# SB3317E-G / SB3317E-G(B)

**High Brightness LED Lamp**

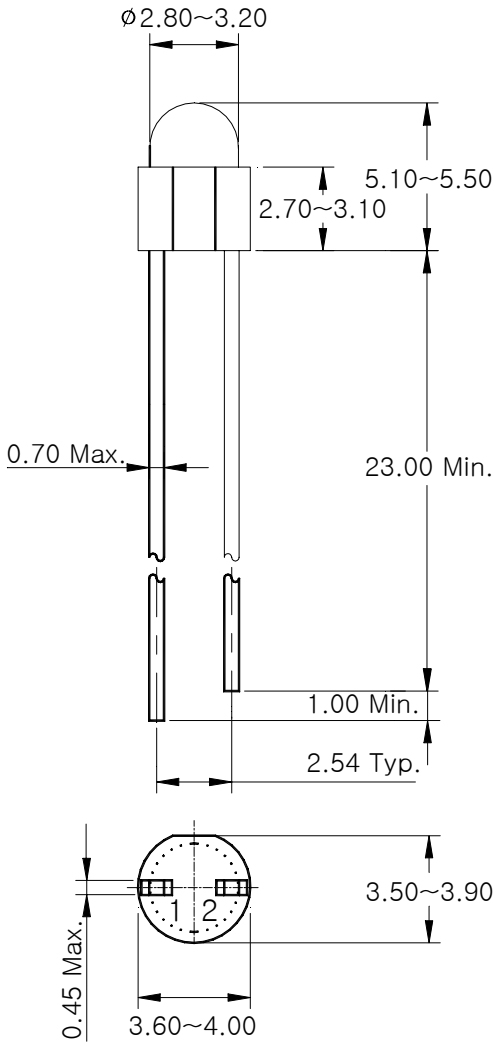
## Features

- Colorless transparency lens type
- ϕ3mm(T-1) all plastic mold type
- Super luminosity
- **E ; ESD Protected (±2.0KV, 3 times @100pF, 1.5KΩ)**

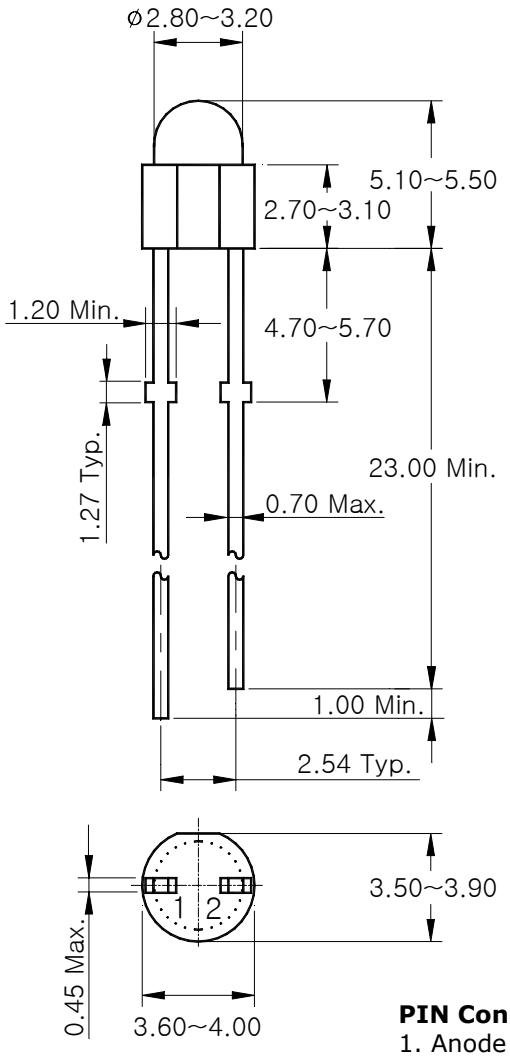
## Outline Dimensions

**unit : mm**

STRAIGHT TYPE




STOPPER TYPE : (B)




**PIN Connections**
1. Anode
2. Cathode

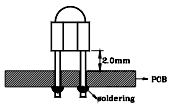
## Absolute Maximum Ratings

**(Ta=25°C)**

| Characteristic | Symbol | Rating | Unit |
|---|---|---|---|
| Power dissipation | $P_D$ | 75 | mW |
| Forward current | $I_F$ | 20 | mA |
| *[1]Peak forward current | $I_{FP}$ | 50 | mA |
| Reverse voltage | $V_R$ | 4 | V |
| Operating temperature range | $T_{opr}$ | -25～85 | ℃ |
| Storage temperature range | $T_{stg}$ | -30～100 | ℃ |
| *[2]Soldering temperature | $T_{sol}$ | 260℃ for 10 seconds | |

*1.Duty ratio = 1/16, Pulse width = 0.1ms

*2.Keep the distance more than 2.0mm from PCB to the bottom of LED package




※ Recommend document

-. LED is very sensitive to ESD.

## Electrical / Optical Characteristics

**(Ta=25°C)**

| Characteristic | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| Forward voltage | $V_F$ | $I_F$= 20mA | 2.9 | - | 3.8 | V |
| *[4]Luminous intensity | $I_V$ | $I_F$= 20mA | 350 | - | 1760 | mcd |
| Dominant wavelength | $\lambda_D$ | $I_F$= 20mA | 460 | 468 | 475 | nm |
| Spectrum bandwidth | $\Delta\lambda$ | $I_F$= 20mA | - | 26 | - | nm |
| Reverse current | $I_R$ | $V_R$=4V | - | - | 10 | uA |
| *[3]Half angle | $\theta 1/2$ | $I_F$= 20mA | - | ±22 | - | deg |

*3. $\theta 1/2$ is the off-axis angle where the luminous intensity is 1/2 the peak intensity

*4. Luminous intensity maximum tolerance for each grade classification limit is ±18%

• $V_F$ / $I_V$ / $\lambda_D$ Grade Classification (Ta=25℃)

| Test Condition @$I_F$ = 20mA | | |
|---|---|---|
| Forward Voltage [V] | Luminous Intensity [mcd] | Dominant Wavelength [nm] |
| 1 : 2.9~3.2 | O : 350~520 | a : 460~465 |
| | P : 520~780 | |
| 2 : 3.2~3.5 | | b : 465~470 |
| | Q : 780~1170 | |
| 3 : 3.5~3.8 | | c : 470~475 |
| | R : 1170~1760 | |

(Do not use to combine grade classification. It must be used separately grade classification)

## Characteristic Diagrams

**Fig. 1 $I_F$ - $V_F$**

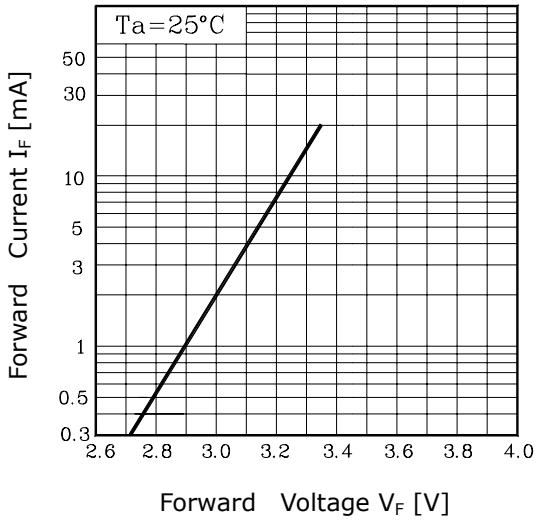



**Fig. 2 $I_V$ - $I_F$**

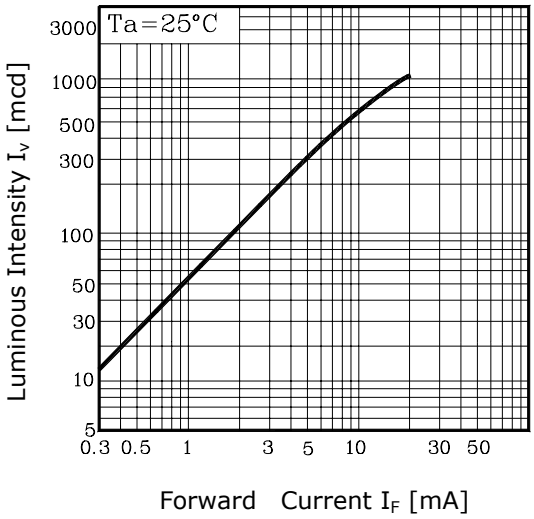



**Fig. 3 $I_F$ – Ta**

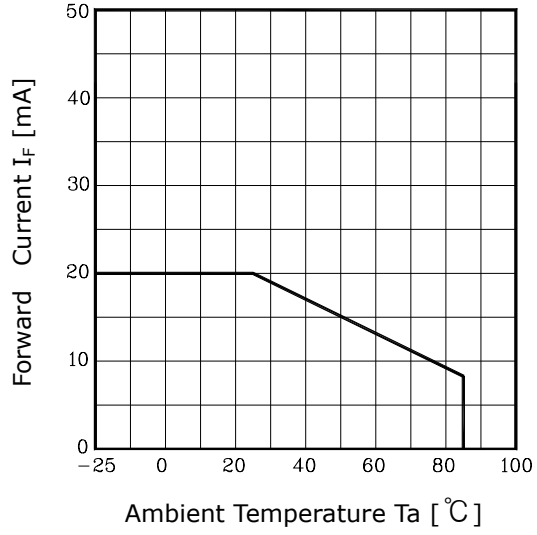



**Fig.4 Spectrum Distribution**

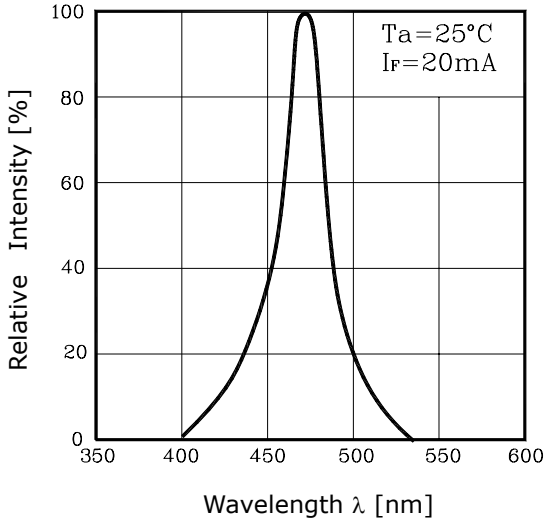
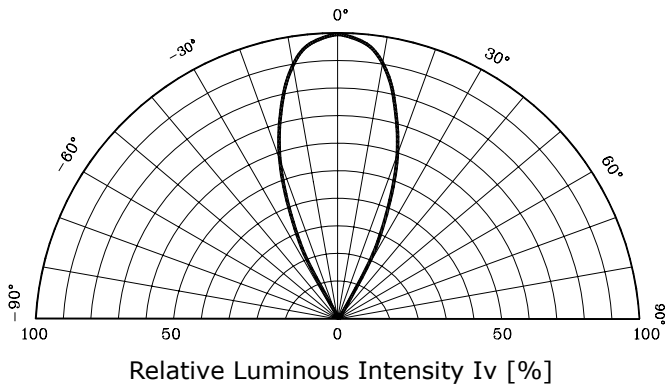



**Fig. 5 Radiation Diagram**



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