

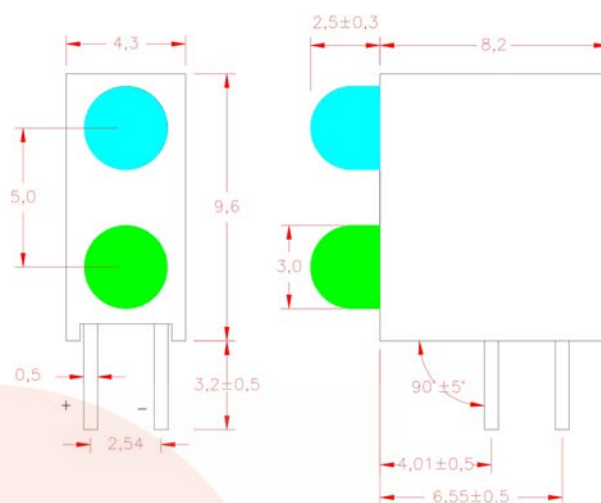
● Features:

1. Chip material: InGaN (Blue)
and GaP/GaP (Green)
2. Emitted color : Blue and Green
3. Lens Appearance : Blue Diffused
and Green Diffused
4. Designed for ease in circuit board assembly.
5. Black case enhance contrast ratio.
6. Solid state light source.
7. Reliable and rugged.
9. This product don't contained restriction
substance, compliance RoHS standard.

- **Applications:**

1. TV set
2. Monitor
3. Telephone
4. Computer
5. Circuit board

● Package dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm}$ (0.01") unless otherwise specified.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.

● **Absolute Maximum Ratings(Ta=25℃)**

| Parameter | Symbol | Blue | Green | Unit |
|------------------------------------|-----------------|-------------------------|-------|------|
| Power Dissipation | Pd | 120 | 80 | mW |
| Forward Current | I _F | 30 | 30 | mA |
| Peak Forward Current* ¹ | I _{FP} | 150 | 150 | mA |
| Reverse Voltage | V _R | 5 | | V |
| Operating Temperature | Topr | -40℃~85℃ | | |
| Storage Temperature | Tstg | -40℃~100℃ | | |
| Soldering Temperature | Tsol | 260℃max (for 5 seconds) | | |
| Hand Soldering Temperature | Tsol | 350℃max(for 3 seconds) | | |

*¹Condition for I_{FP} is pulse of 1/10 duty and 0.1msec width.

● Electrical and optical characteristics(Ta=25°C)

| Parameter | Symbol | Condition | Color | Min. | Typ. | Max. | Unit |
|--------------------------|-----------------|-------------------|---------------|------------|------------|------------|---------------|
| Forward Voltage | V_F | $I_F=20\text{mA}$ | Blue Green | 2.7 1.8 | - - | 3.3 2.6 | V |
| Luminous Intensity | I_v | $I_F=20\text{mA}$ | Blue Green | 1200 40 | - - | 2200 80 | mcd |
| Reverse Current | I_R | $V_R=5\text{V}$ | Blue Green | - | - | 10 | μA |
| Peak Wave Length | λ_p | $I_F=20\text{mA}$ | Blue Green | - | 470 570 | - | nm |
| Dominant Wave Length | λ_d | $I_F=20\text{mA}$ | Blue Green | 465 565 | - | 475 575 | nm |
| Spectral Line Half-width | $\Delta\lambda$ | $I_F=20\text{mA}$ | Blue Green | - | 30 30 | - | nm |
| Viewing Angle | $2\theta_{1/2}$ | $I_F=20\text{mA}$ | Blue Green | - | 30 35 | - | deg |

● Typical Electro-Optical Characteristics Curves

Fig.1 Relative intensity vs. Wavelength

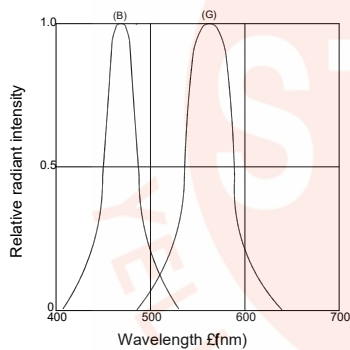


Fig.2 Forward current derating curve vs. Ambient temperature

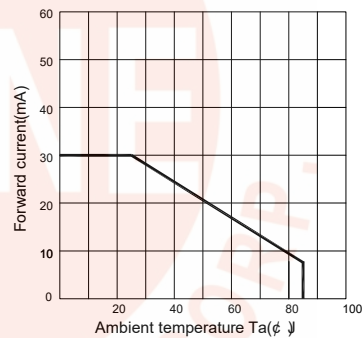


Fig.3 Forward current vs. Forward voltage

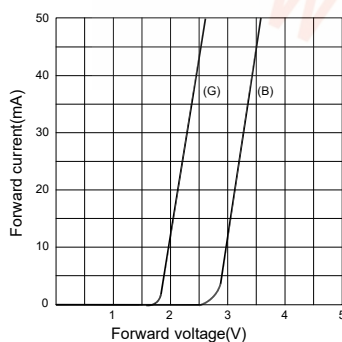


Fig.4 Relative luminous intensity vs. Ambient temperature

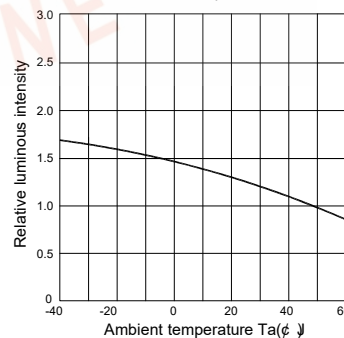


Fig.5 Relative luminous intensity vs. Forward current

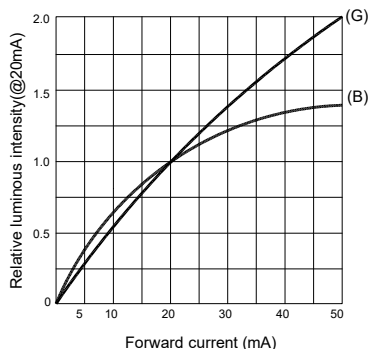
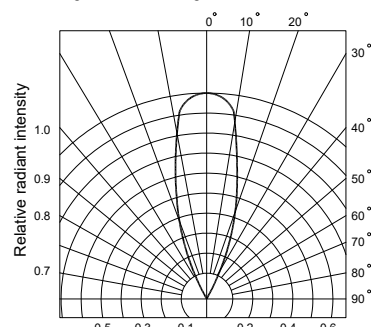
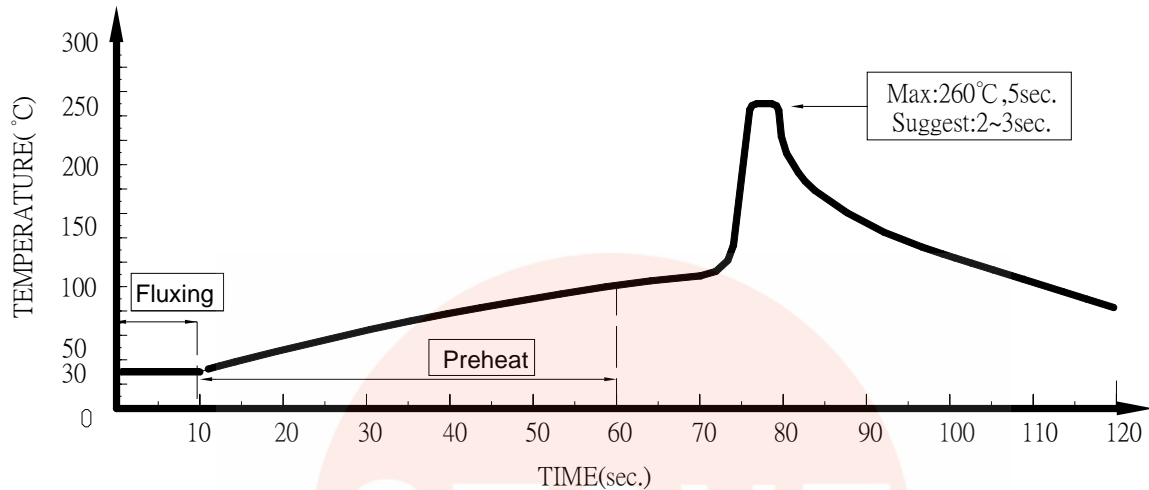


Fig.6 Radiation diagram



● Dip Soldering



1. Please avoid any external stress applied to the lead-frames and epoxy while the LEDs are at high temperature, especially during soldering
2. DIP soldering and hand soldering should not be done more than one time.
3. After soldering, avoid the epoxy lens from mechanical shock or vibration until the LEDs are back to room temperature.
4. Avoid rapid cooling during temperature ramp-down process
5. Although the soldering condition is recommended above, soldering at the lowest possible temperature is feasible for the LEDs

● IRON Soldering

A : Max : 350°C Within 3 sec. One time only.

B : For 3mm LED without flange, if the LED epoxy lays flat on the PCB, the welding condition is 350°C within 2 seconds, one time only.

