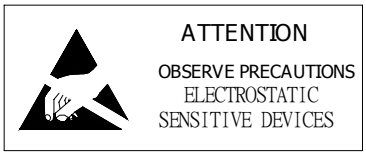
# SPECIFICATION FOR LED LAMP

P/N : LB551C3N

Approved Sheet




| Designed by | Qualified by | Approved by Customer |
|---|---|---|
| | | |

# *LB551C3N*

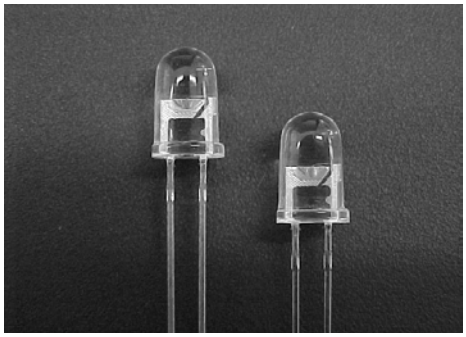
Spec. No. : GT-0210-09-070

### Features

- Standard T-1 3/4 package
- General purpose leads
- Viewing Angle :30°

### Benefits

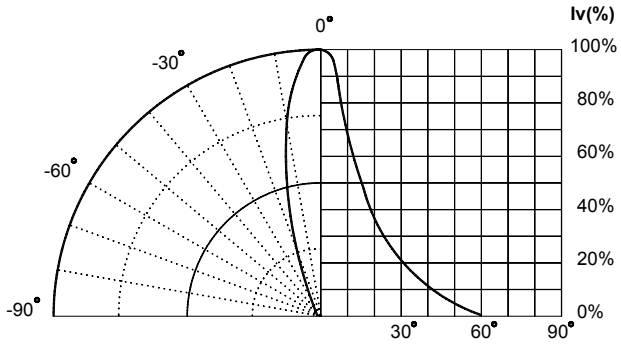
- High intensity
- Lower Power Consumption
- High Reliability and Firm and Solid
- Optimal Optical and Mechanical Design



LED Picture

## Applications

- Electronic Signs and Signals
- Small Area Illumination
- Lighting
- General Purpose Indicators




Beam Pattern

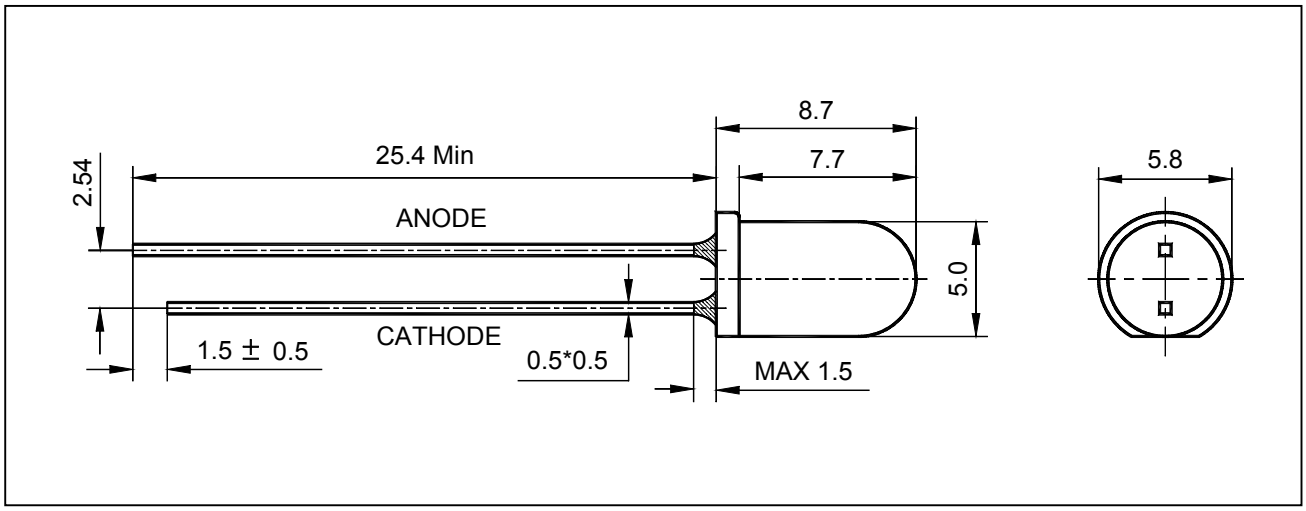
### Description

- The T-1 3/4 lamps are untinged, nondiffused, and incorporates precise optics producing well defined spatial radiation patterns at specific viewing cone angles, this capability drastically reduce the number of LEDs required for lighting functions-there by lowering the total cost.

### Device Selection Guide

| Part Number | Viewing Angle | Resin Color | LED Color | Dice Material | Stand OFF |
|---|---|---|---|---|---|
| LB551C3N | 30° | Water Clear | Blue | $InGaN/Al_2O_3$ | No |
| | | | | | |
| | | | | | |
| | | | | | |

## Package Dimensions




**Notes:** 1. All dimensions are in millimeters

2. Tolerance is ±0.20mm unless otherwise noted.

3. Protruded resin under flange is 1.5mm max.

4. Lead spacing is measured where the leads emerge from the package.

5. Specifications are subject to change without notice.

## Absolute Maximum Rating at Ta=25℃

| Parameter | Value | Units |
|---|---|---|
| Power Dissipation | 95 | mW |
| Peak Forward Current(1/10 Duty Cycle, 0.1ms Pulse Width) | 100 | mA |
| Forward Current | 25 | mA |
| Reverse Voltage | 5 | V |
| Operating Temperature Range | -30℃ to + 80℃ | |
| Storage Temperature Range | -40℃ to + 100℃ | |
| Lead Soldering Temperature(3mm From Body) | 260℃ for 5 Seconds | |

### Electrical Optical Characteristics at Ta=25℃

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Remark |
|---|---|---|---|---|---|---|
| Luminous Intensity | Iv | 450 | ---- | ---- | mcd | $I_f$=20mA |
| Viewing Angle | 2θ1/2 | ---- | 30 | ---- | Deg. | $I_f$=20mA |
| Dominant Wavelength | $\lambda_d$ | ---- | 470 | ---- | nm | $I_f$=20mA |
| Forward Voltage | $V_f$ | ---- | 3.3 | 3.8 | V | $I_f$=20mA |
| Reverse Current | $I_r$ | ---- | ---- | 50 | μA | $V_r$=10V |

**Note:** 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, $2\theta_{1/2} = \theta_{1/2} + \theta_{1/2}$.

## Bin Rank Combination

| Rank | F | G | H | J |
|---|---|---|---|---|
| Luminous Intensity ($I_f$ = 20mA) | 450~580mcd | 580~750mcd | 750~980mcd | 980~1300mcd |
| **Rank** | **K** | **L** | **----** | **----** |
| Luminous Intensity ($I_f$ = 20mA) | 1300~1700mcd | 1700~2200mcd | ---- | ---- |

| Rank | B2 | B3 | ---- | ---- |
|---|---|---|---|---|
| Wavelength Specification ($I_f$ = 20mA) | 465~470nm | 470~475nm | ---- | ---- |

**Note:** The quantity ratio of the ranks is decided by GVOPTO.

Measurement Uncertainty of the Luminous intensity : ±15%

Measurement Uncertainty of the Dominant Wavelength : ±1.0nm

Measurement Uncertainty of the Forward Voltage : ±0.1V

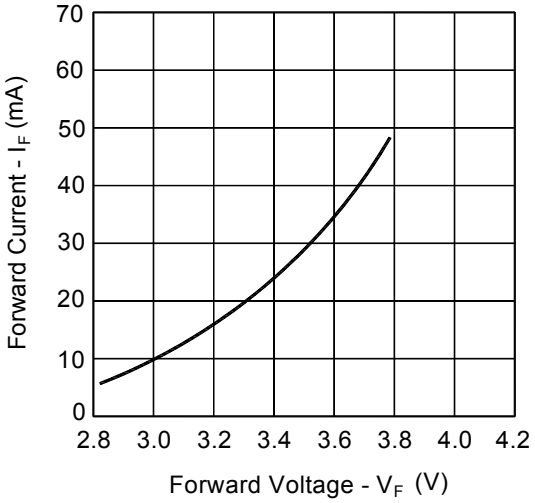
### Cautions on LED Usage

1. Static electricity and surge will damage the LEDs. It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.
2. Use grounded soldering iron and do not solder the LEDs at the conditions beyond the absolute maximum ratings specified in the data sheet.
3. G.V. will not be held responsible for any damage caused by the operation exceeds the absolute maximum ratings.
4. Use the LEDs as soon as possible once the bag was opened. Store and use where there is no corrosive gas. The leads of LEDs will be rusty when the LEDs were exposed to the air for longer than one month.

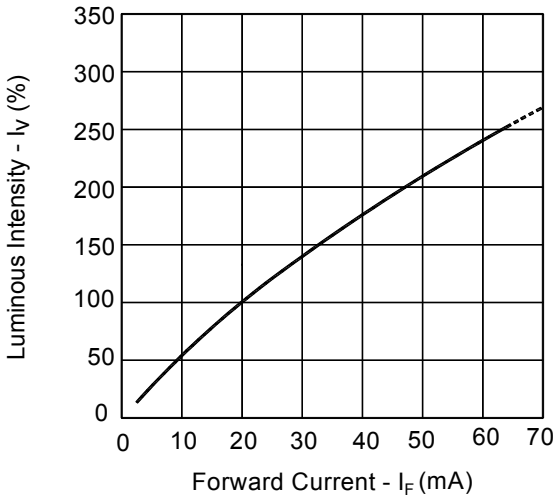
## Typical Electrical / Optical Characteristics Curves

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

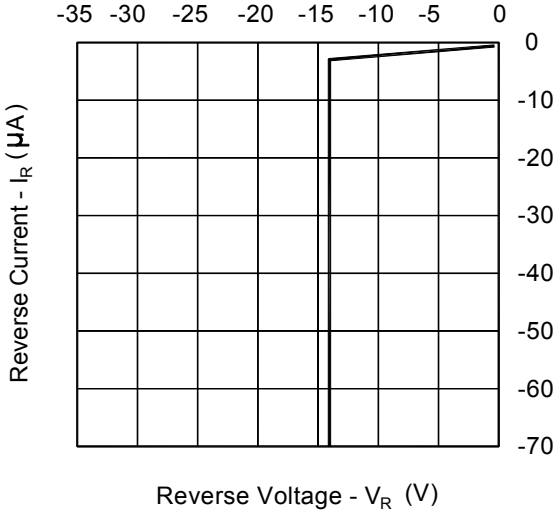
$I_F$ vs. $V_F$



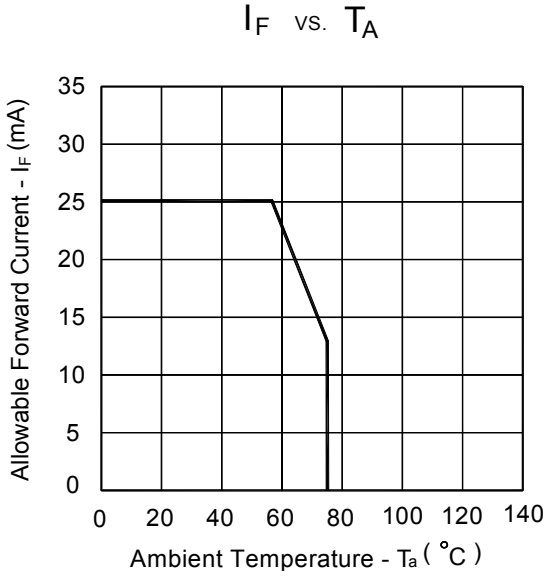

$I_V$ vs. $I_F$



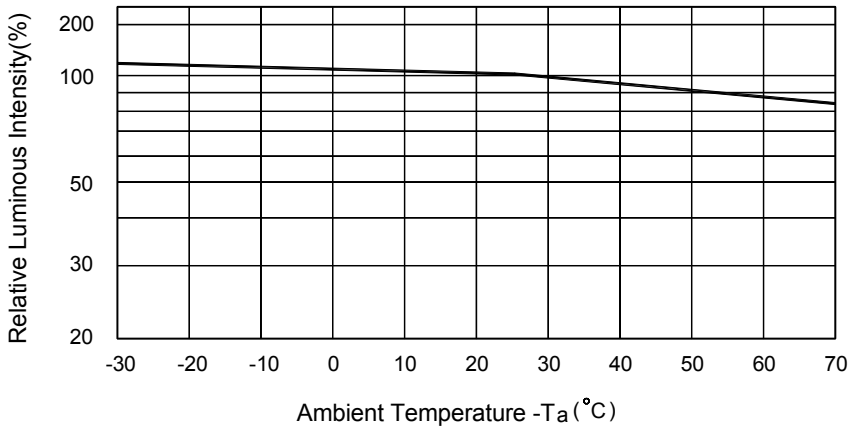

$I_R$ vs. $V_R$



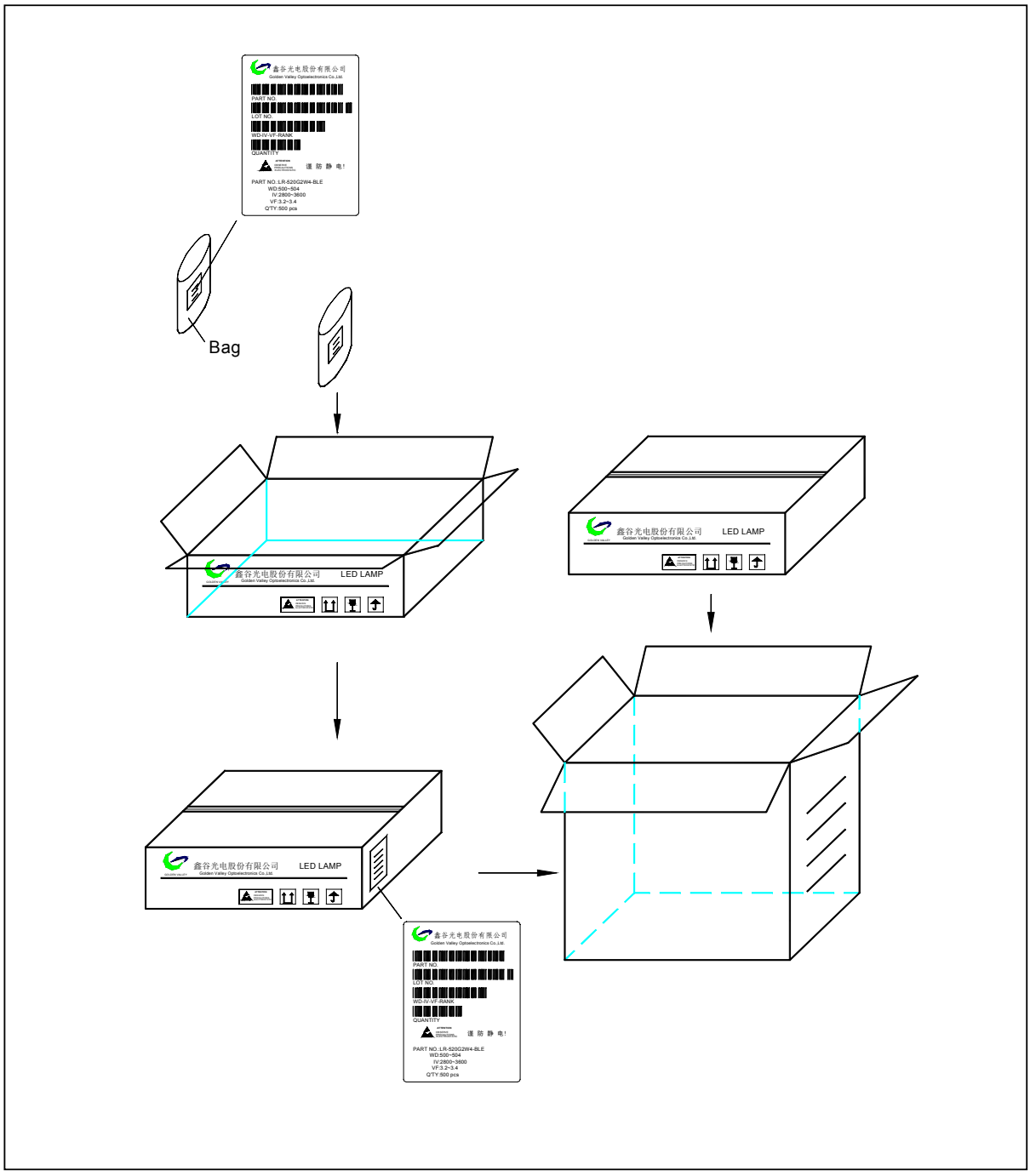

$I_F$ vs. $T_A$




Relative Luminous Intensity vs. Ta



## Packing Specification




Notes :

1. Inner ploy bag is common products
2. 30 bags per inner box, 15 kpcs per inner box .
3. 3 inner box per outer box, 45 kpcs per outer box