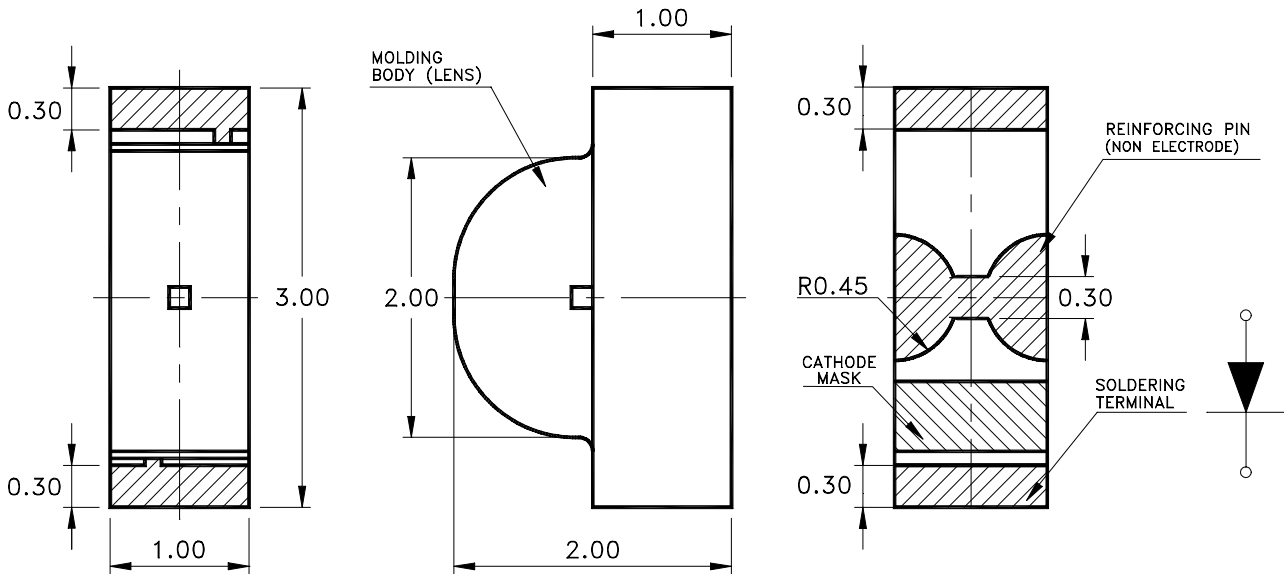


### Features

- \* 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-S320EKT | Water Clear | GaAsP on GaP Red Orange |

### Notes:

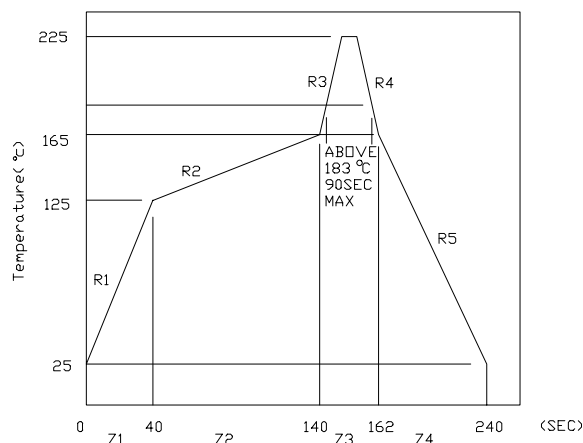
1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.1\text{mm}$  (.004") unless otherwise noted.

Property of Lite-On Only

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

| Parameter  | LTST-S320EKT        | Unit  |
|--|---------------------|-------|
| Power Dissipation  | 100                 | mW    |
| Peak Forward Current<br>(1/10 Duty Cycle, 0.1ms Pulse Width) | 120                 | mA    |
| Continuous Forward Current                                   | 30                  | mA    |
| Derating Linear From 50°C                                    | 0.6                 | 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 :





# LITE-ON ELECTRONICS, INC.

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## Electrical Optical Characteristics At Ta= 25°C

| Parameter                | Symbol           | Part No.<br>LTST- | Min. | Typ. | Max. | Unit    | Test Condition            |
|--------------------------|------------------|-------------------|------|------|------|---------|---------------------------|
| Luminous Intensity       | IV               | S320EKT           | 1.6  | 4.0  | 12.5 | mcd     | IF = 20mA<br>Note 1       |
| Viewing Angle            | $2\theta 1/2$    | S320EKT           |      | 130  |      | deg     | Note 2 (Fig.6)            |
| Peak Emission Wavelength | $\lambda P$      | S320EKT           |      | 630  |      | nm      | Measurement @Peak (Fig.1) |
| Dominant Wavelength      | $\lambda d$      | S320EKT           |      | 621  |      | nm      | Note 3                    |
| Spectral Line Half-Width | $\Delta \lambda$ | S320EKT           |      | 24   |      | nm      |                           |
| Forward Voltage          | VF               | S320EKT           |      | 2.0  | 2.6  | V       | IF = 20mA                 |
| Reverse Current          | IR               | S320EKT           |      |      | 100  | $\mu A$ | VR = 5V                   |
| Capacitance              | C                | S320EKT           |      | 20   |      | PF      | VF = 0<br>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)

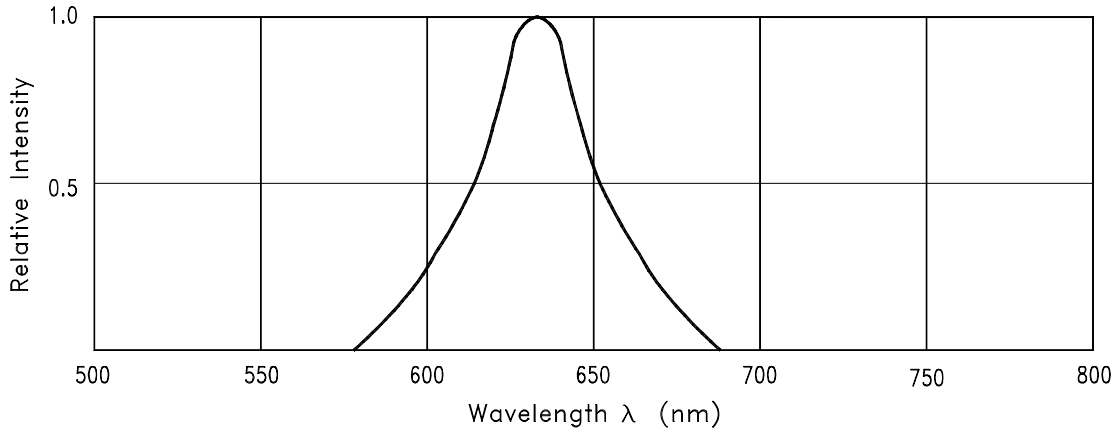


Fig.1 RELATIVE INTENSITY VS. WAVELENGTH

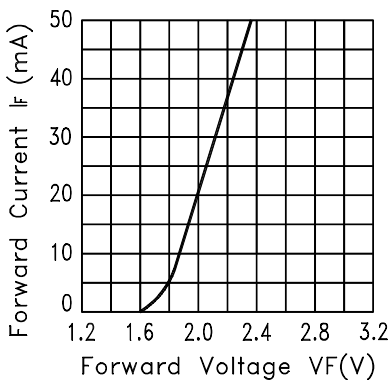


Fig.2 FORWARD CURRENT VS. FORWARD VOLTAGE

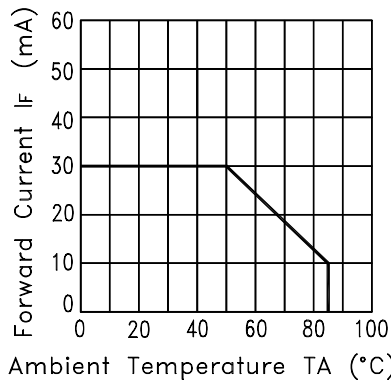


Fig.3 FORWARD CURRENT DERATING CURVE

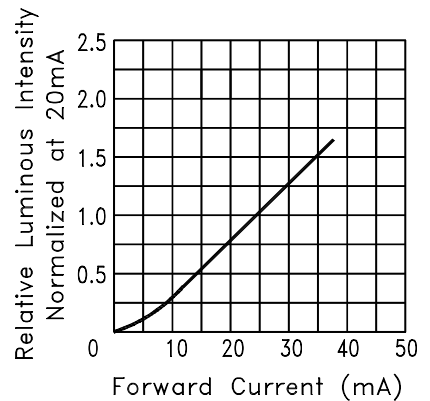


Fig.4 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

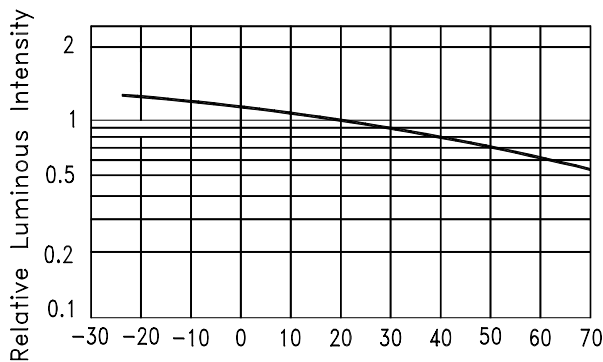


Fig.5 LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

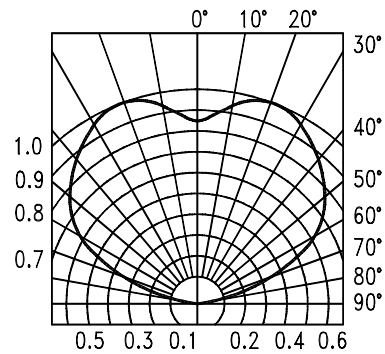


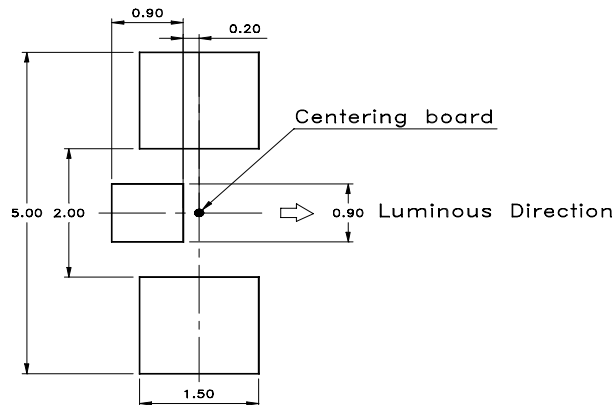
Fig.6 SPATIAL DISTRIBUTION

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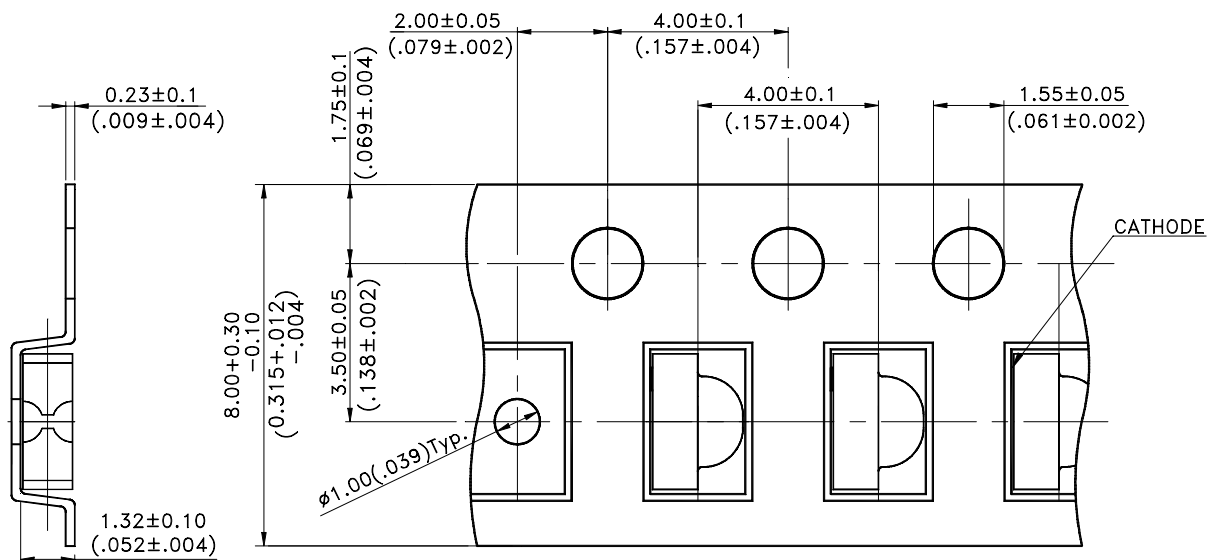
### Cleaning

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

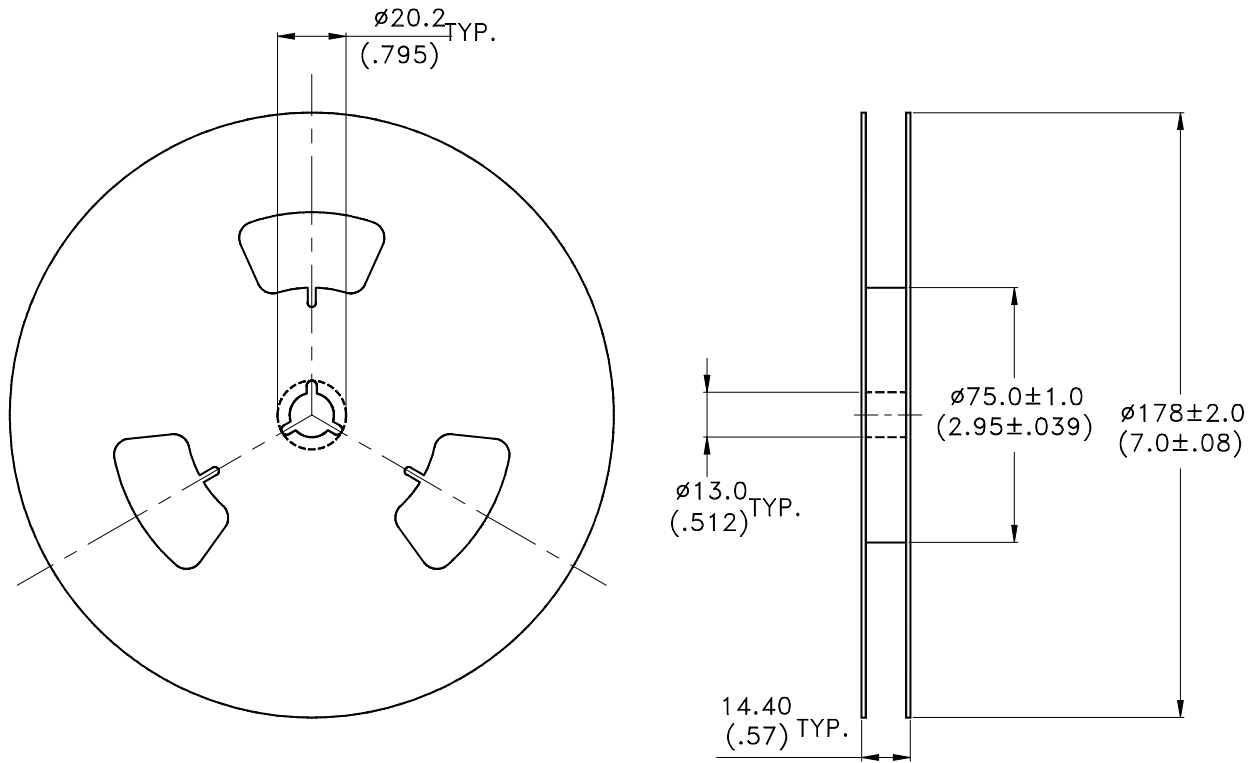


### Package Dimensions Of Tape And Reel



### 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.