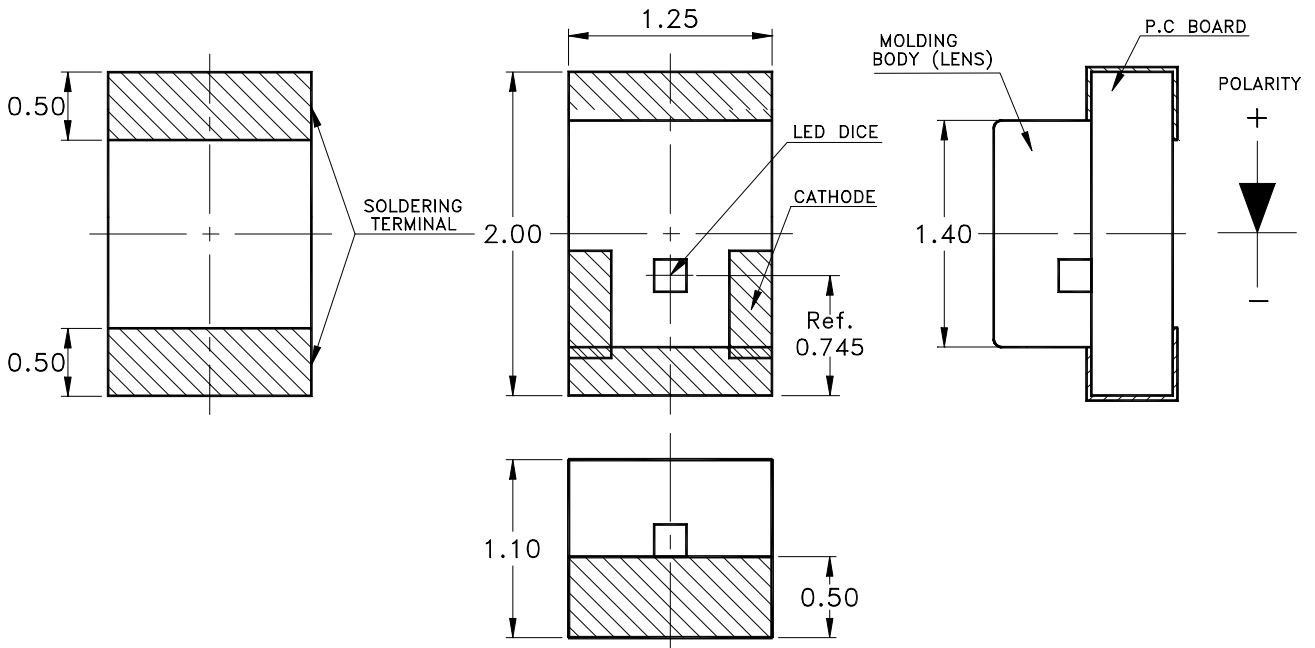


### Features

- \* Ultra bright AlInGaP Chip LED.
- \* 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-C170QRKTC-QM	Water Clear	AlInGaP Super Red

### Notes:

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



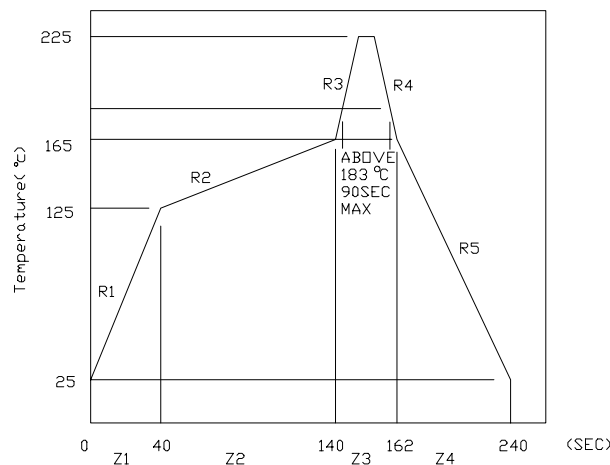
# LITE-ON ELECTRONICS, INC.

Property of Lite-On Only

## Absolute Maximum Ratings At Ta= 25°C

Parameter	LTST-C170QRKTC-QM	Unit
Power Dissipation	75	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	80	mA
Continuous Forward Current	30	mA
Derating Linear From 25°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 :





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## Electrical Optical Characteristics At Ta= 25°C

Parameter	Symbol	Part No. LTST-	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	IV	C170QRKTC-QM	20.0	-	100.0	mcd	IF = 20mA Note 1
Viewing Angle	$2\theta 1/2$	C170QRKTC-QM		130		deg	Note 2 (Fig.6)
Peak Emission Wavelength	$\lambda P$	C170QRKTC-QM		639		nm	Measurement @Peak (Fig.1)
Dominant Wavelength	$\lambda d$	C170QRKTC-QM	624.0	-	636.0	nm	Note 3
Spectral Line Half-Width	$\Delta \lambda$	C170QRKTC-QM		20		nm	
Forward Voltage	VF	C170QRKTC-QM	1.80	-	2.10	V	IF = 20mA
Reverse Current	IR	C170QRKTC-QM			100	$\mu A$	VR = 5V
Capacitance	C	C170QRKTC-QM		40		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.



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## Bin Code List

Forward Voltage		Unit: V @20mA
Bin Code	Min.	Max.
3	1.75	1.95
4	1.85	2.05
5	1.95	2.15

Luminous Intensity		Unit : mcd @20mA
Bin Code	Min.	Max.
M2	20.0	32.0
N1	25.0	40.0
N2	32.0	50.0
P1	40.0	63.0
P2	50.0	80.0
Q1	63.0	100.0

Dominant Wavelength		Unit : nm @20mA
Bin Code	Min.	Max.
W	624.0	631.0
X	629.0	636.0

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## Typical Electrical / Optical Characteristics Curves

(25 °C Ambient Temperature Unless Otherwise Noted)

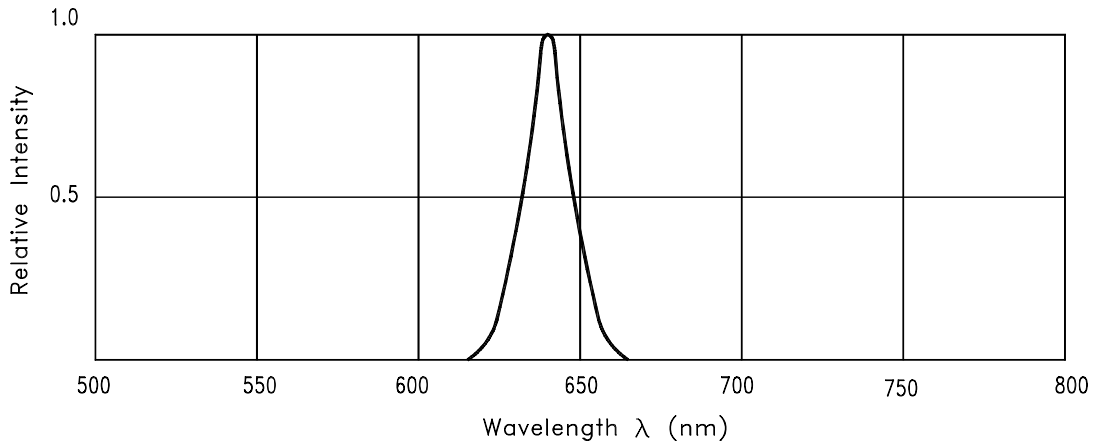


Fig.1 RELATIVE INTENSITY VS. WAVELENGTH

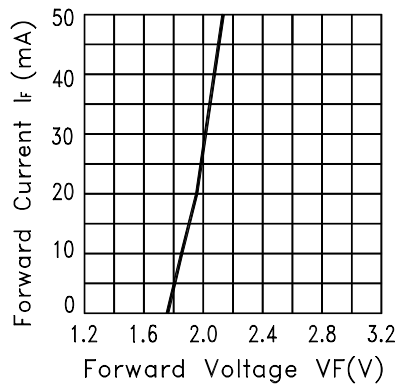


Fig.2 FORWARD CURRENT VS. FORWARD VOLTAGE

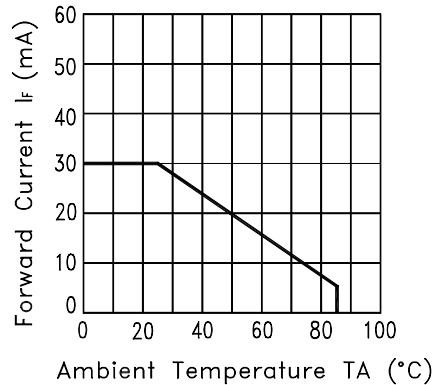


Fig.3 FORWARD CURRENT DERATING CURVE

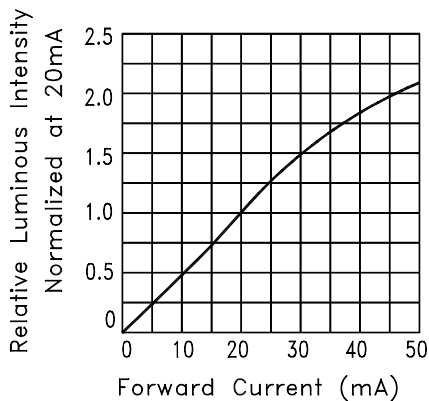


Fig.4 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

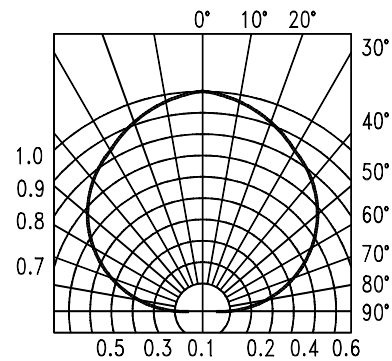


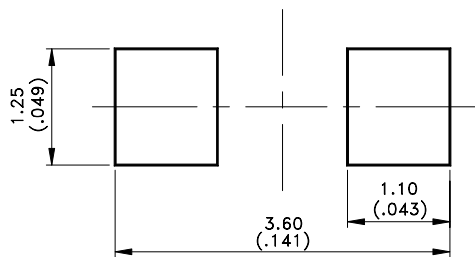
Fig.6 SPATIAL DISTRIBUTION

Property of Lite-On Only

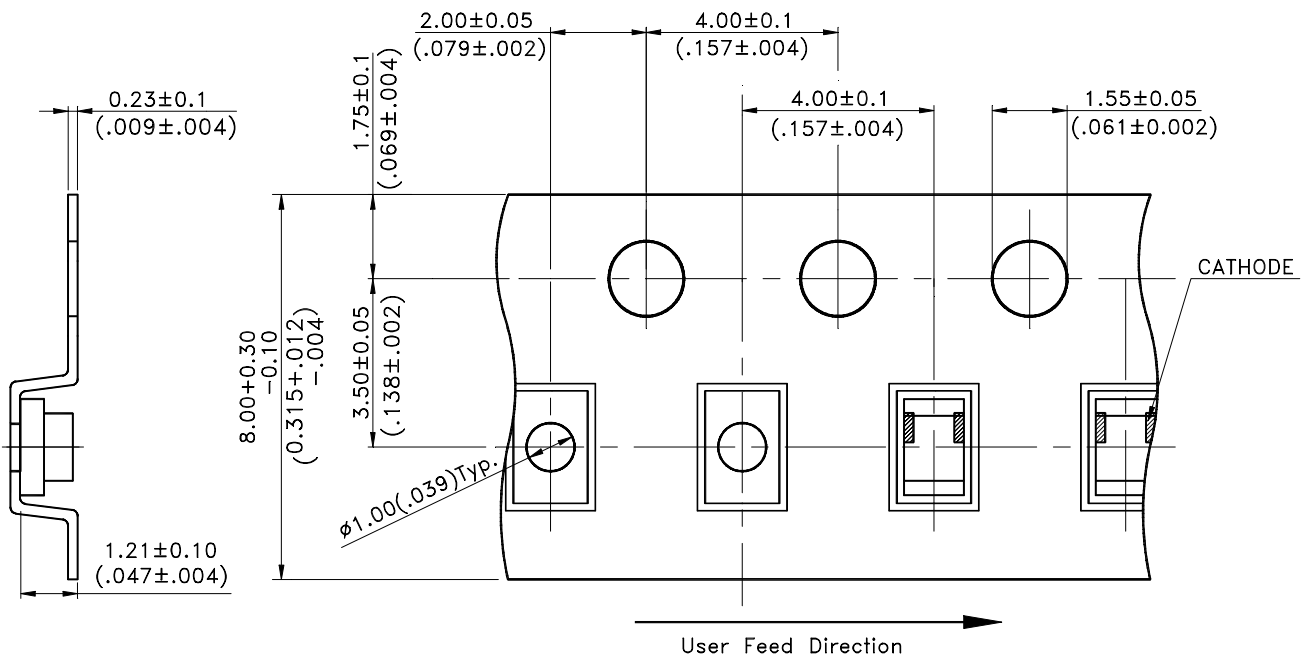
### Cleaning

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.

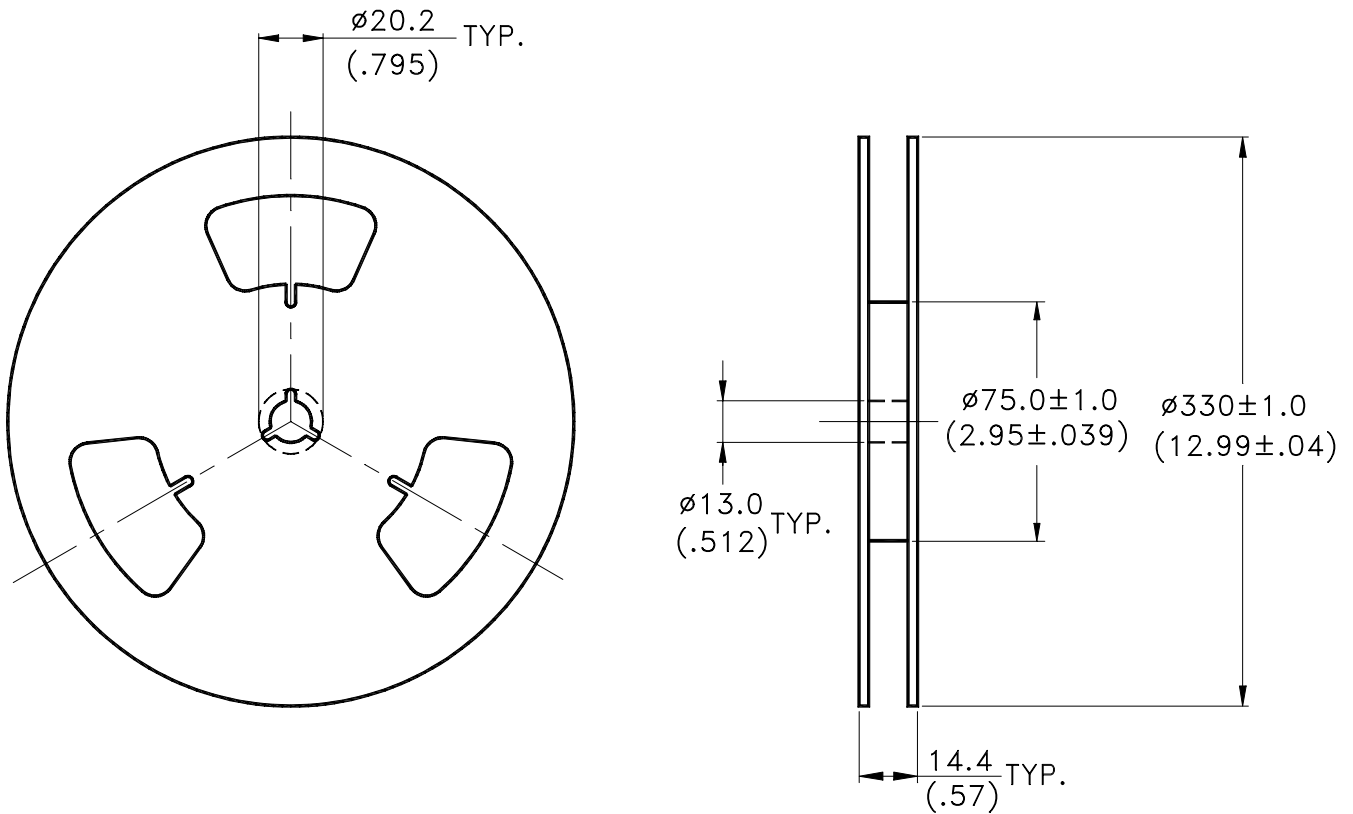
### Suggest Soldering Pad Dimensions



### Package Dimensions Of Tape And Reel



1. All dimensions are in millimeters (inches).



Notes:

1. Empty component pockets sealed with top cover tape.
2. 7 inch reel-10000 pieces per reel.
3. The maximum number of consecutive missing lamps is two.
4. In accordance with ANSI/EIA 481-1-A-1994 specifications.