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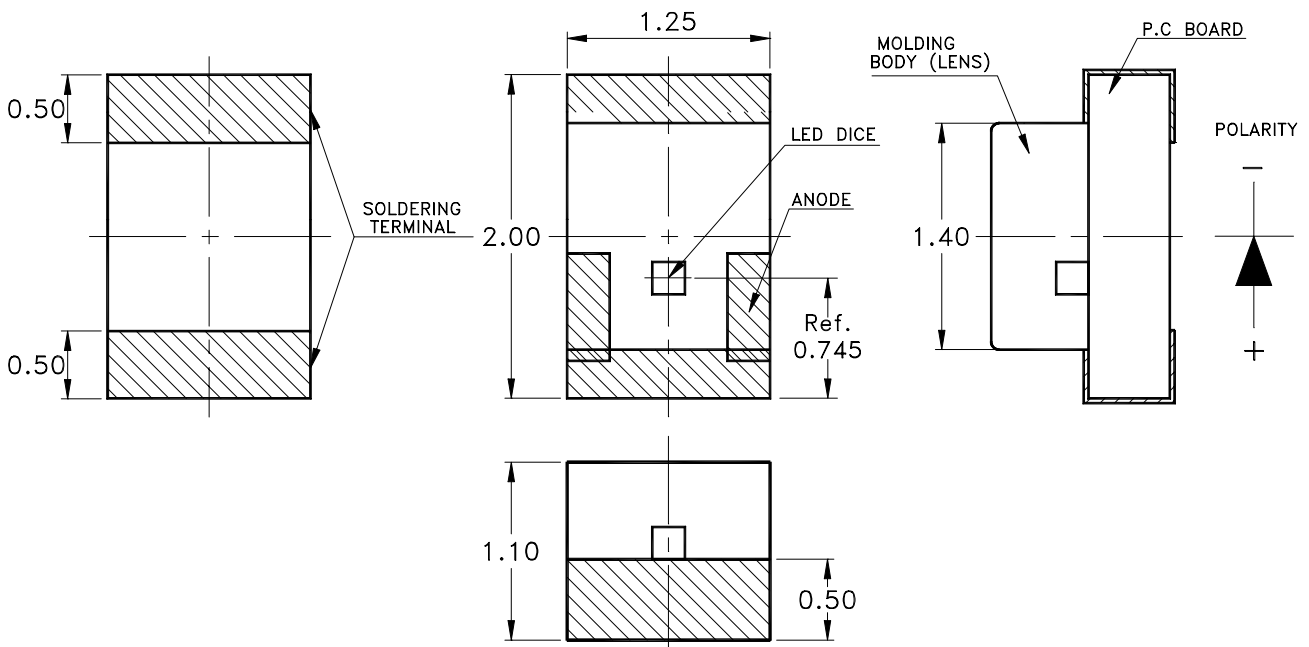
* Package in 8mm tape on 7" diameter reels.
* Compatible with automatic placement equipment.
* Compatible with infrared and vapor phase reflow solder process.
* EIA STD package.
* I.C. compatible.

Package Dimensions

Part no.	Lens	Source Color
LTST-C170CKT	Water Clear	AlGaAs on GaAs Red

Notes:

1. All dimensions are in millimeters (inches).

2. Tolerance is ±0.1mm (.004") unless otherwise noted.

Absolute Maximum Ratings At Ta=25℃

Parameter	LTST-C170CKT	Unit
Power Dissipation	100	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	200	mA
Continuous Forward Current	40	mA
Derating Linear From 50℃	0.8	mA/℃
Reverse Voltage	5	V
Operating Temperature Range	-55℃ to + 85℃	
Storage Temperature Range	-55℃ to + 85℃	
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 :

Electrical Optical Characteristics At Ta=25℃

Parameter	Symbol	Part No. LTST-	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	IV	C170CKT	2.5	10.0		mcd	IF = 10mA Note 1
Viewing Angle	$2\theta 1/2$	C170CKT		130		deg	Note 2 (Fig.6)
Peak Emission Wavelength	λ Peak	C170CKT		660		nm	Measurement @Peak (Fig.1)
Dominant Wavelength	λ d	C170CKT		638		nm	Note 3
Spectral Line Half-Width	$\triangle \lambda$	C170CKT		20		nm	
Forward Voltage	VF	C170CKT		1.8	2.4	V	IF = 20mA
Reverse Current	IR	C170CKT			100	μA	VR = 5V
Capacitance	C	C170CKT		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, λ d is derived from the CIE chromaticity diagram and represents the
single wavelength which defines the color of the device.

Bin Code List

Luminous Intensity		Unit : mcd @10mA
Bin Code	Min.	Max.
H	2.5	5.0
J	4.0	8.0
K	6.3	12.5
L	10.0	20.0
M	16.0	32.0

Typical Electrical / Optical Characteristics Curves

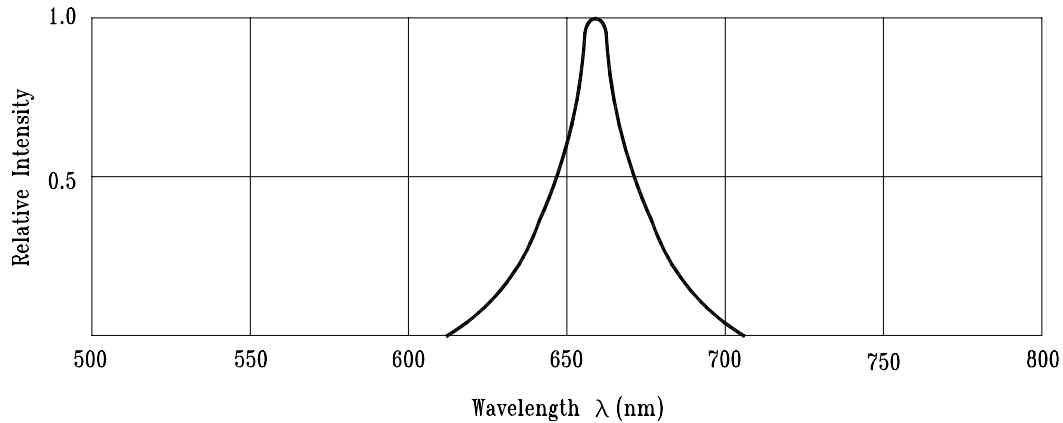### (25℃ Ambient Temperature Unless Otherwise Noted)

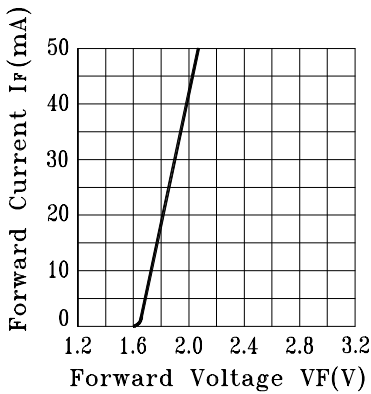Fig.1   RELATIVE INTENSITY VS. WAVELENGTH
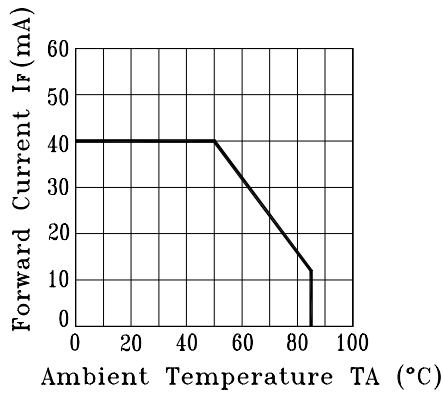
Fig.2 FORWARD CURRENT VS.
FORWARD VOLTAGE

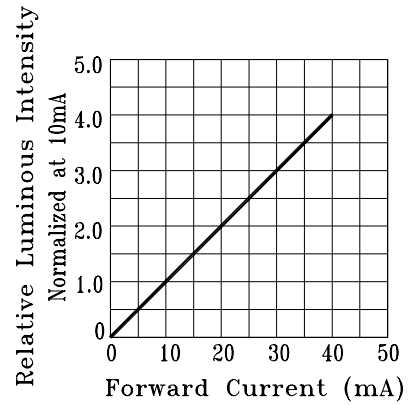Fig.3 FORWARD CURRENT
DERATING CURVE
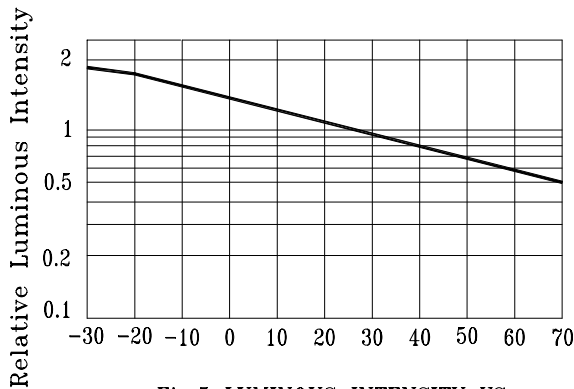
Fig.4 RELATIVE LUMINOUS
INTENSITY VS. FORWARD CURRENT
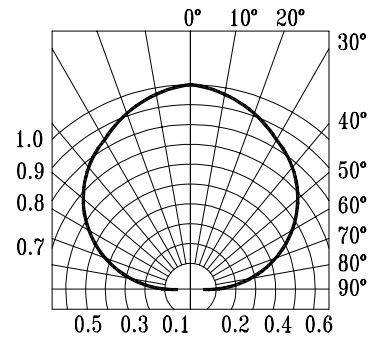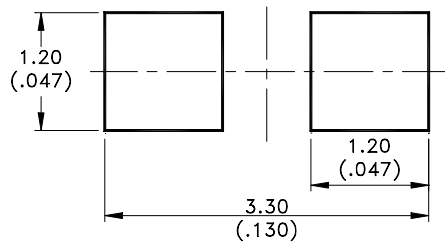
Fig.5 LUMINOUS INTENSITY VS.
AMBIENT TEMPERATURE.
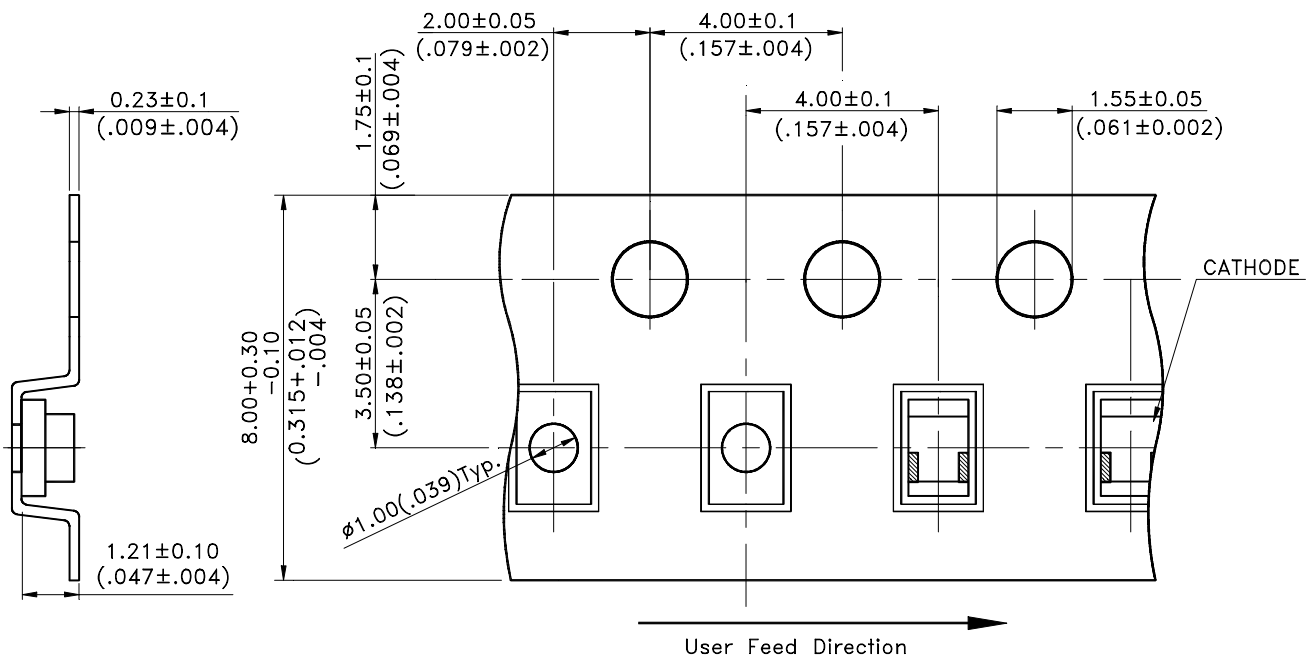
Fig.6 SPATIAL DISTRIBUTION

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.
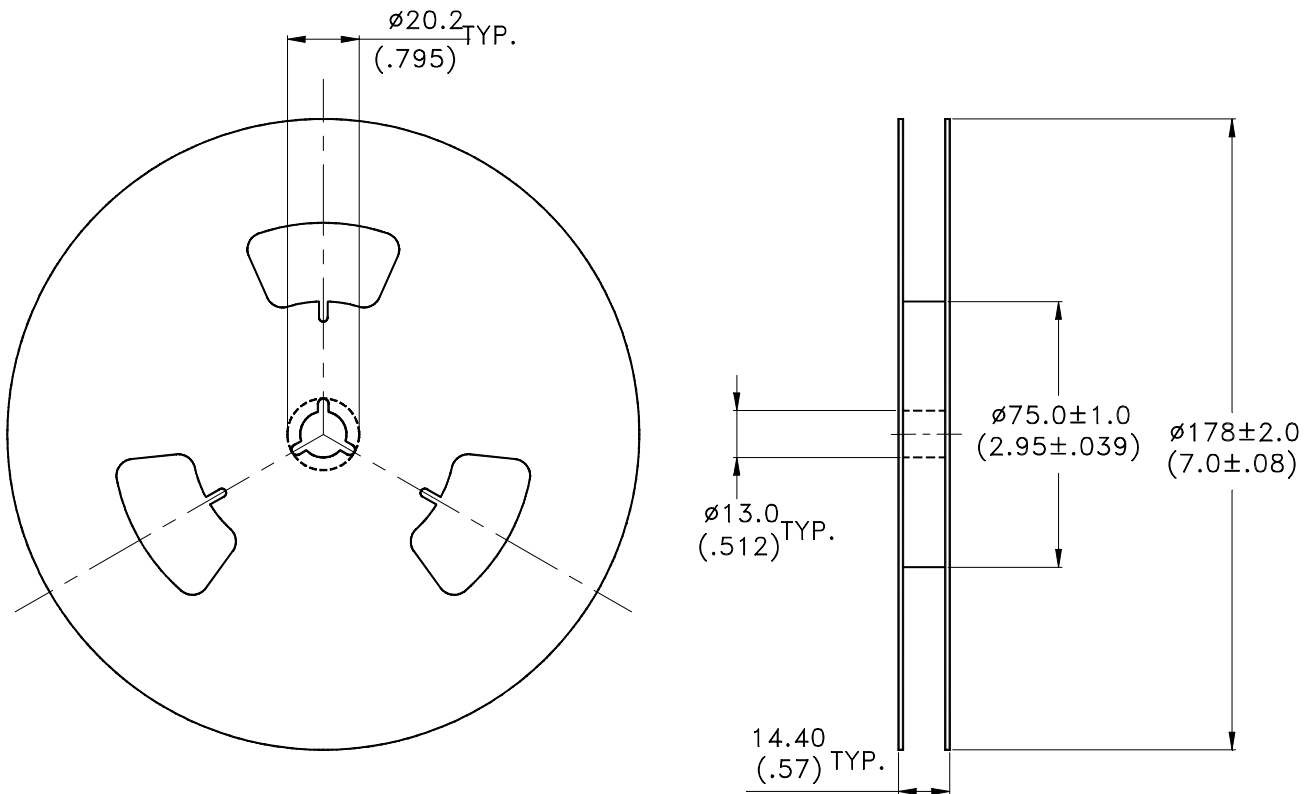
Suggest Soldering Pad Dimensions

```
1.20                    1.20
(.047)                  (.047)
         3.30
        (.130)
```

Package Dimensions Of Tape And Reel

```
2.00±0.05      4.00±0.1
(.079±.002)   (.157±.004)

1.75±0.1                4.00±0.1          1.55±0.05
(.069±.004)            (.157±.004)      (.061±0.002)

0.23±0.1
(.009±.004)

                                                        CATHODE

8.00+0.30      3.50±0.05
    -0.10      (.138±.002)
(0.315+.012)
      -.004)

Ø1.00(.039)Typ.

1.21±0.10
(.047±.004)

              User Feed Direction
```

Notes:

1. All dimensions are in millimeters (inches).

ø20.2 TYP.
(.795)

ø75.0±1.0
(2.95±.039)

ø178±2.0
(7.0±.08)

ø13.0 TYP.
(.512)

14.40 TYP.
(.57)

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.

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