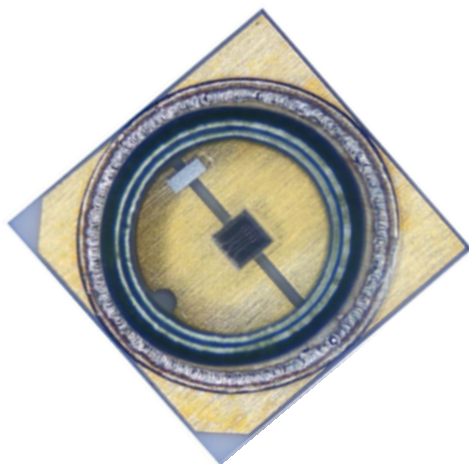


## TH-UV275T0.2WSS5-3535F

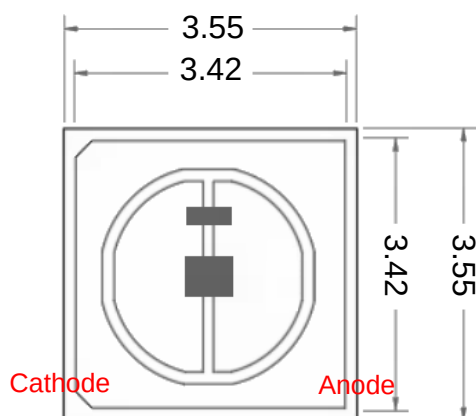


### CAUTION

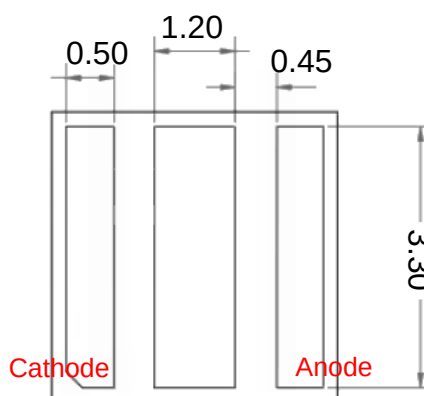
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
DISCHARGE  
SENSITIVE  
DEVICES



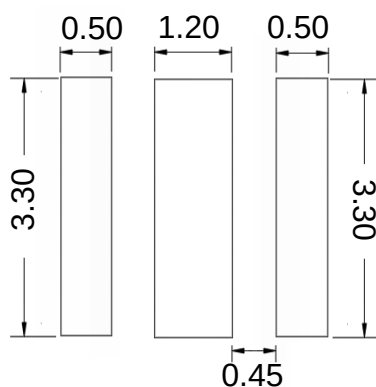
## Mechanical Dimensions



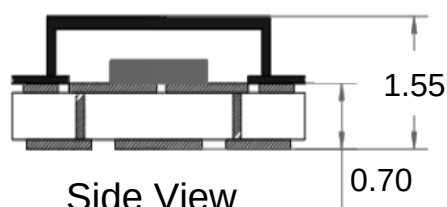
Front Side



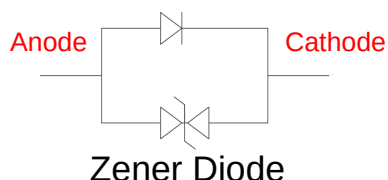
Back Side



Solder Pad of PCB



Side View



Zener Diode

### Notes :

- [1] All dimensions are in millimeters.
- [2] Scale : none
- [3] Undefined tolerance is  $\pm 0.2\text{mm}$



### Electro-Optical characteristics at60mA

(T<sub>a</sub>=25℃, RH=30%)

| Items                          | Symbol                                      | Condition              | Min. | Typ. | Max. | Unit  |
|--------------------------------|---------------------------------------------|------------------------|------|------|------|-------|
| Forward Current                | I <sub>F</sub>                              |                        |      | 60   |      | mA    |
| Forward Voltage <sup>[4]</sup> | V <sub>F</sub>                              | I <sub>F</sub> = 60 mA | 5.0  |      | 7.0  | V     |
| Radiant Flux <sup>[2]</sup>    | Φ <sub>e</sub> <sup>[3]</sup>               | I <sub>F</sub> = 60 mA | 5    |      | 10   | mW    |
| Peak Wavelength <sup>[1]</sup> | λ <sub>p</sub>                              | I <sub>F</sub> = 60 mA | 270  |      | 280  | nm    |
| Viewing Angle                  | 2 θ <sub>½</sub>                            | I <sub>F</sub> = 60 mA |      | 120  |      | deg.  |
| Spectrum Half Width            | Δ λ                                         | I <sub>F</sub> = 60 mA |      | 10   |      | nm    |
| Thermal Resistance             | R <sub>θ<sub>J-b</sub></sub> <sup>[5]</sup> | I <sub>F</sub> = 60 mA |      | 15.8 |      | °C /W |

### Absolute Maximum Ratings

| Parameter             | Symbol           | Absolute maximum Rating | Unit |
|-----------------------|------------------|-------------------------|------|
| Forward Current       | I <sub>F</sub>   | 70                      | mA   |
| Power Dissipation     | P <sub>D</sub>   | 350                     | mW   |
| Operating Temperature | T <sub>opr</sub> | -30 ~ +60               | °C   |
| Storage Temperature   | T <sub>stg</sub> | -40 ~ +100              | °C   |

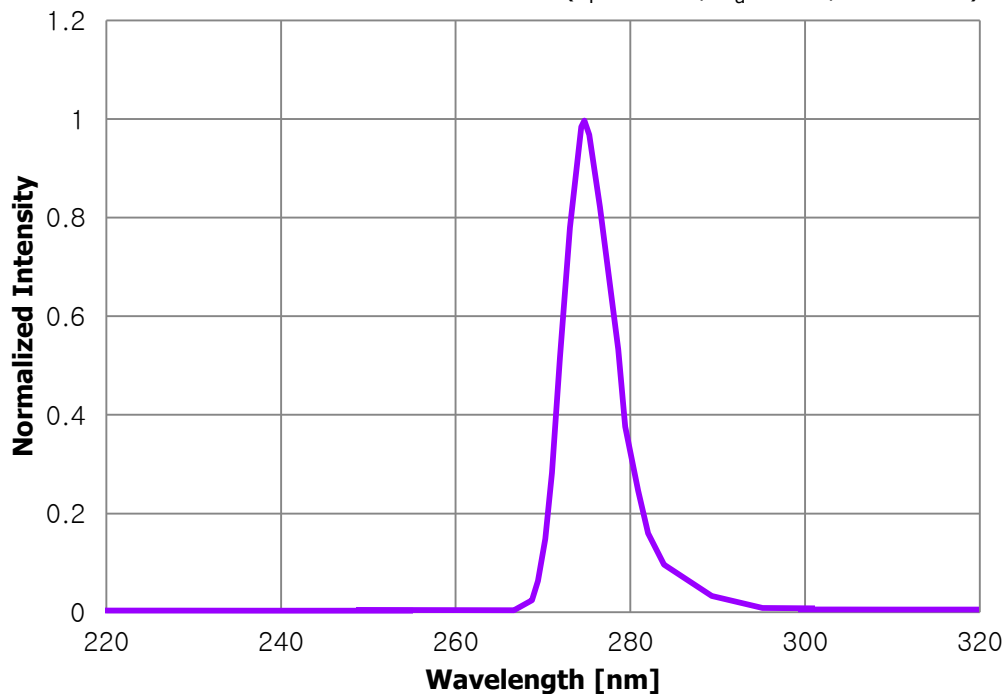
Notes :

1. Peak Wavelength Measurement tolerance : ±3nm
2. Radiant Flux Measurement tolerance : ± 10%
3. Φ<sub>e</sub> is the Total Radiant Flux as measured with an integrated sphere.
4. Forward Voltage Measurement tolerance : ±3%
5. R<sub>θ<sub>J-b</sub></sub> is the thermal resistance between chip junction to PCB board bottom.  
The PCB is made of aluminium and the size of PCB is 3.5mm by 3.5mm



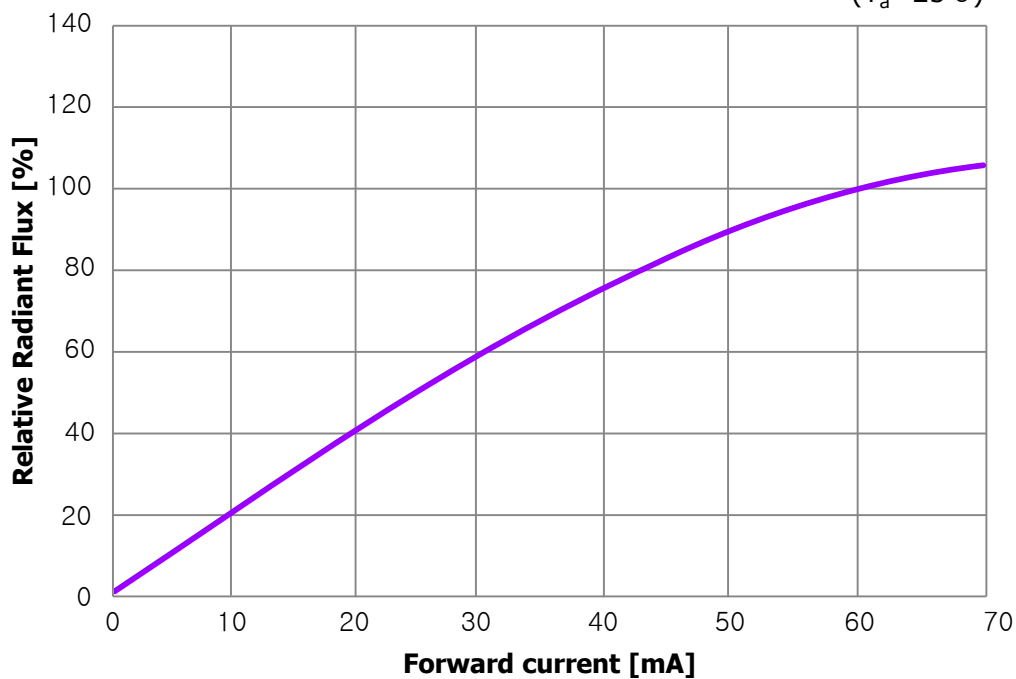
### Spectral Power Distribution

( $I_F=60\text{mA}$ ,  $T_a=25^\circ\text{C}$ ,  $\text{RH}=30\%$ )



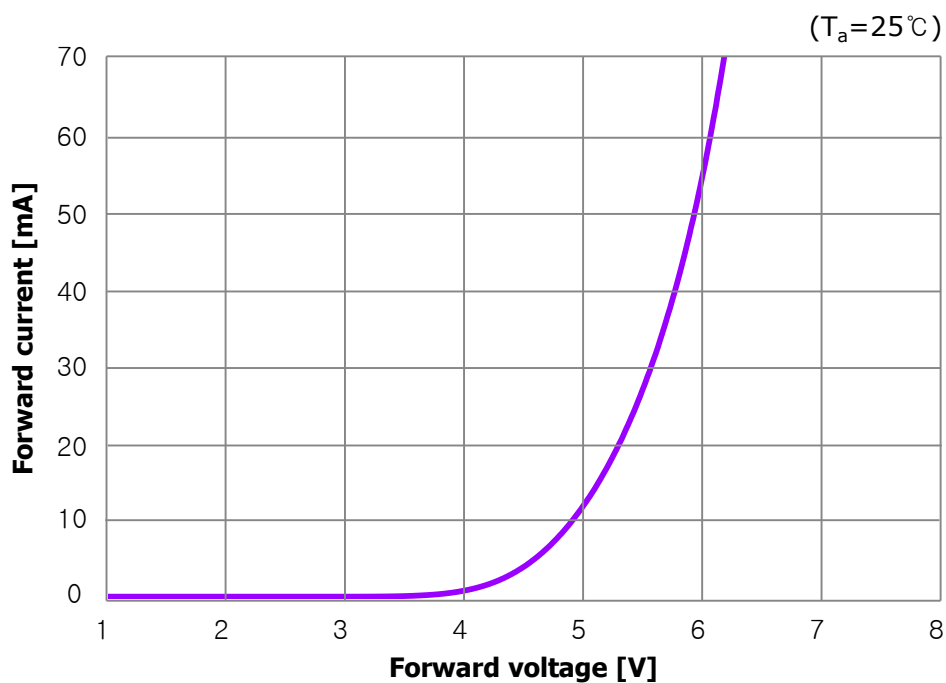
### Relative Radiant Flux vs. Forward Current

( $T_a=25^\circ\text{C}$ )

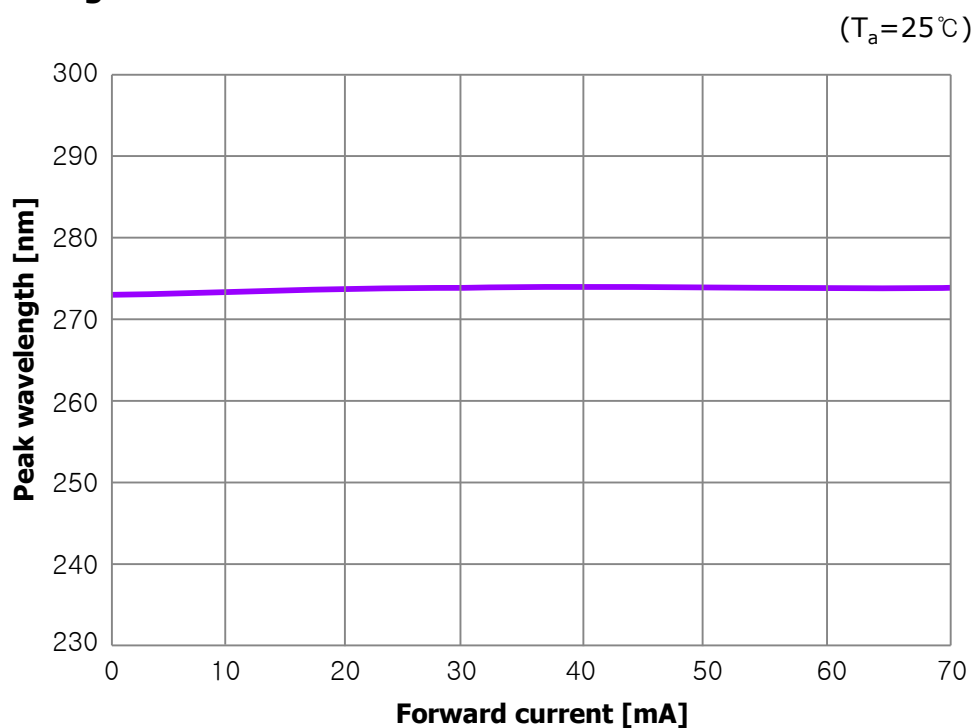




### Forward current vs. Forward Voltage

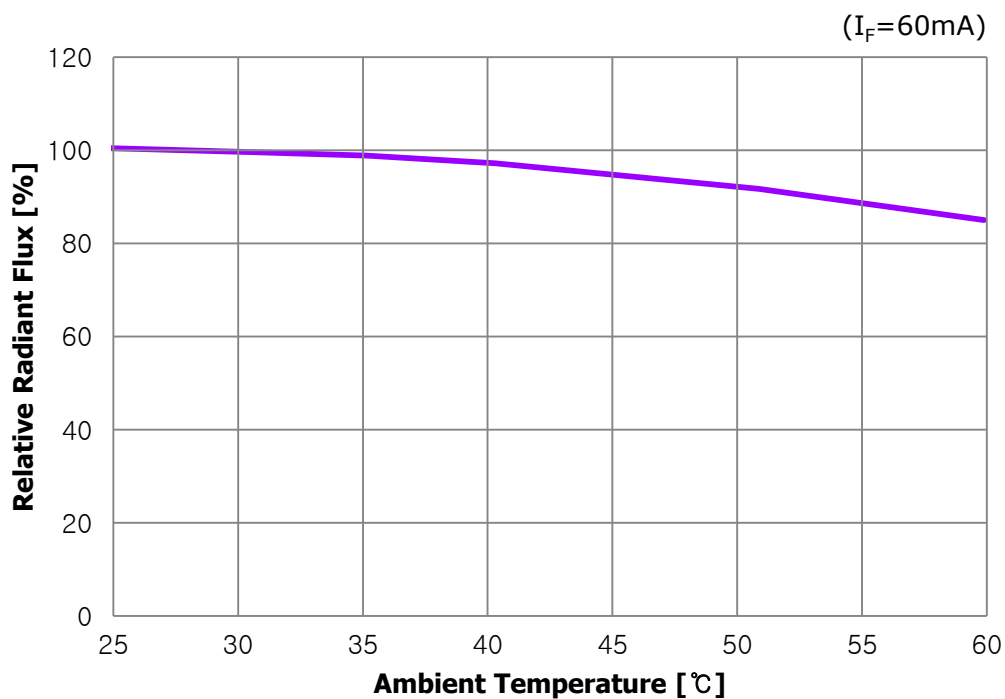


### Peak Wavelength vs. Forward current

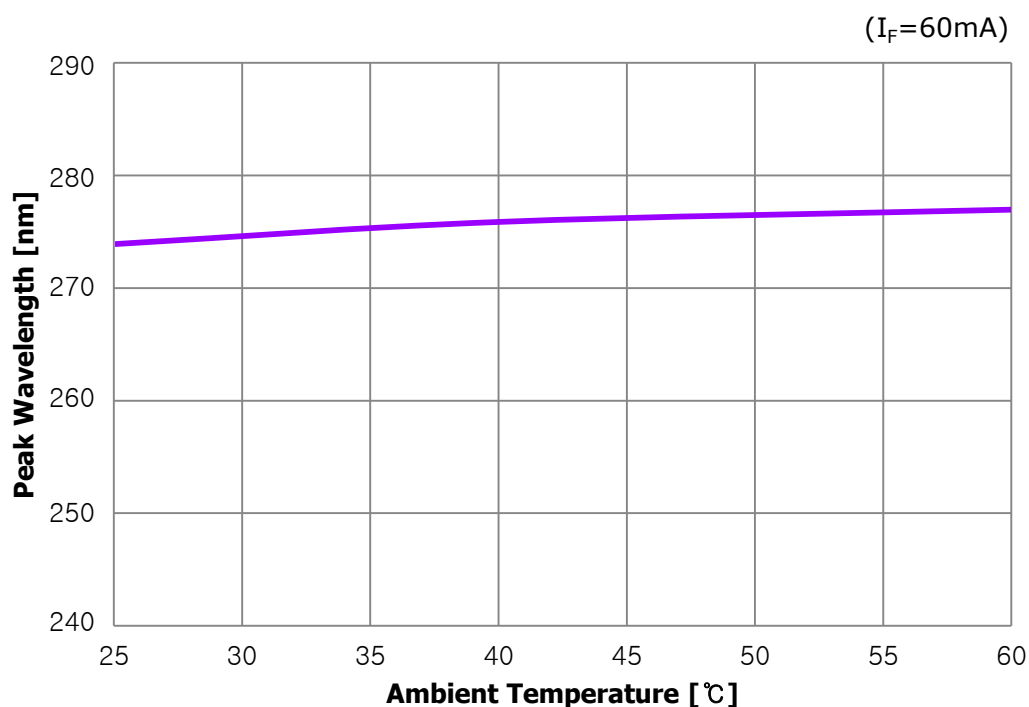




### Relative Radiant Flux vs. Ambient Temperature

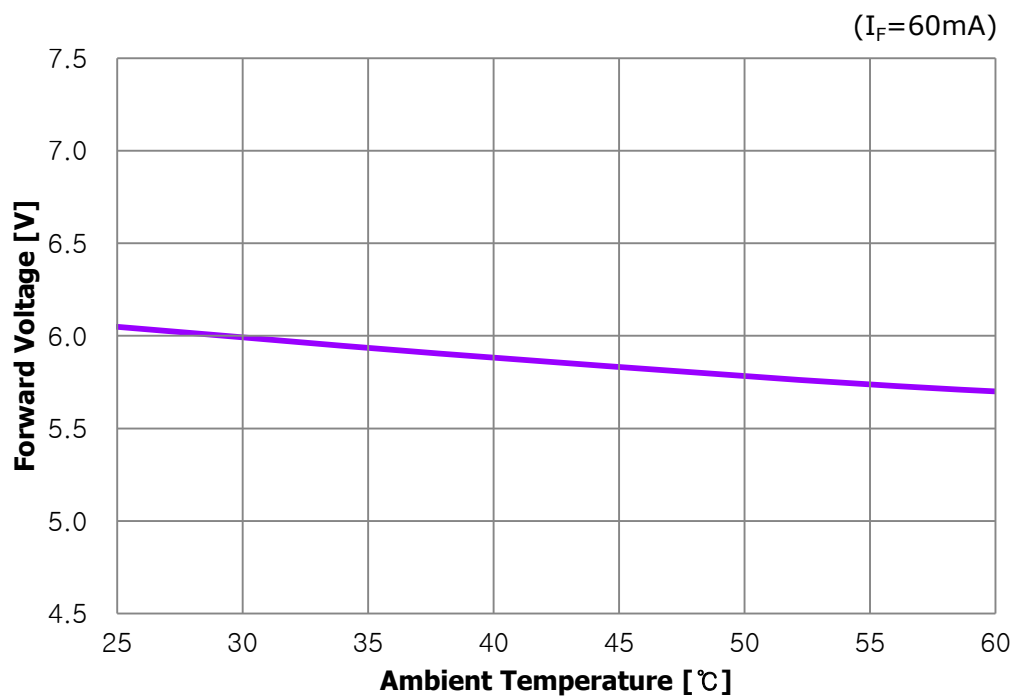


### Peak Wavelength vs. Ambient Temperature

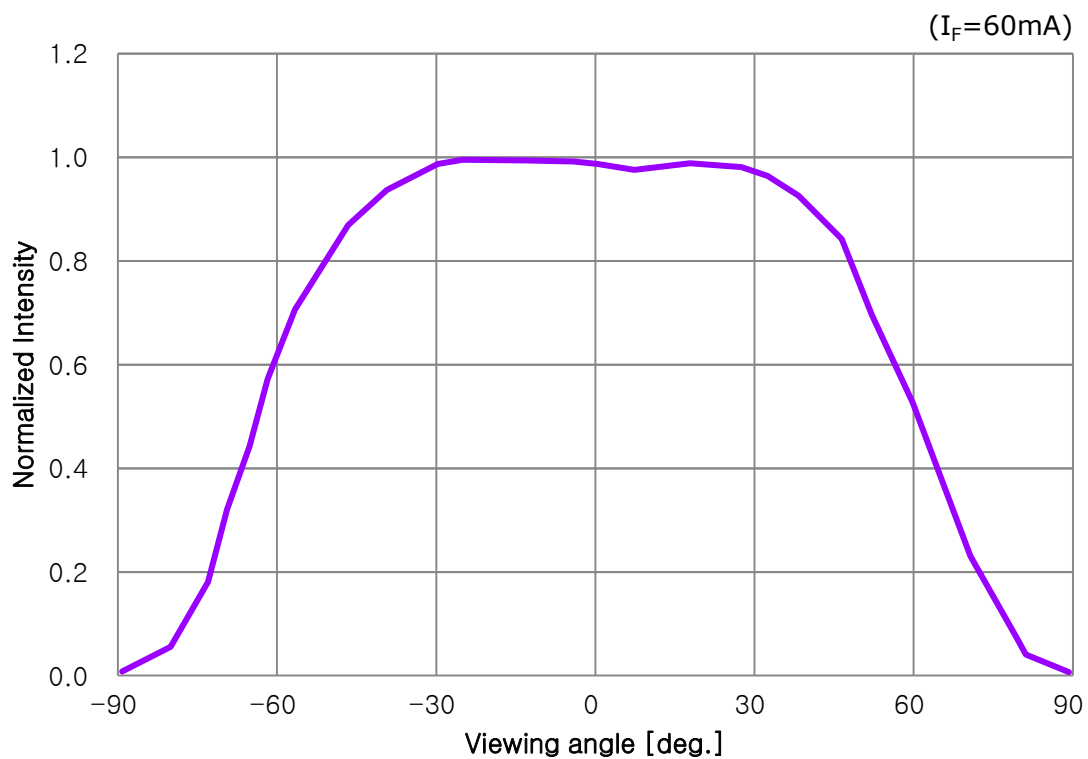


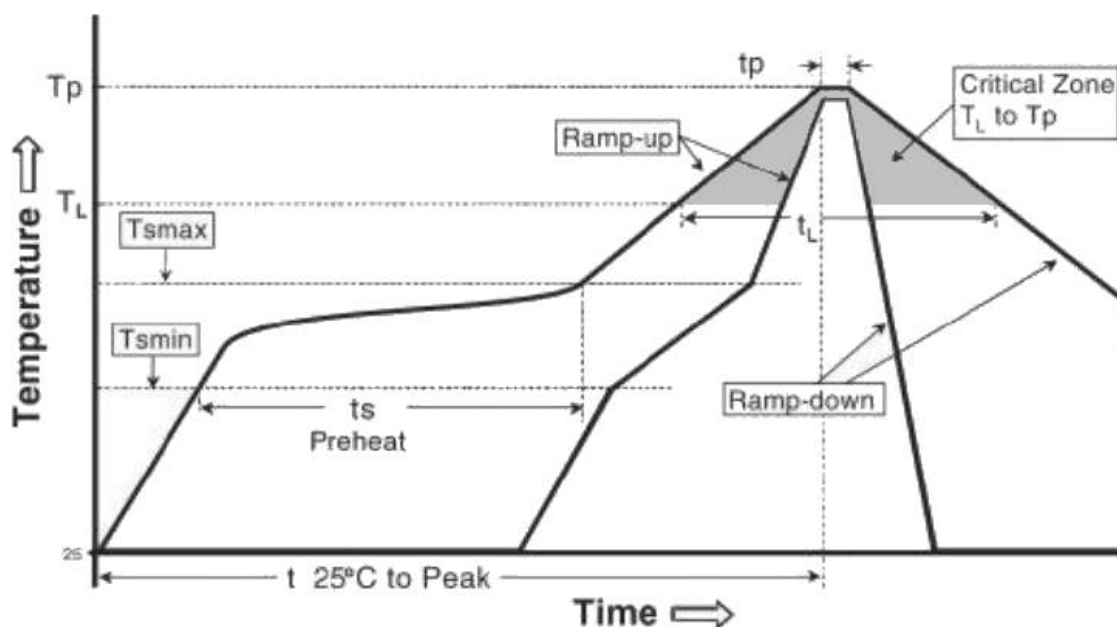


## Forward Voltage vs. Ambient Temperature



## Radiant Pattern





| Profile Feature                                                                                                                                                                                                                                    | Sn-Pb Eutectic Assembly            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| Average ramp-up rate ( $T_{s\_max}$ to $T_p$ )                                                                                                                                                                                                     | 3 °C/second max.                   |
| Preheat <ul style="list-style-type: none"> <li>- Temperature Min (<math>T_{s\_min}</math>)</li> <li>- Temperature Max (<math>T_{s\_max}</math>)</li> <li>- Time (<math>T_{s\_min}</math> to <math>T_{s\_max}</math>) (<math>t_s</math>)</li> </ul> | 100 °C<br>140 °C<br>60-120 seconds |
| Time maintained above: <ul style="list-style-type: none"> <li>- Temperature (<math>T_L</math>)</li> <li>- Time (<math>t_L</math>)</li> </ul>                                                                                                       | 180 °C<br>20-50 seconds            |
| Peak Temperature ( $T_p$ )                                                                                                                                                                                                                         | 214°C                              |
| Time within 5°C of actual Peak Temperature ( $t_p$ )                                                                                                                                                                                               | 10-30 seconds                      |
| Ramp-down Rate                                                                                                                                                                                                                                     | 6 °C/second max.                   |
| Time 25°C to Peak Temperature                                                                                                                                                                                                                      | 6 minutes max.                     |

**\* Caution**

1. Reflow soldering should not be done more than one time.
2. Repairs should not be done after the LEDs have been soldered. When repair is unavoidable, suitable tools must be used.
3. Die slug is to be soldered.
4. When soldering, do not put stress on the LEDs during heating.
5. After soldering, do not warp the circuit board.
6. Recommend to use a convection type reflow machine with 6 ~ 8 zones.