



# YGP321015-ASC3

## SMD Type Yellow Green Emitter

### Features

- Side view 1204 package
- Viewing Angle =  $\pm 60^\circ$
- Compatible with infrared and vapor phase reflow solder process
- High reliability
- Ultra bright Yellow Green
- RoHS compliance

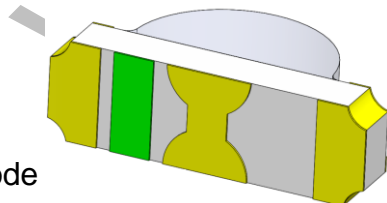
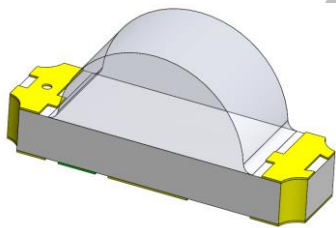
### Applications

- Optical indicator.
- Switch and Symbol Display.

### Description

The YGP321015-ASC3 is an AlGaInP Yellow Green LED housed in a miniature SMD package. The device has a dominant wavelength of 572 nm LED.

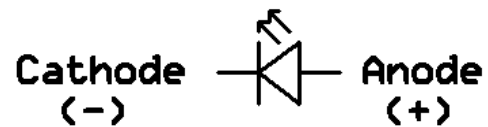
### Package Outline



Cathode

Anode

### Schematic



**Absolute Maximum Rating at 25°C**

| Symbol           | Parameters   | Ratings    | Units | Notes |
|------------------|--|------------|-------|-------|
| I <sub>F</sub>   | Continuous Forward Current                               | 25         | mA    |       |
| I <sub>FP</sub>  | Peak Forward Current                                     | 60         | mA    | 1     |
| V <sub>R</sub>   | Reverse Voltage  | 5          | V     |       |
| T <sub>opr</sub> | Operating Temperature                                    | -40 ~ +85  | °C    |       |
| T <sub>stg</sub> | Storage Temperature                                      | -40 ~ +100 | °C    |       |
| T <sub>sol</sub> | Soldering Temperature                                    | 260        | °C    | 2     |
| P <sub>D</sub>   | Power Dissipation at(or below) 25°C Free Air Temperature | 65         | mW    |       |

**Electro-Optical Characteristics** *TA = 25°C (unless otherwise specified)***Optical Characteristics**

| Symbol           | Parameters              | Test Conditions      | Min | Typ | Max | Units | Notes |
|------------------|-------------------------|----------------------|-----|-----|-----|-------|-------|
| I <sub>v</sub>   | Luminous Intensity      | I <sub>F</sub> =20mA | 25  | -   | 62  | mcd   | 3     |
| λ <sub>D</sub>   | Dominant Wavelength     | I <sub>F</sub> =20mA | 568 | -   | 576 | nm    | 4     |
| θ <sub>1/2</sub> | Angle of Half Intensity | I <sub>F</sub> =20mA | -   | ±60 | -   | deg   |       |

**Electrical Characteristics**

| Symbol         | Parameters      | Test Conditions      | Min | Typ | Max | Units | Notes |
|----------------|-----------------|----------------------|-----|-----|-----|-------|-------|
| V <sub>F</sub> | Forward Voltage | I <sub>F</sub> =20mA | 1.7 | -   | 2.5 | V     | 5     |
| I <sub>R</sub> | Reverse Current | V <sub>R</sub> =5V   | -   | -   | 1   | μA    |       |

**Notes:**

1. I<sub>FP</sub> Conditions--Pulse Width ≤ 100μs and Duty ≤ 10%.
2. Soldering time ≤ 10 seconds.
3. Bin Range of Luminous Intensity

| Bin Code | Min | Max | Unit | Condition            |
|----------|-----|-----|------|----------------------|
| j2       | 25  | 30  | mcd  | I <sub>F</sub> =20mA |
| k1       | 30  | 36  |      |                      |
| k2       | 36  | 43  |      |                      |
| l1       | 43  | 51  |      |                      |
| l2       | 51  | 62  |      |                      |

Tolerance of Luminous Intensity ±10%



4. Bin Range of Dominant Wavelength

| Bin Code | Min | Max | Unit | Condition            |
|----------|-----|-----|------|----------------------|
| G2       | 568 | 570 | nm   | I <sub>F</sub> =20mA |
| G3       | 570 | 572 |      |                      |
| G5       | 572 | 574 |      |                      |
| G6       | 574 | 576 |      |                      |

Tolerance of Dominant Wavelength:  $\pm 1$ nm.

5. Bin Range of Forward Voltage

| Bin Code | Min | Max | Unit | Condition            |
|----------|-----|-----|------|----------------------|
| V4       | 1.7 | 1.9 | V    | I <sub>F</sub> =20mA |
| V5       | 1.9 | 2.1 |      |                      |
| V6       | 2.1 | 2.3 |      |                      |
| V7       | 2.3 | 2.5 |      |                      |

Tolerance of Forward Voltage  $\pm 0.1$ V.



### Typical Characteristic Curves

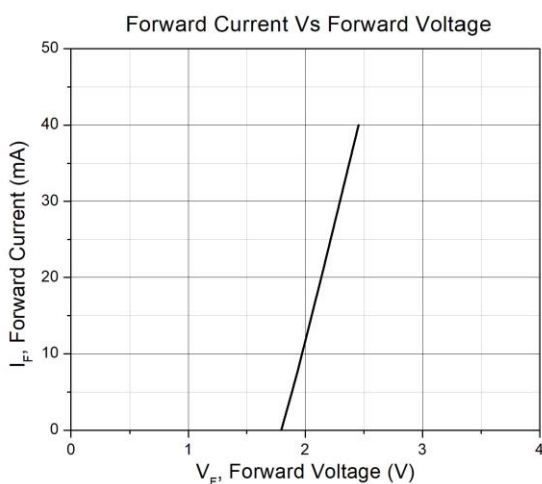


Figure 1

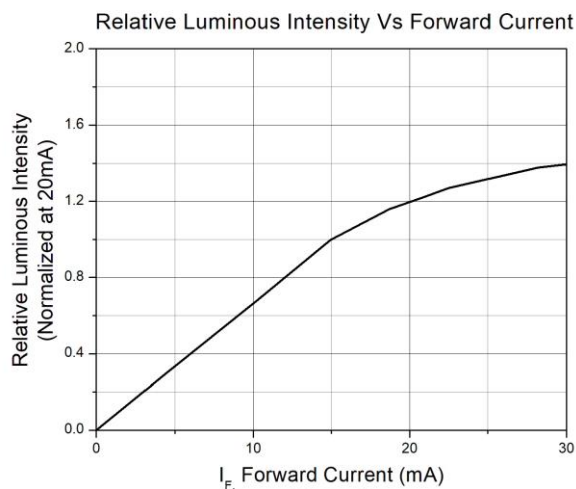


Figure 2

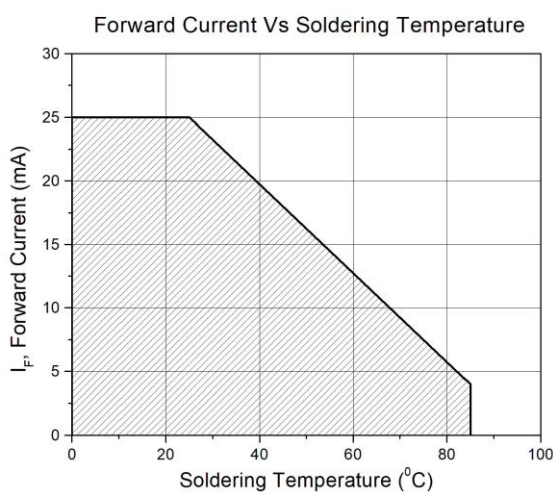


Figure 3

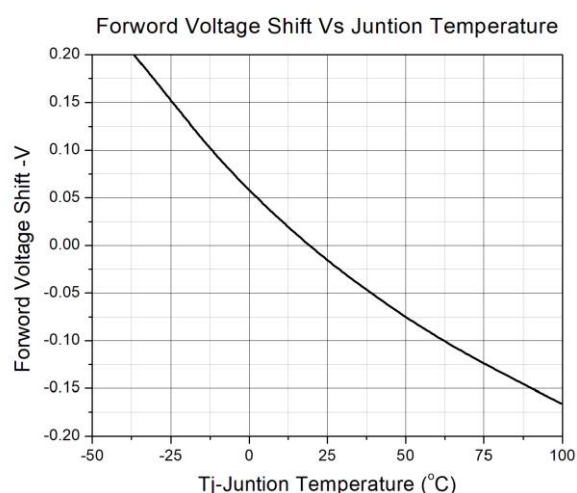


Figure 4

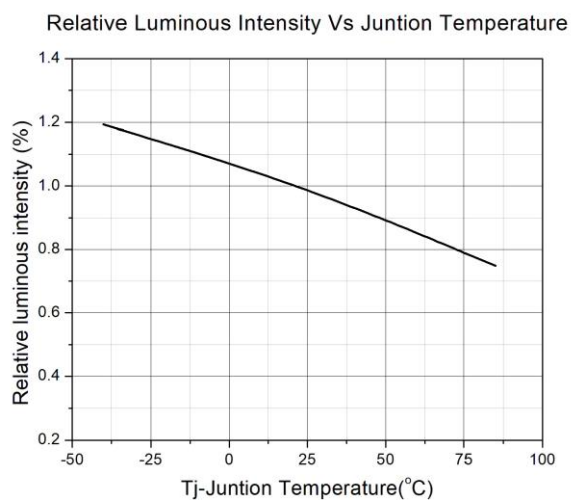


Figure 5

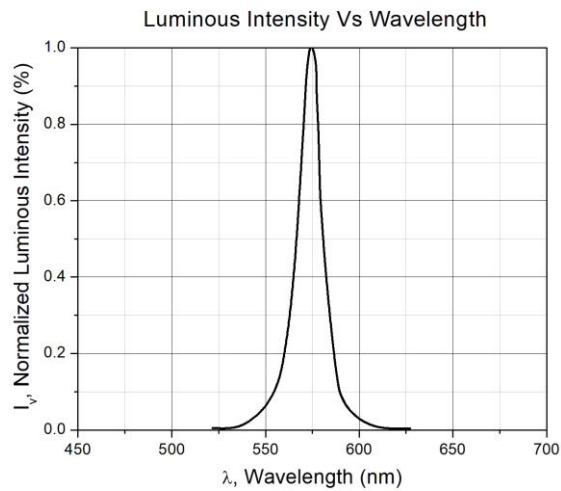
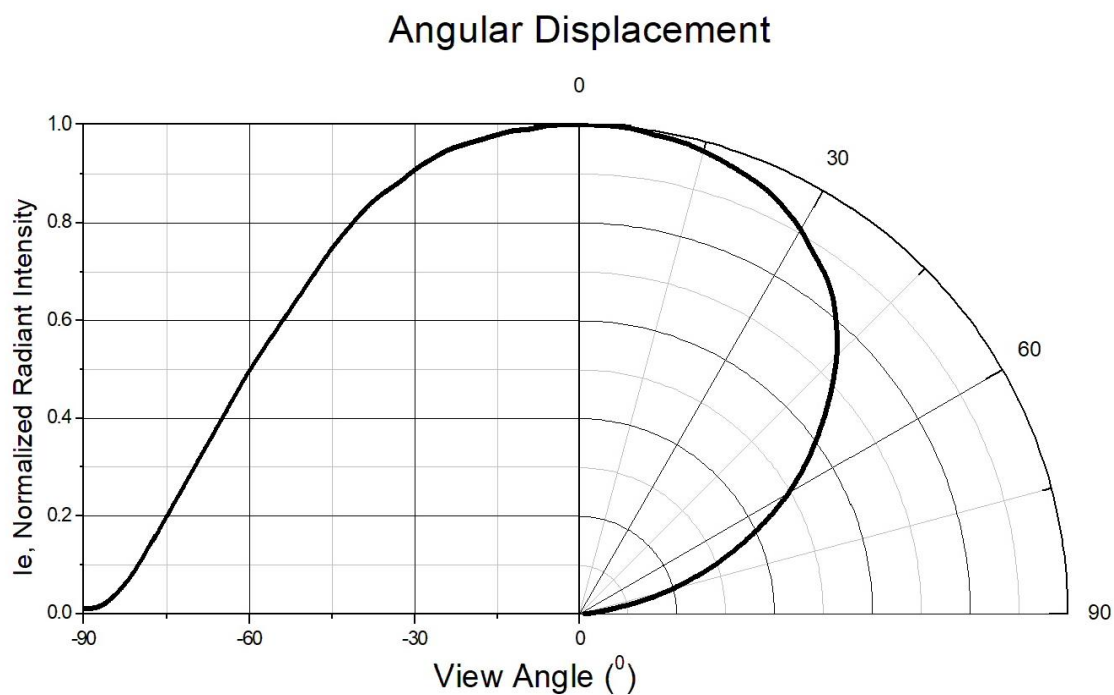


Figure 6

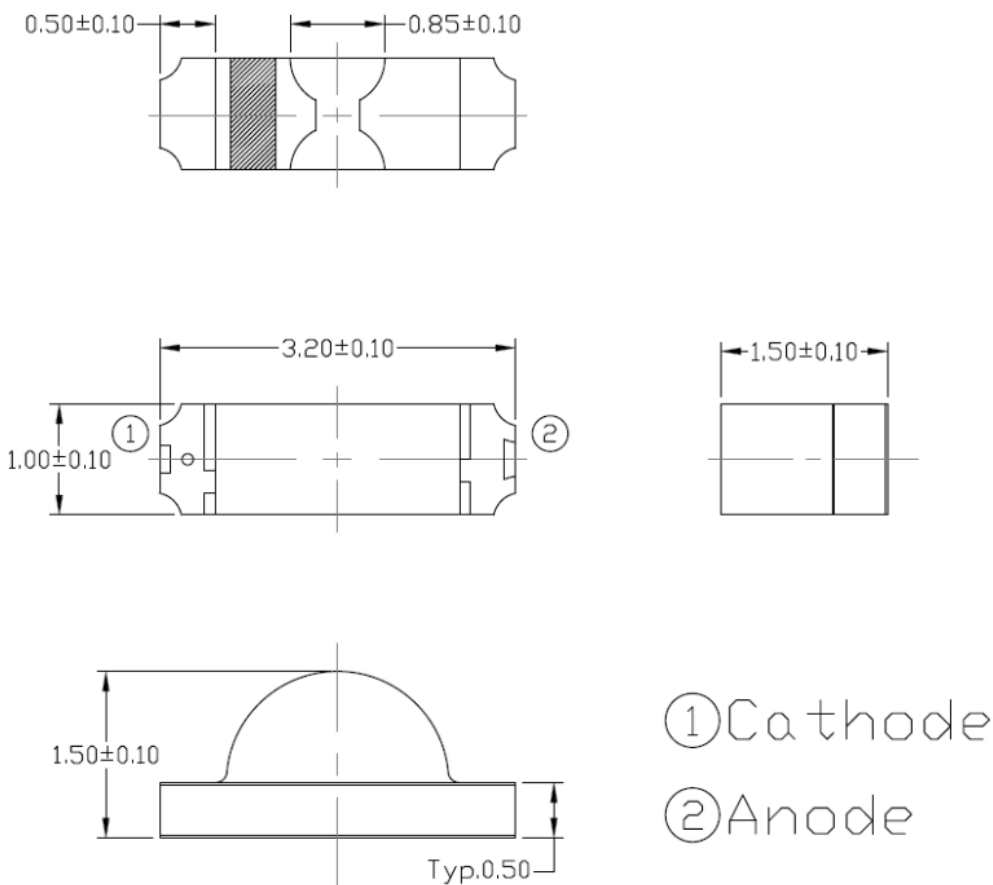


### Typical Characteristic Curves



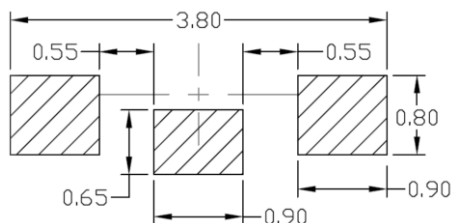


**Package Dimension** *All dimensions are in mm, unless otherwise stated*



Note: Tolerance unless mentioned is  $\pm 0.1$ mm.

**Recommended Soldering Mask** *All dimensions are in mm, unless otherwise stated*



Note: Tolerance unless mentioned is  $\pm 0.1$ mm.

**Ordering Information**

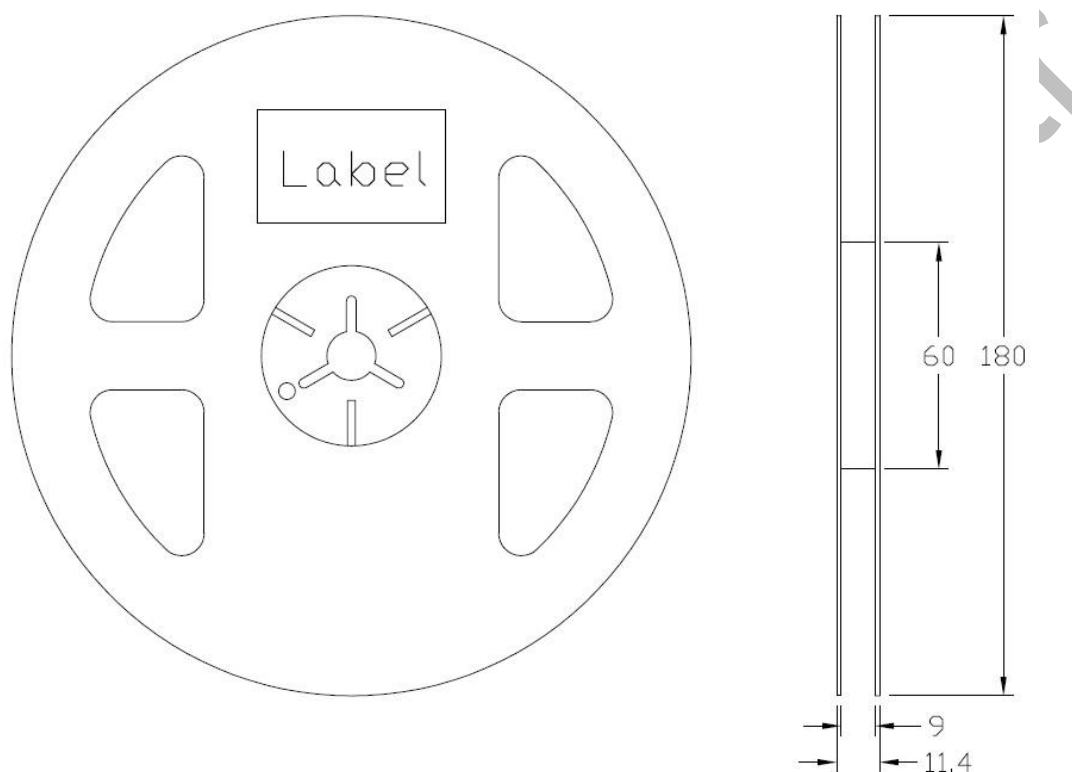
| Part Number    | Description | Quantity |
|----------------|-------------|----------|
| YGP321015-ASC3 | Tape & Reel | 3000 pcs |



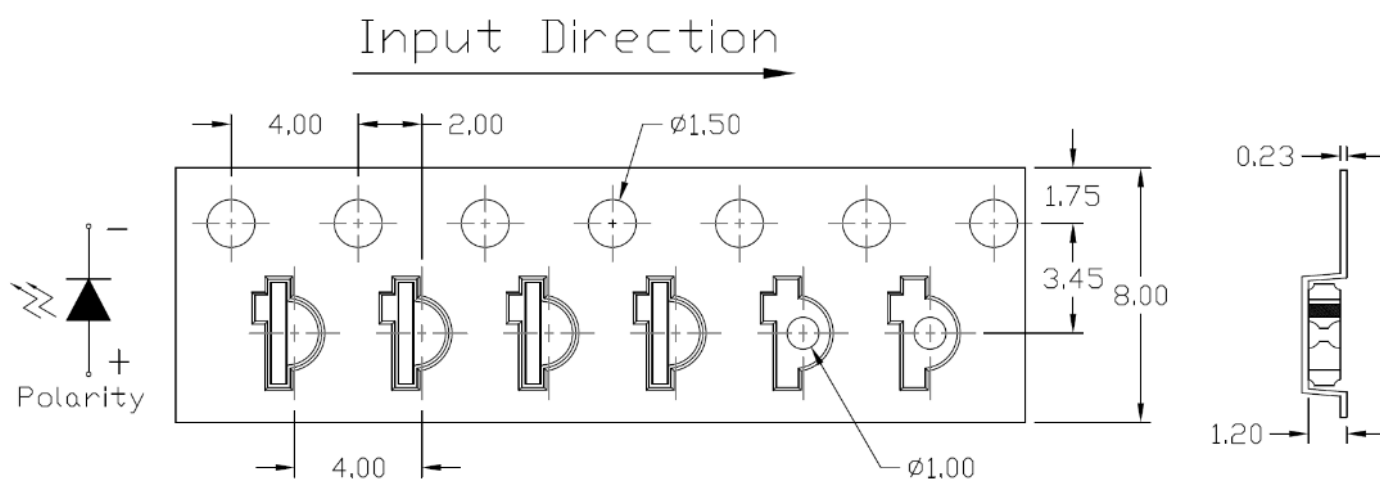
YGP321015-ASC3

SMD Type Yellow Green Emitter

**Reel Dimension** *All dimensions are in mm, unless otherwise stated*



**Tape Dimension** *All dimensions are in mm, unless otherwise stated*



Note: Tolerance unless mentioned is  $\pm 0.1$ mm.



### Label Form Specification



CPN : Customer Part Number  
 Part no: CTM Production Number  
 Serial no: Production Number  
 Lot no: Lot number  
 Q'ty: Packing Quantity  
 Date Code: Manufacture Date  
 IV : Bin Code of Luminous Intensity  
 WD : Bin Code of Dominant Wavelength  
 VF : Bin Code of Forward Voltage  
 MADE IN CHINA: Production Place

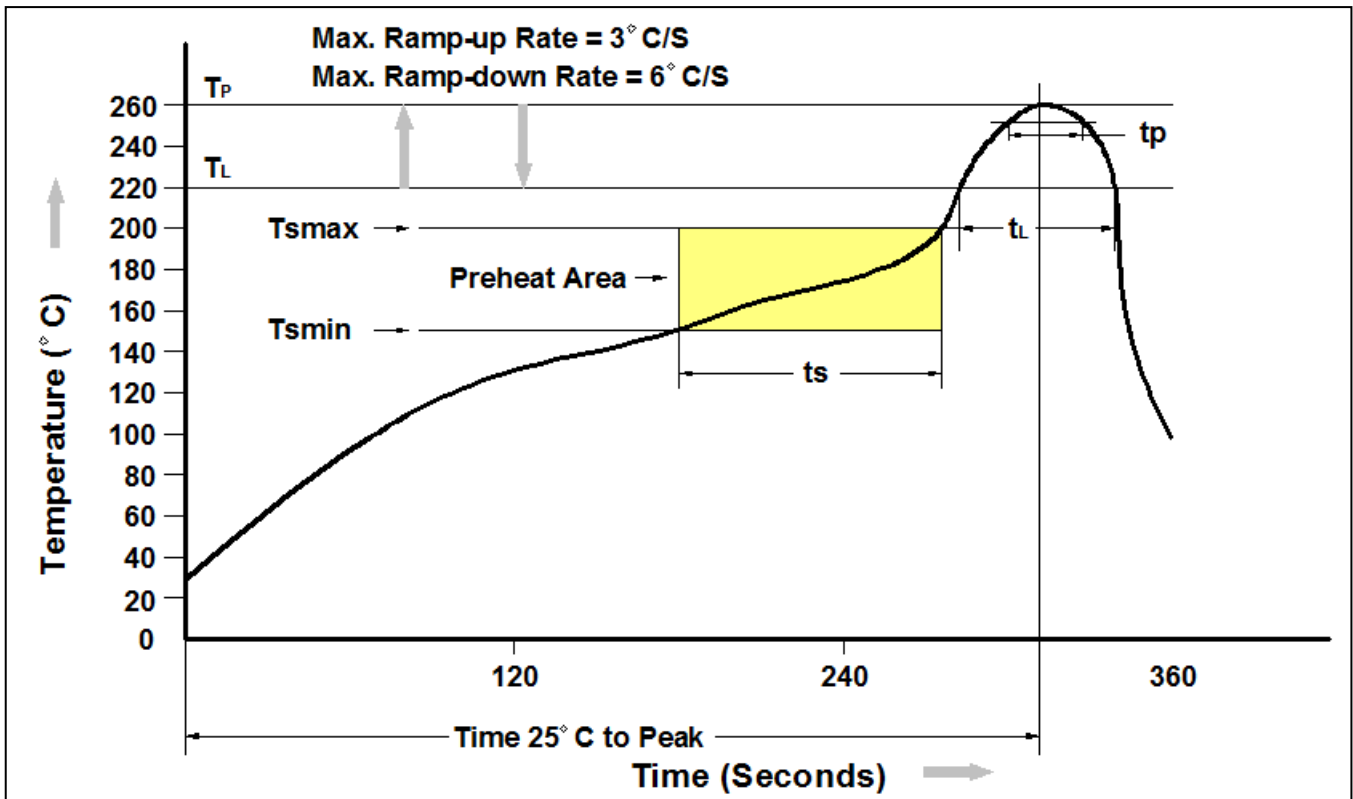
### Storage Condition

1. Do not open moisture proof bag before the products are ready to use.
2. The moisture barrier bag should be stored at 30°C and 90%R.H. max. before opening.  
Shelf life of non-opened bag is 12 months after the bag sealing date.
3. After opening the moisture barrier bag floor life is 1 year at 30°C/60%RH. max. Unused LEDs should be resealed into moisture barrier bag. (Refer to J-STD-020 Standard)
4. If the moisture absorbent material has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the J-STD-033 Standard conditions.





Reflow Profile



| Profile Feature   | Pb-Free Assembly Profile |
|---|--------------------------|
| Temperature Min. (T <sub>min</sub> )                                | 150°C                    |
| Temperature Max. (T <sub>max</sub> )                                | 200°C                    |
| Time (t <sub>s</sub> ) from (T <sub>min</sub> to T <sub>max</sub> ) | 60-120 seconds           |
| Ramp-up Rate (t <sub>L</sub> to t <sub>P</sub> )                    | 3°C/second max.          |
| Liquidous Temperature (T <sub>L</sub> )                             | 217°C                    |
| Time (t <sub>L</sub> ) Maintained Above (T <sub>L</sub> )           | 60 – 150 seconds         |
| Peak Body Package Temperature                                       | 260°C +0°C / -5°C        |
| Time (t <sub>P</sub> ) within 5°C of 260°C                          | 30 seconds               |
| Ramp-down Rate (T <sub>P</sub> to T <sub>L</sub> )                  | 6°C/second max           |
| Time 25°C to Peak Temperature                                       | 8 minutes max.           |



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