



# BP3015Q12-B10

## SMD Type Blue Emitter

### Features

- Small double-end package
- Viewing Angle =  $\pm 55^\circ$
- High reliability
- Ultra bright Blue
- RoHS compliance

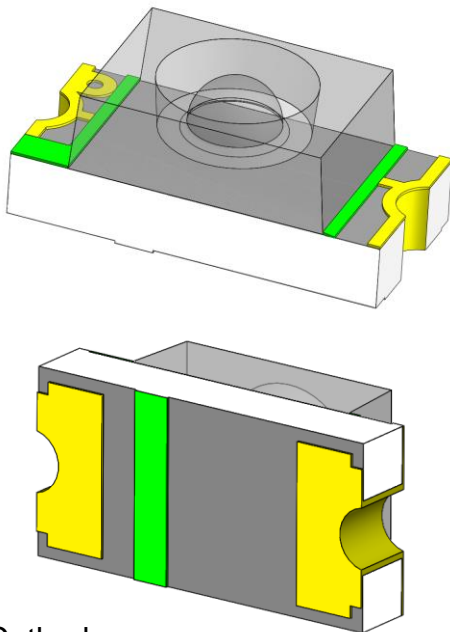
### Applications

- Blue sensor

### Description

The BP3015Q12-B10 is an InGaN Blue LED housed in a miniature SMD package. The device has a peak wavelength of 465nm LED.

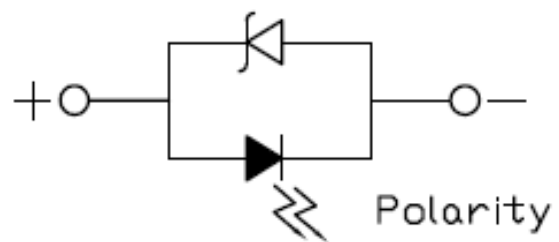
### Package Outline



Cathode  
(Blue LED)

Anode  
(Blue LED)

### Schematic





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### Absolute Maximum Rating at 25°C

Symbol	Parameters	Ratings	Units	Notes
I <sub>F</sub>	Continuous Forward Current	20	mA	
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	1
P <sub>D</sub>	Power Dissipation at(or below) 25°C Free Air Temperature	76	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> =5mA	45	-	130	mcd	2
λ <sub>p</sub>	Peak Wavelength	I <sub>F</sub> =5mA	-	465	-	nm	
λ <sub>d</sub>	Dominant Wavelength	I <sub>F</sub> =5mA	465	-	475	nm	3
Δλ	Spectral Bandwidth	I <sub>F</sub> =5mA	-	17	-	nm	
θ <sub>1/2</sub>	Angle of Half Intensity	I <sub>F</sub> =5mA	-	±55	-	deg	

#### Electrical Characteristics

Symbol	Parameters	Test Conditions	Min	Typ	Max	Units	Notes
V <sub>F</sub>	Blue LED Forward Voltage	I <sub>F</sub> =5mA	2.4	2.65	3.0	V	4
		I <sub>F</sub> =20mA	2.6	-	3.8	V	
V <sub>FZ</sub>	Zener LED Forward Voltage	I <sub>FZ</sub> =20mA	0.6	-	1.2	V	

#### Notes:

- Soldering time ≤ 5 seconds.
- Tolerance of Luminous intensity: ±10%

Bin Code	P	Q
Min	45	71
Max	71	130



# BP3015Q12-B10

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### 3. Tolerance of Dominant Wavelength: $\pm 1\text{nm}$

Bin Code	AB	AC
Min	465	470
Max	470	475

### 4. Tolerance of Forward Voltage: $\pm 0.1\text{V}$

Bin Code	D1	D2	D3
Min	2.4	2.6	2.8
Max	2.6	2.8	3.0

## Typical Characteristic Curves

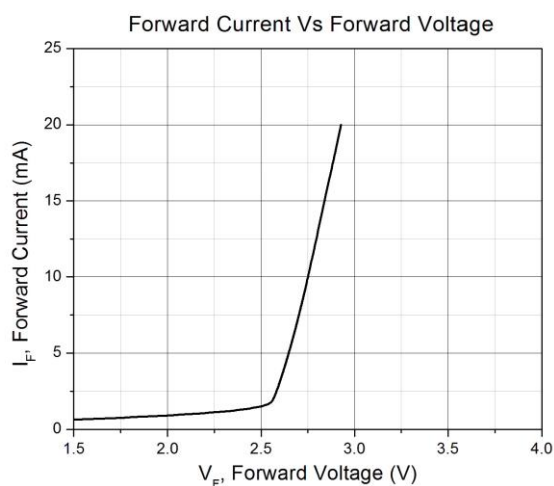


Figure 1

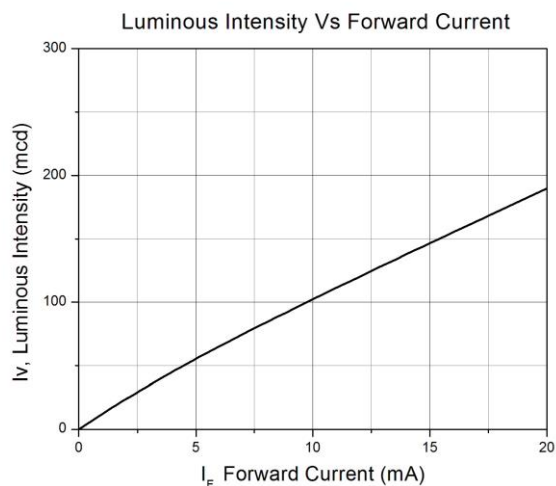


Figure 2

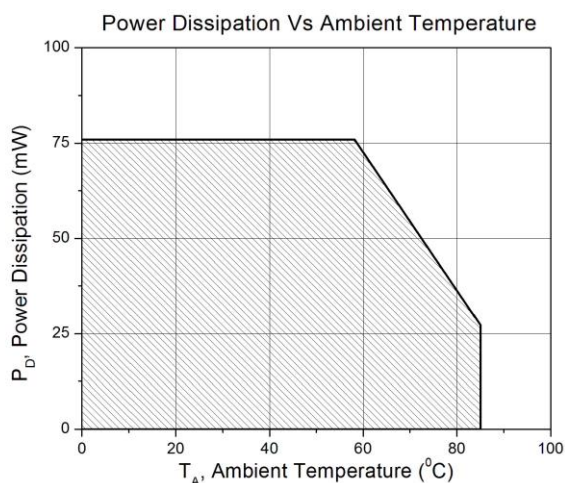


Figure 3

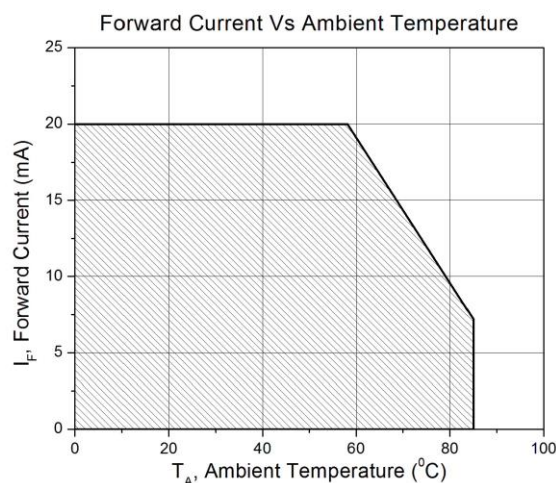
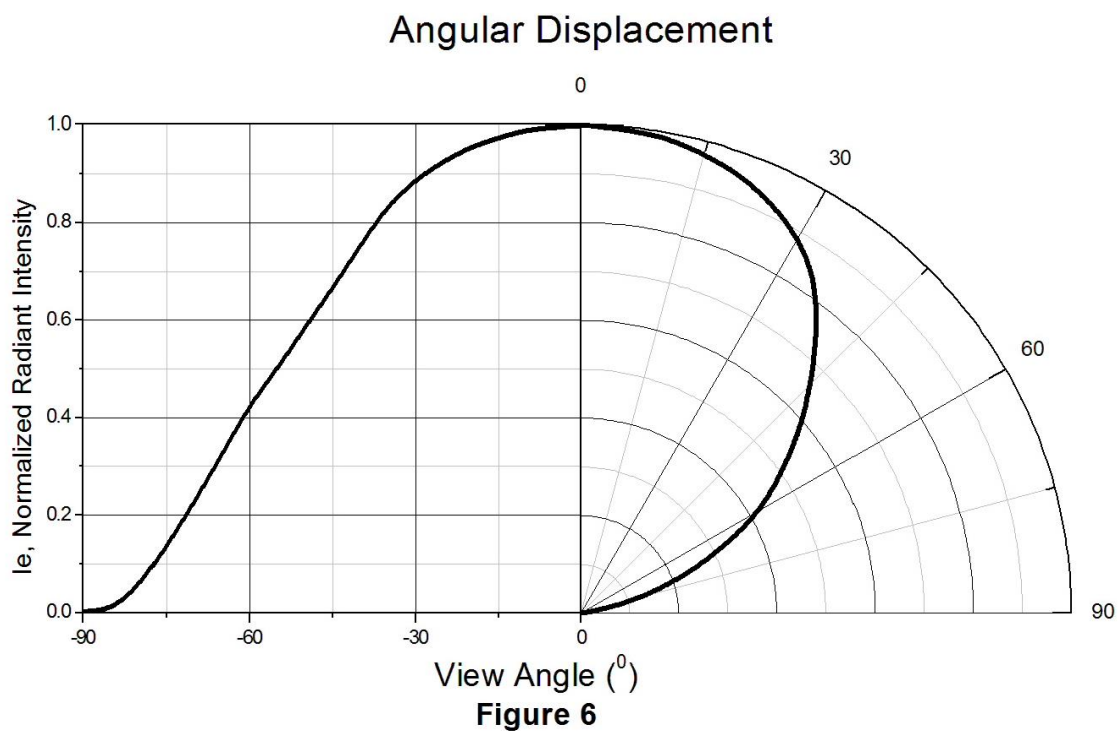
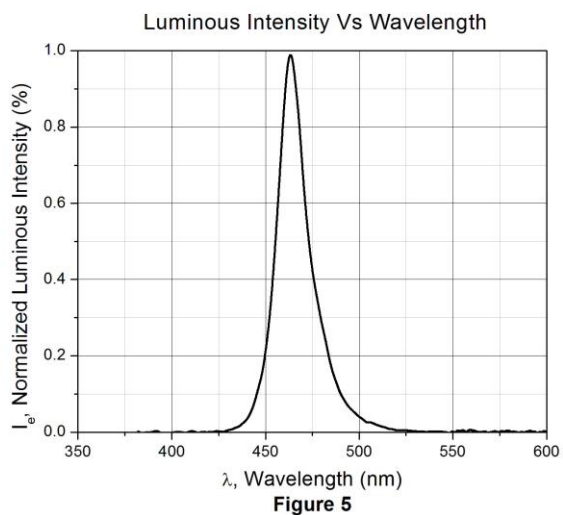


Figure 4



# BP3015Q12-B10

## SMD Type Blue Emitter

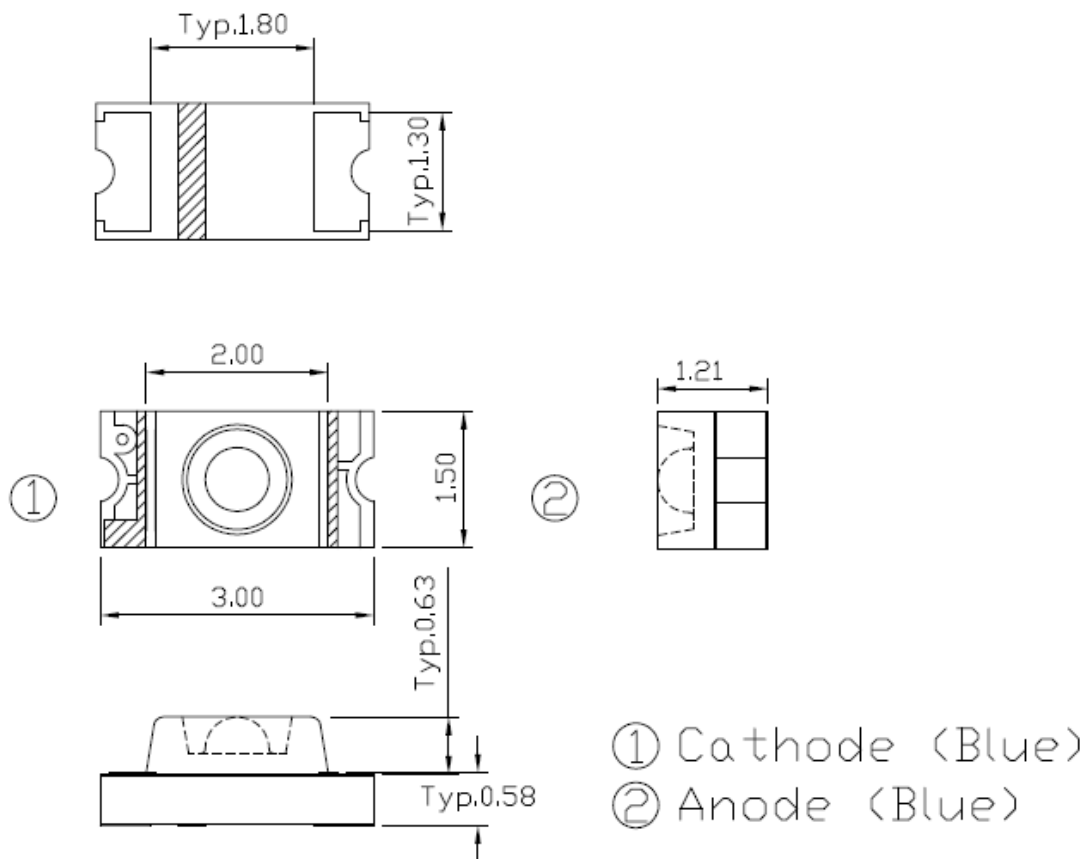




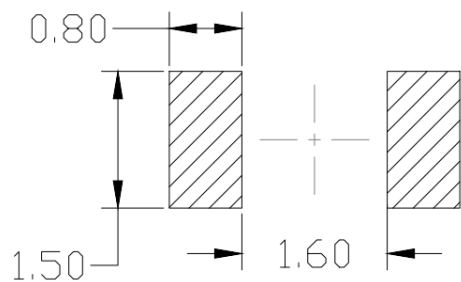
# BP3015Q12-B10

## SMD Type Blue Emitter

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



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



### Ordering Information

Part Number	Description	Quantity
BP3015Q12-B10	Tape & Reel	3000 pcs

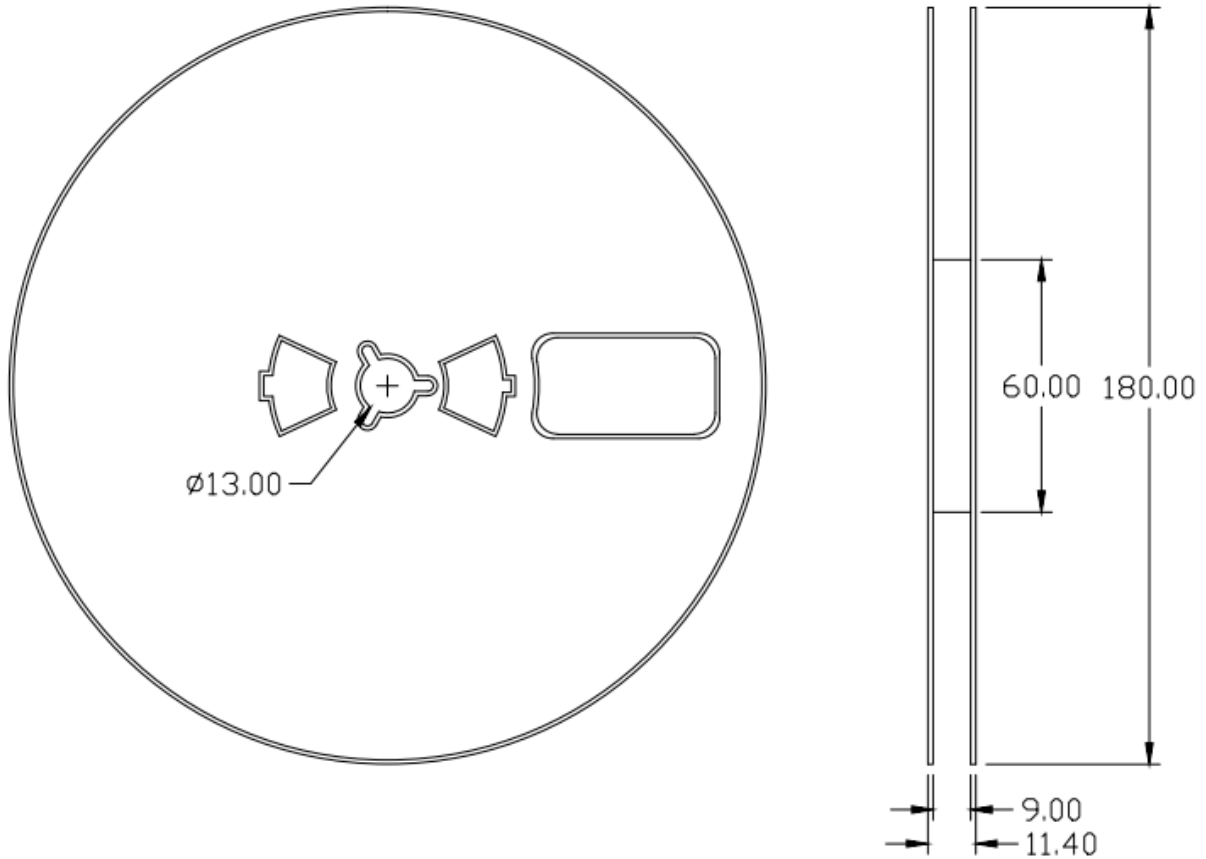


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## SMD Type Blue Emitter

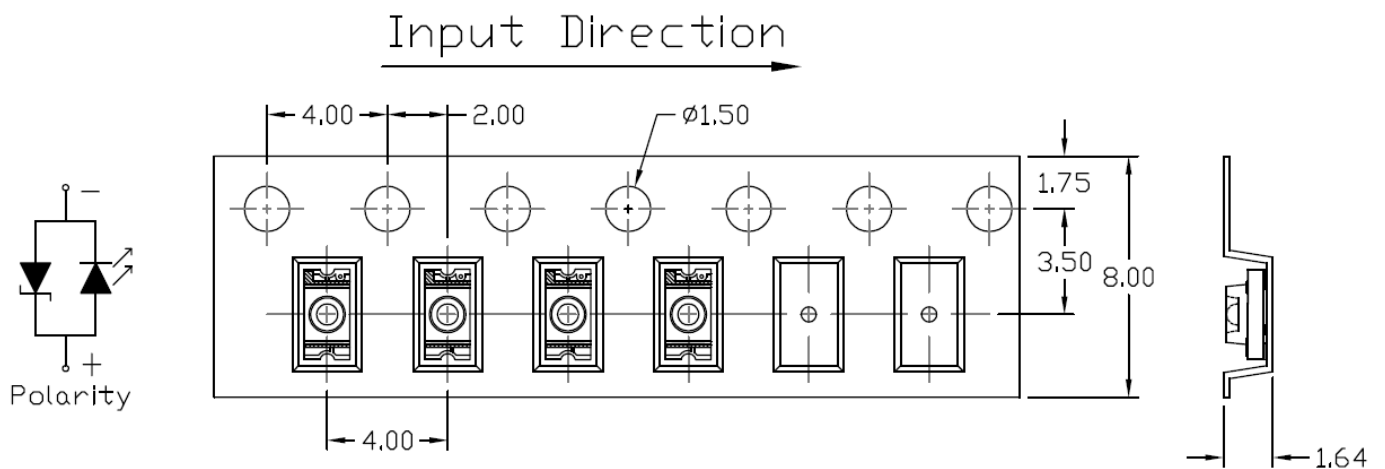
### Reel Dimension

All dimensions are in mm, unless otherwise stated



### Tape Dimension

All dimensions are in mm, unless otherwise stated

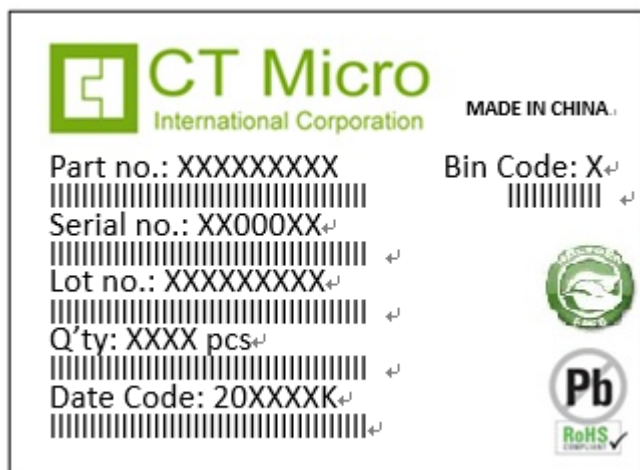




BP3015Q12-B10

SMD Type Blue Emitter

### Label Form Specification



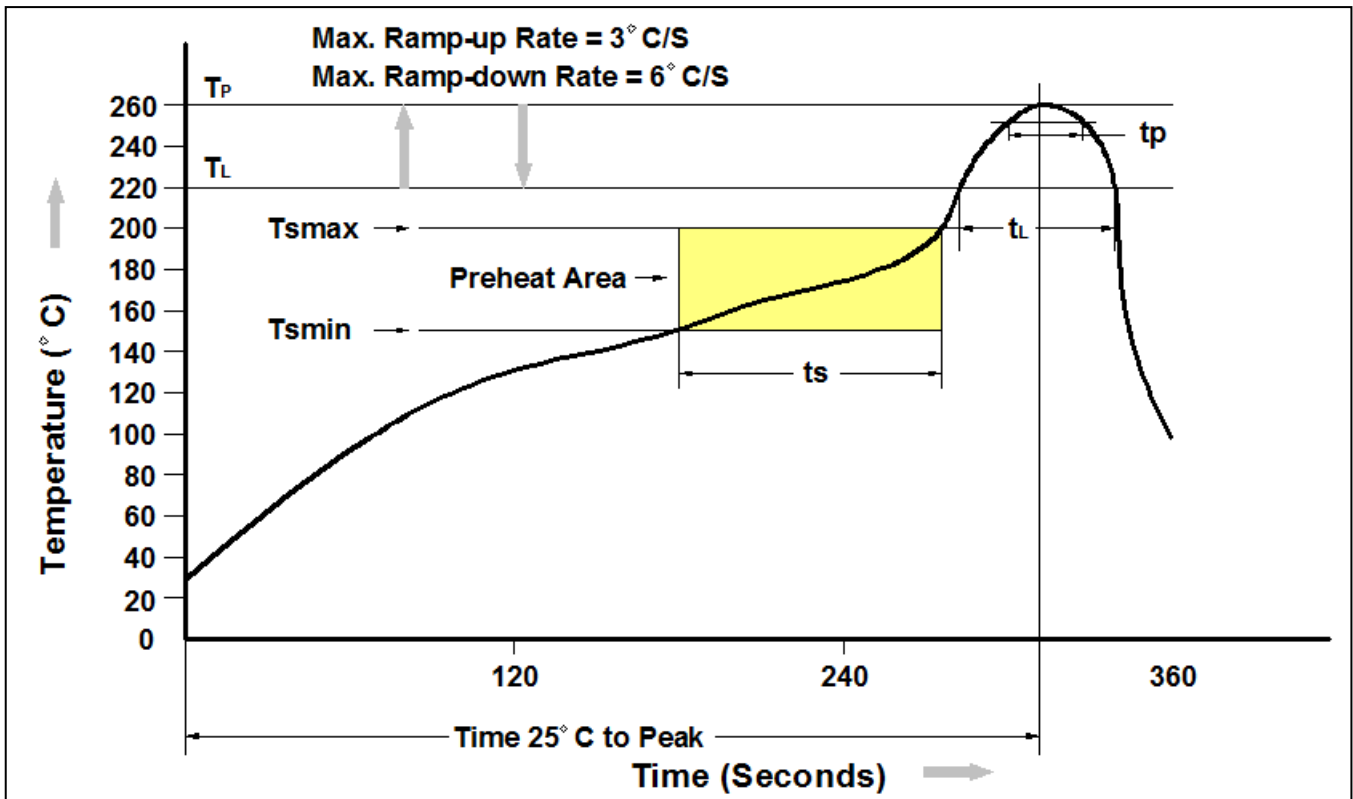
Part no: CTM Production Number  
 Serial no: Production Number  
 Lot no: Lot number  
 Q'ty: Packing Quantity  
 Date Code: Manufacture Date  
 Bin Code: Iv Ranks  
 MADE IN CHINA: Production Place

### 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 168h 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>smin</sub> )	150°C
Temperature Max. (T <sub>smax</sub> )	200°C
Time (t <sub>s</sub> ) from (T <sub>smin</sub> to T <sub>smax</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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