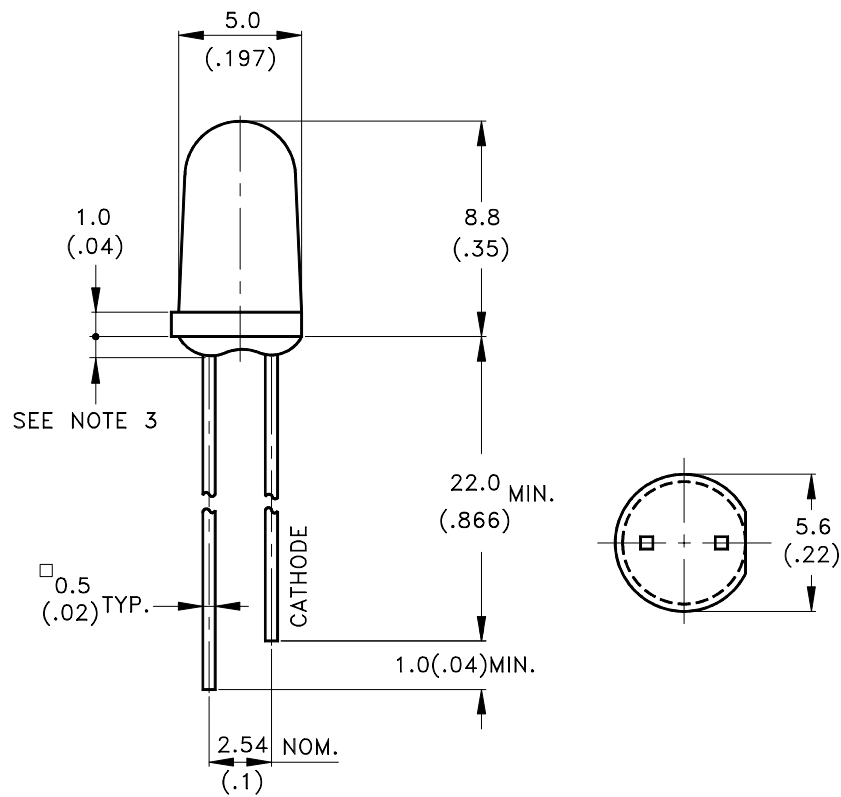


## Features

- \* Low power consumption.
- \* High efficiency.
- \* Versatile mounting on p.c. board or panel.
- \* I.C. compatible/low current requirement.
- \* T-1 3/4 type package.

## Package Dimensions



Part No.	Lens	Source Color
LTL353UBK	Water Clear	Blue

### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25\text{mm}(.010\text{'})$  unless otherwise noted.
3. Protruded resin under flange is 1.0mm(.04") max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.



**Absolute Maximum Ratings at TA=25°C**

Parameter	Maximum Rating	Unit
Power Dissipation	135	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	70	mA
Continuous Forward Current	30	mA
Derating Linear From 30°C	0.5	mA/°C
Reverse Voltage	5	V
Electrostatic Discharge Threshold(HBM) <sup>Note A</sup>	1000	V
Operating Temperature Range	-20°C to + 80°C	
Storage Temperature Range	-30°C to + 100°C	
Lead Soldering Temperature [1.6mm(.063") From Body]	260°C for 5 Seconds	

Note A :

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

## Electrical / Optical Characteristics at TA=25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I <sub>v</sub>	100	250		mcd	I <sub>F</sub> = 20mA Note 1,5
Viewing Angle	2θ <sub>1/2</sub>		12		deg	Note 2 (Fig.6)
Peak Emission Wavelength	λ <sub>P</sub>		428		nm	Measurement @Peak (Fig.1)
Dominant Wavelength	λ <sub>d</sub>		466		nm	Note 3
Spectral Line Half-Width	Δλ		65		nm	
Forward Voltage	V <sub>F</sub>		3.8	4.5	V	I <sub>F</sub> = 20mA
Reverse Current	I <sub>R</sub>			100	μA	V <sub>R</sub> = 5V

- NOTE: 1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. θ<sub>1/2</sub> is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
3. The dominant wavelength, λ<sub>d</sub> is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.
4. I<sub>v</sub> classification code is marked on each packing bag.
5. The I<sub>v</sub> guarantee should be added ± 15% tolerance.
6. Precautions in handling:
- When soldering, leave 2mm of minimum clearance from the resin to the soldering point.
  - Dipping the resin to solder must be avoided.
  - Correcting the soldered position after soldering must be avoided.
  - In soldering, do not apply any stress to the lead frame particularly when heated.
  - When forming a lead, make sure not to apply any stress inside the resin.
  - Lead forming must be done before soldering.
  - It is necessary to cut the lead frame at normal temperature.
7. 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.

## Typical Electrical / Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)

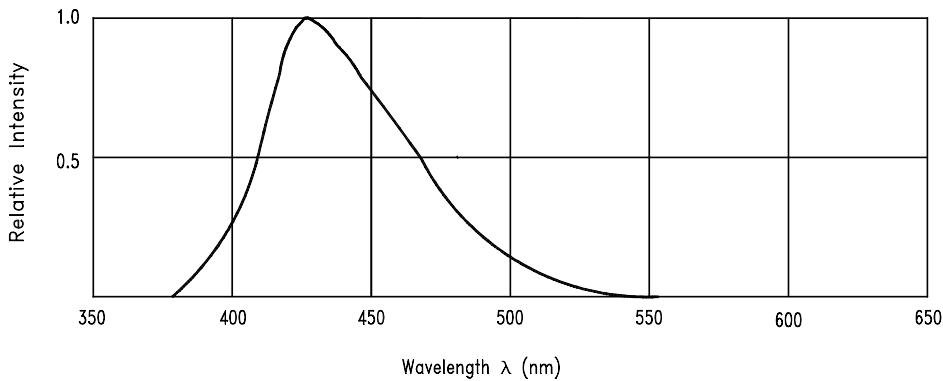


Fig.1 Relative Intensity vs. Wavelength

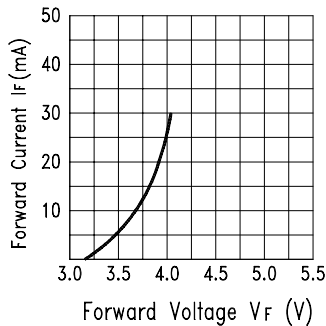


Fig.2 Forward Current vs. Forward Voltage

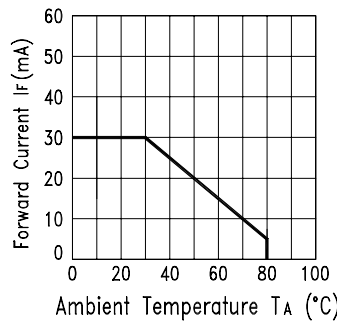


Fig.3 Forward Current Derating Curve

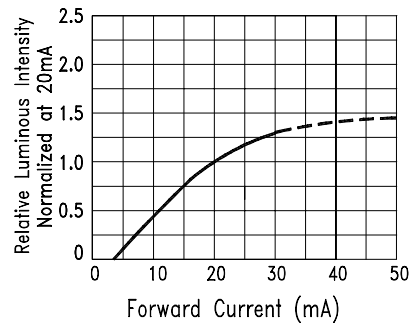


Fig.4 Relative Luminous Intensity vs. Forward Current

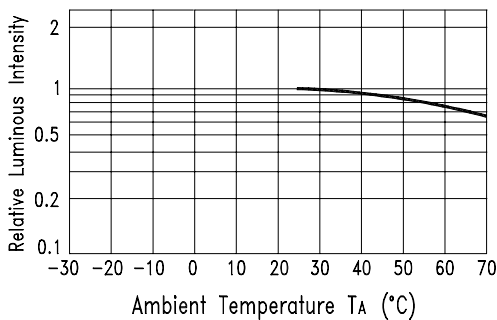


Fig.5 Luminous Intensity vs. Ambient Temperature

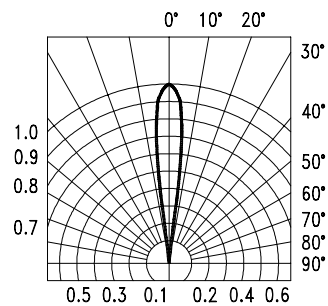


Fig.6 Spatial Distribution