**

**BNS-OD-FC001/A4**

**LITE-ON Technology Corp. / Optoelectronics**

No.90,Chien 1 Road, Chung Ho, New Taipei City 23585, Taiwan, R.O.C.

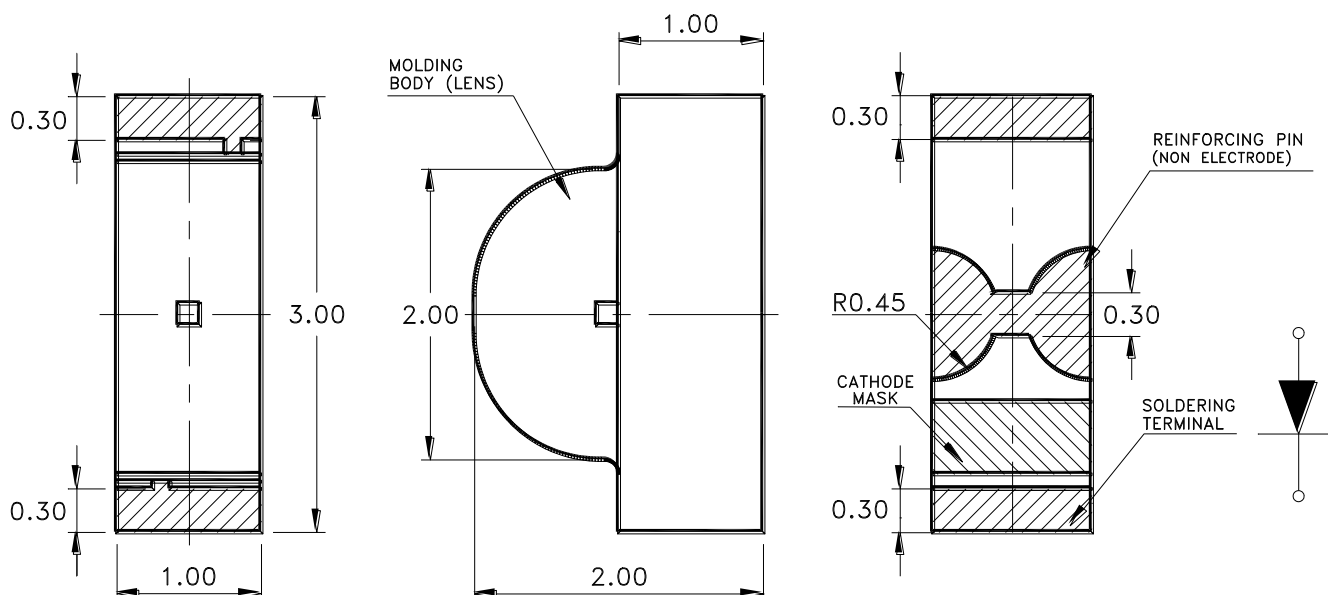
Tel: 886-2-2222-6181 Fax: 886-2-2221-1948 / 886-2-2221-0660

<http://www.liteon.com/opto>

## Features

- \* Side looking special for LCD backlight.
- \* Package in 8mm tape on 7" diameter reels.
- \* Compatible with automatic placement equipment.
- \* Compatible with infrared and vapor phase reflow and wave solder process.
- \* EIA STD package.
- \* I.C. compatible.

## Package Dimensions



Part No.	Lens	Source Color
LTST-S320YKT	Water Clear	GaAsP on GaP Yellow

## Notes:

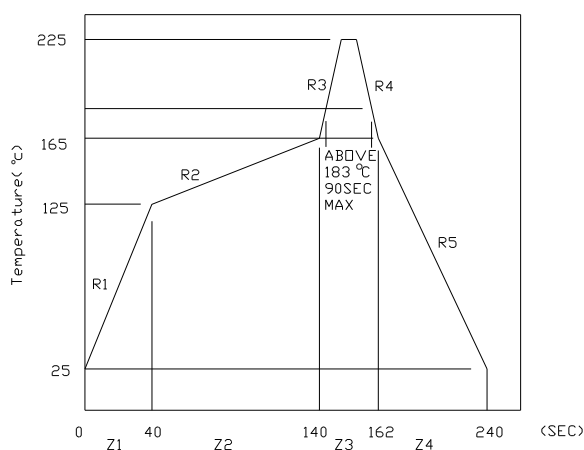
1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.1\text{mm}$  (.004") unless otherwise noted.

## Property of Lite-On Only

### Absolute Maximum Ratings At Ta= 25°C

Parameter	LTST-S320YKT	Unit
Power Dissipation	60	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	80	mA
Continuous Forward Current	20	mA
Derating Linear From 50°C	0.4	mA/°C
Reverse Voltage	5	V
Operating Temperature Range	-55°C to + 85°C	
Storage Temperature Range	-55°C to + 85°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	

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	S320YKT	1.6	4.0	12.5	mcd	IF = 20mA Note 1
Viewing Angle	2 $\theta$ 1/2	S320YKT		130		deg	Note 2 (Fig.6)
Peak Emission Wavelength	$\lambda$ P	S320YKT		585		nm	Measurement @Peak (Fig.1)
Dominant Wavelength	$\lambda$ d	S320YKT		588		nm	Note 3
Spectral Line Half-Width	$\Delta \lambda$	S320YKT		35		nm	
Forward Voltage	VF	S320YKT		2.1	2.6	V	IF = 20mA
Reverse Current	IR	S320YKT			100	$\mu$ A	VR = 5V
Capacitance	C	S320YKT		30		PF	VF = 0 f = 1MHZ

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,  $\lambda$  d is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

Property of Lite-On Only

## Typical Electrical / Optical Characteristics Curves

(25 °C Ambient Temperature Unless Otherwise Noted)

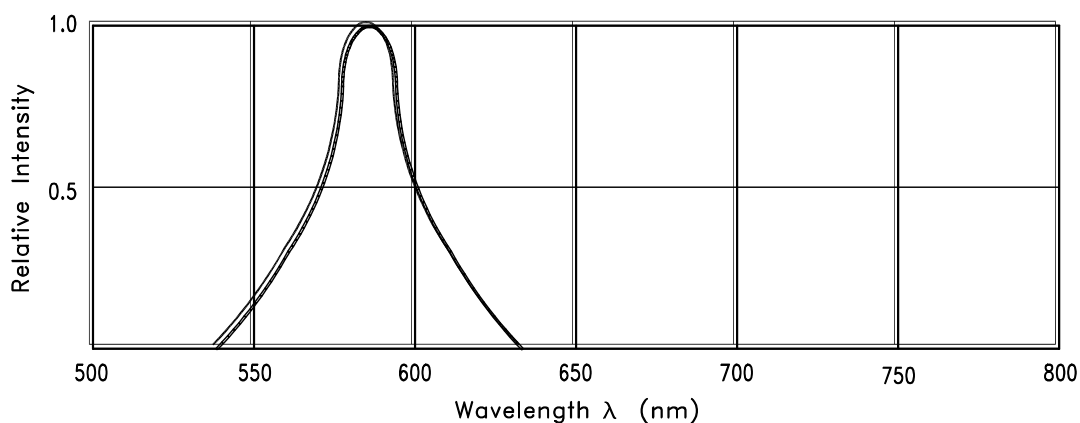


Fig.1 RELATIVE INTENSITY VS. WAVELENGTH

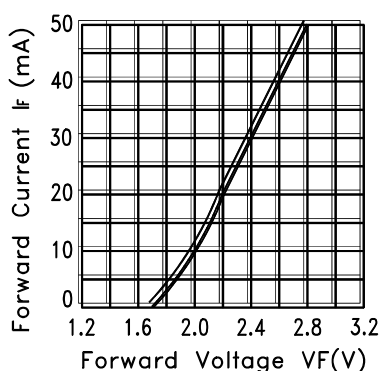


Fig.2 FORWARD CURRENT VS. FORWARD VOLTAGE

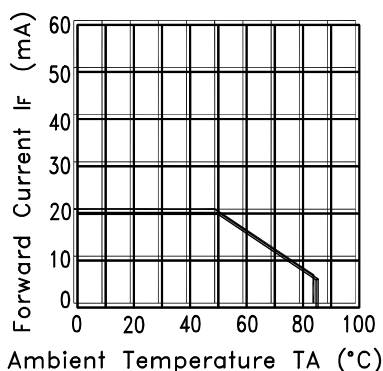


Fig.3 FORWARD CURRENT DERATING CURVE

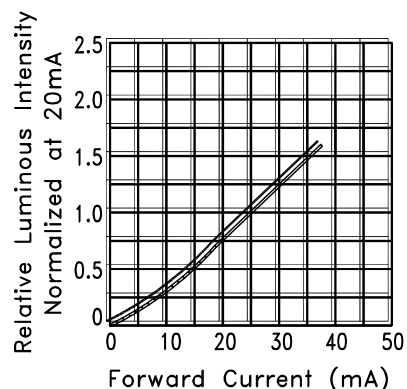


Fig.4 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

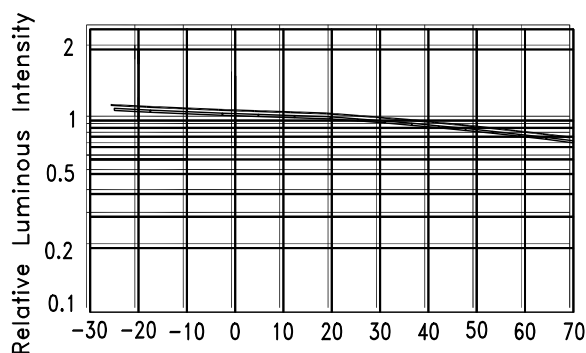


Fig.5 LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

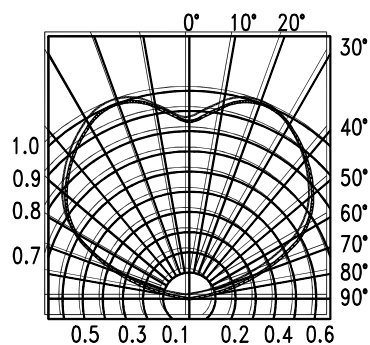


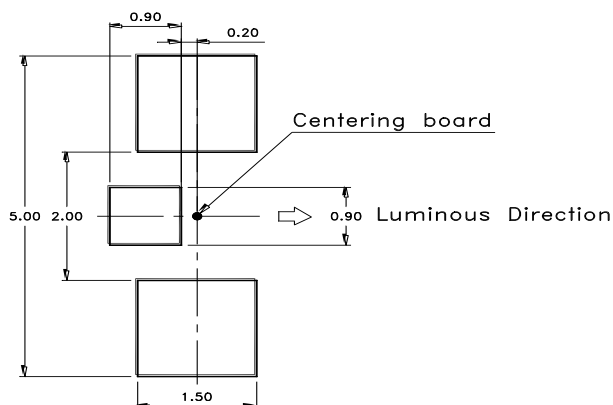
Fig.6 SPATIAL DISTRIBUTION

## Cleaning

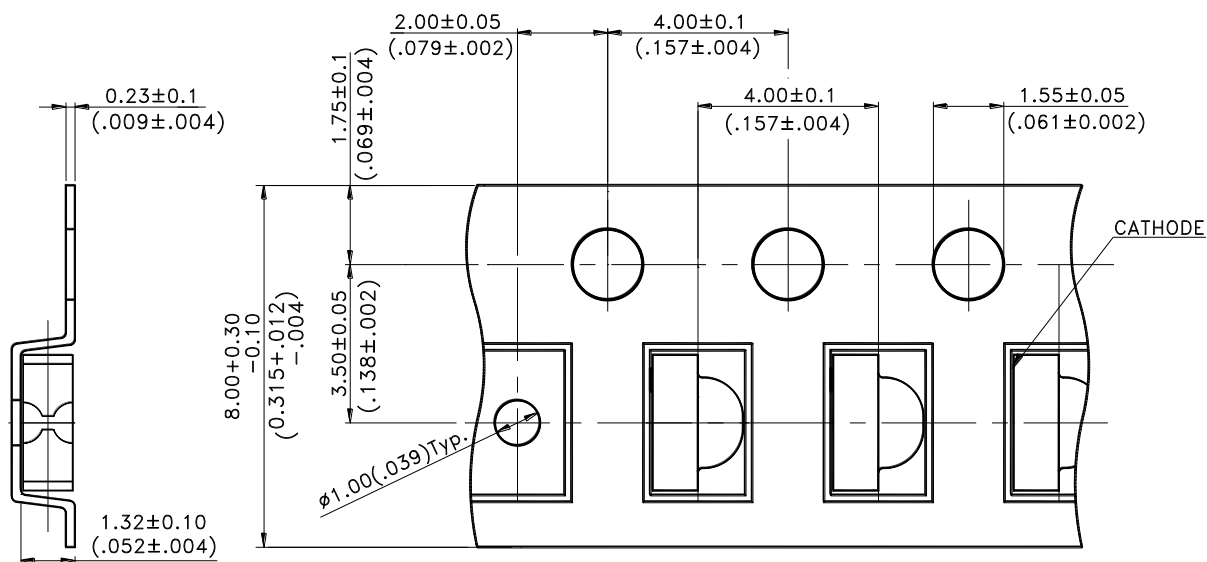
Do not use unspecified chemical liquid to clean LED they could harm the package.

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

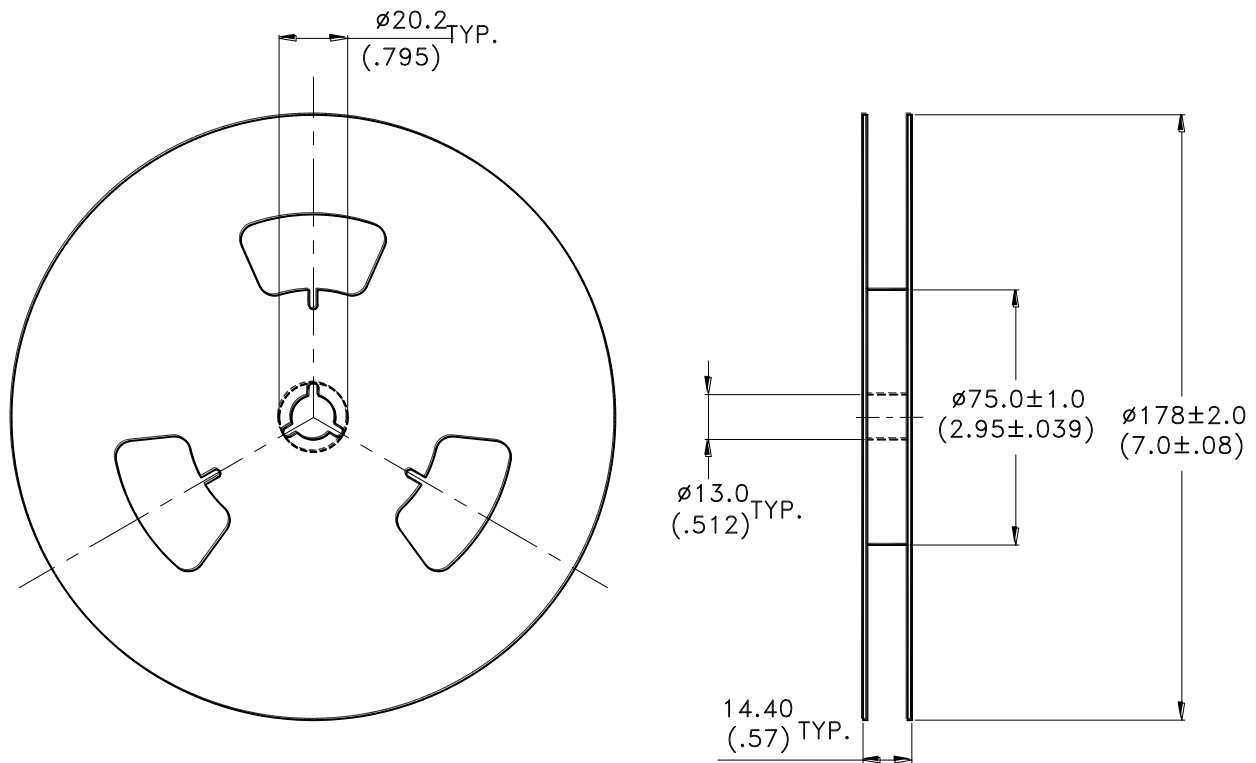


## Package Dimensions Of Tape And Reel



## Notes:

1. All dimensions are in millimeters (inches).



## 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.