



BP3015Q12-B10

SMD Type Blue Emitter

Features

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

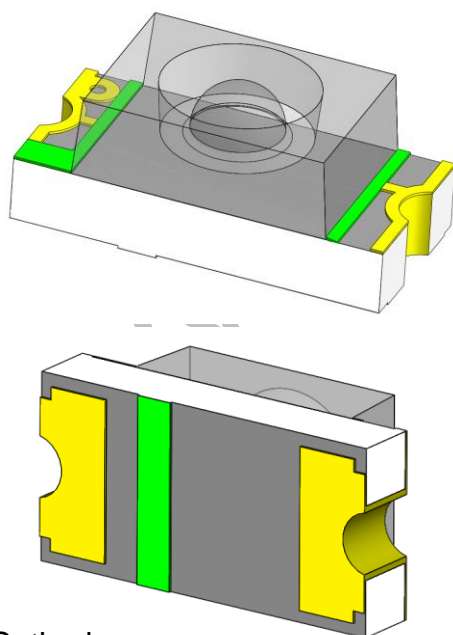
Applications

- 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



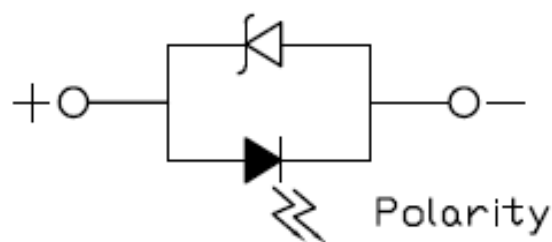
Cathode

(Blue LED)

Anode

(Blue LED)

Schematic





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Absolute Maximum Rating at 25°C

Symbol	Parameters	Ratings	Units	Notes
I _F	Continuous Forward Current	20	mA	
V _R	Reverse Voltage	5	V	
T _{opr}	Operating Temperature	-40 ~ +85	°C	
T _{stg}	Storage Temperature	-40 ~ +100	°C	
T _{sol}	Soldering Temperature	260	°C	1
P _D	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 _v	Luminous Intensity	I _F =5mA	45	-	130	mcd	2
λ _p	Peak Wavelength	I _F =5mA	-	465	-	nm	
λ _d	Dominant Wavelength	I _F =5mA	465	-	475	nm	3
Δλ	Spectral Bandwidth	I _F =5mA	-	17	-	nm	
θ _{1/2}	Angle of Half Intensity	I _F =5mA	-	±55	-	deg	

Electrical Characteristics

Symbol	Parameters	Test Conditions	Min	Typ	Max	Units	Notes
V _F	Blue LED Forward Voltage	I _F =5mA	2.4	2.65	3.0	V	4
		I _F =20mA	2.6	-	3.8	V	
V _{FZ}	Zener LED Forward Voltage	I _{FZ} =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



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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

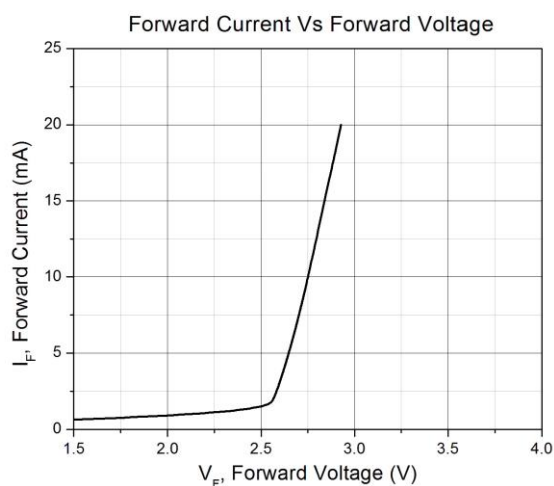


Figure 1

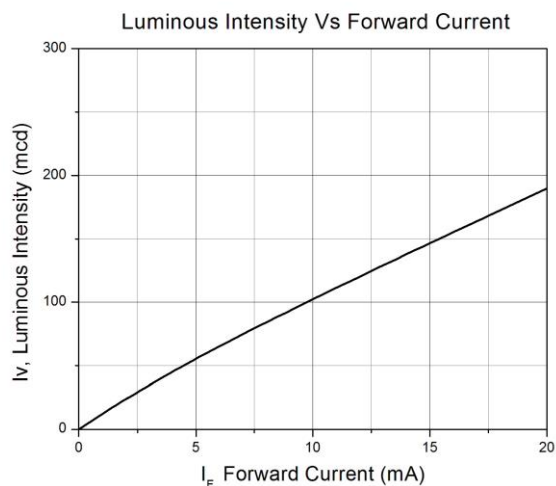


Figure 2

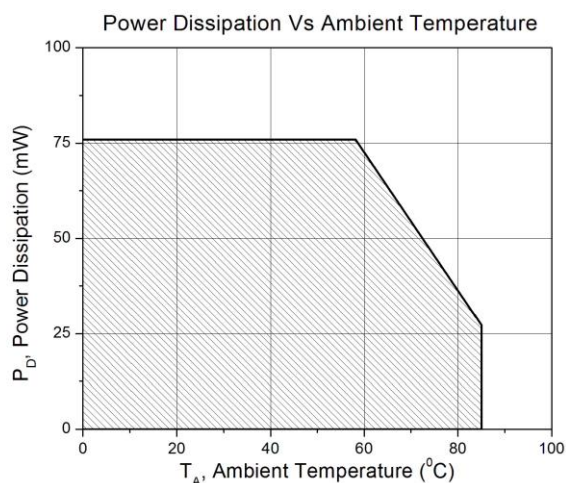


Figure 3

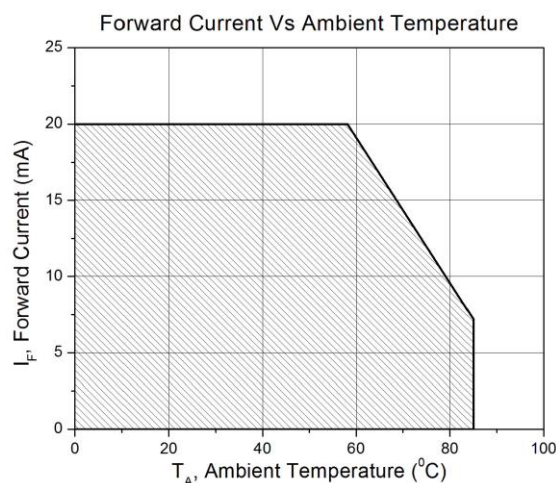
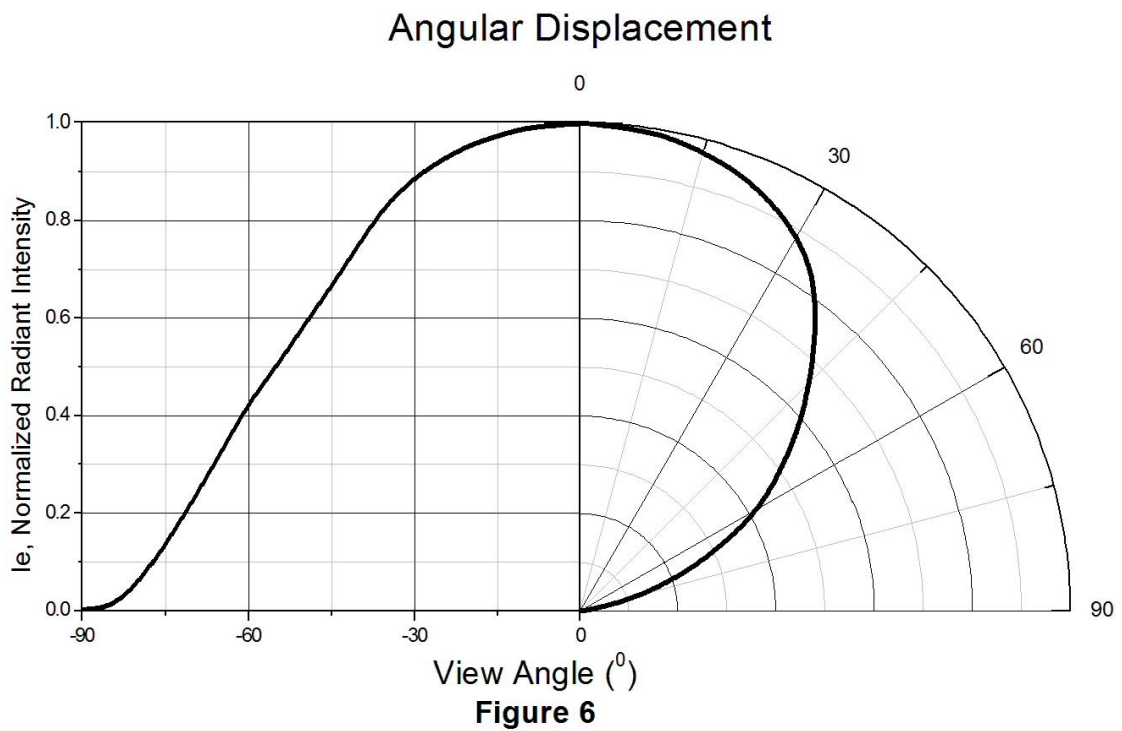
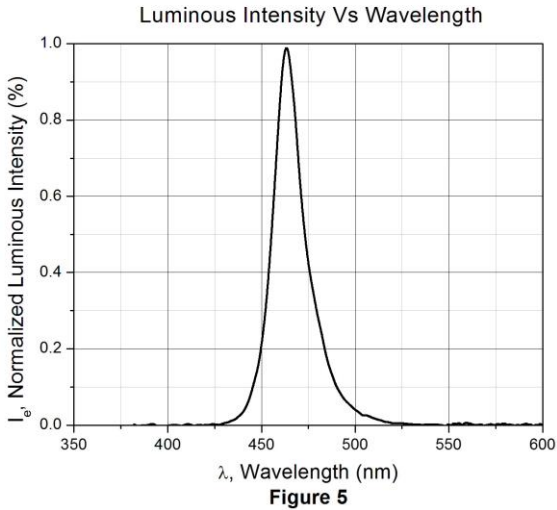


Figure 4



BP3015Q12-B10
SMD Type Blue Emitter

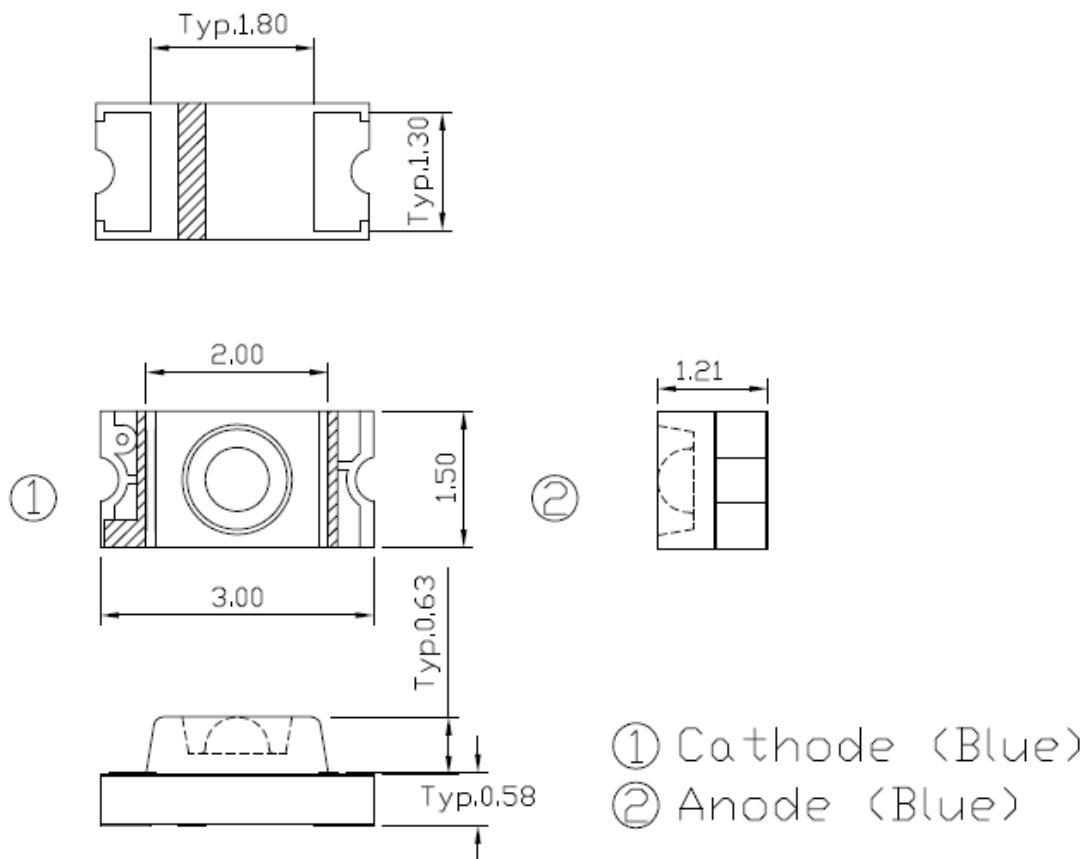




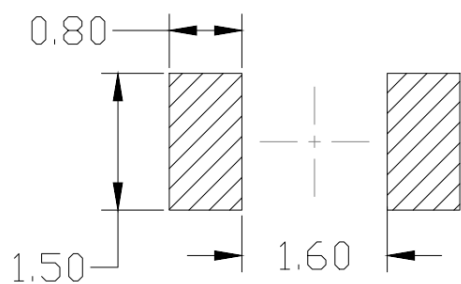
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Package Dimension *All dimensions are in mm, unless otherwise stated*



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



Ordering Information

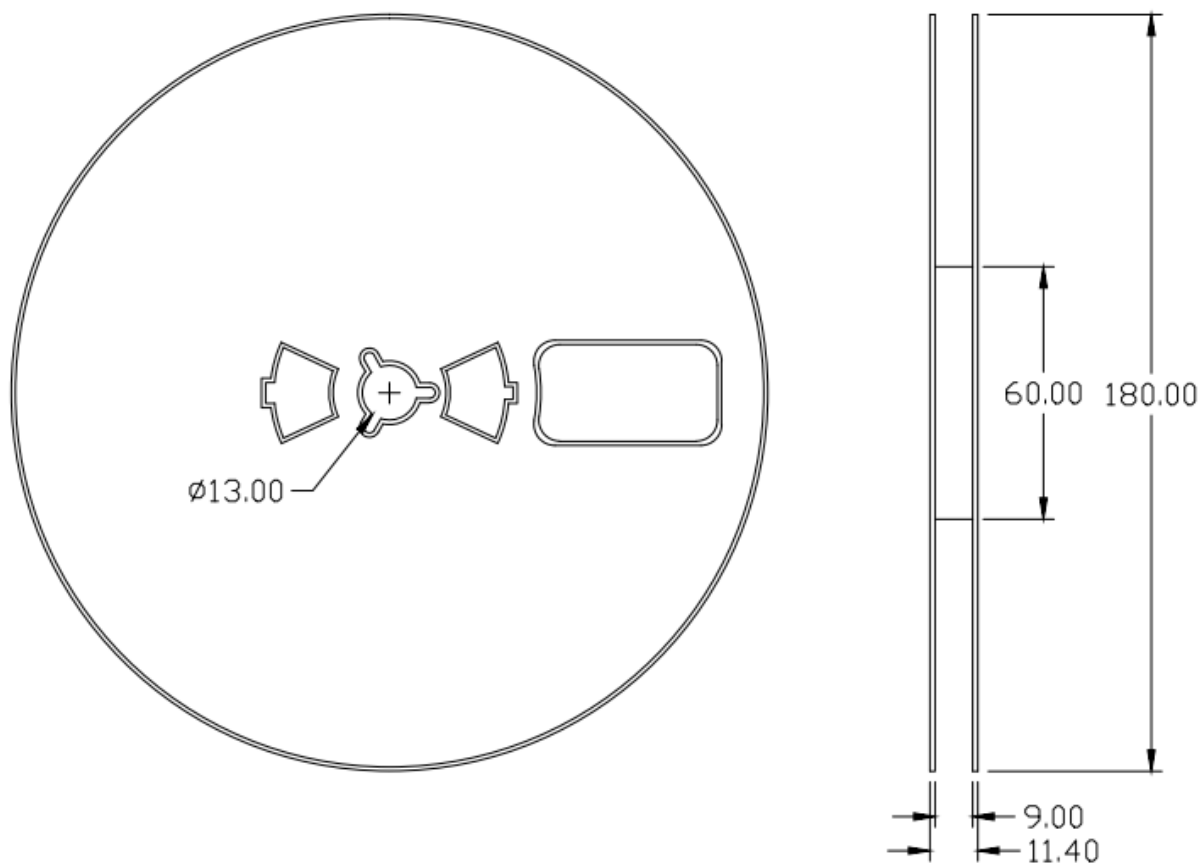
Part Number	Description	Quantity
BP3015Q12-B10	Tape & Reel	3000 pcs



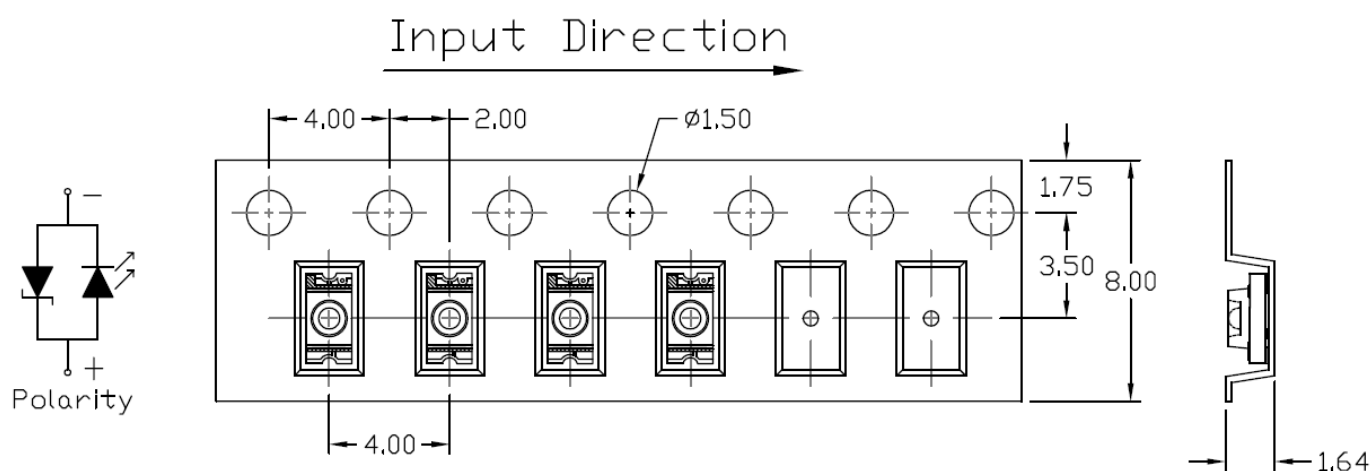
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Reel Dimension *All dimensions are in mm, unless otherwise stated*

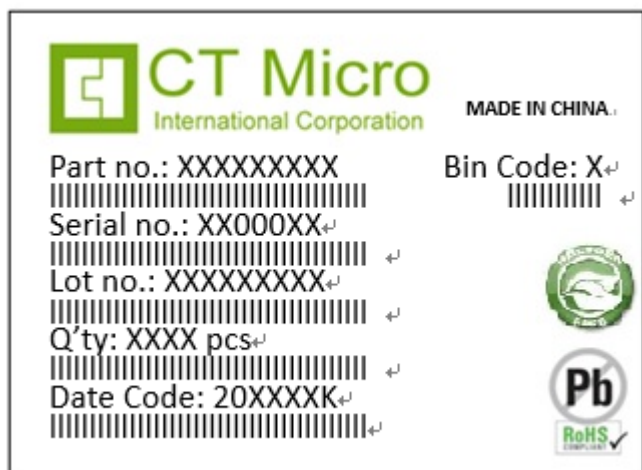


Tape Dimension *All dimensions are in mm, unless otherwise stated*





Label Form Specification



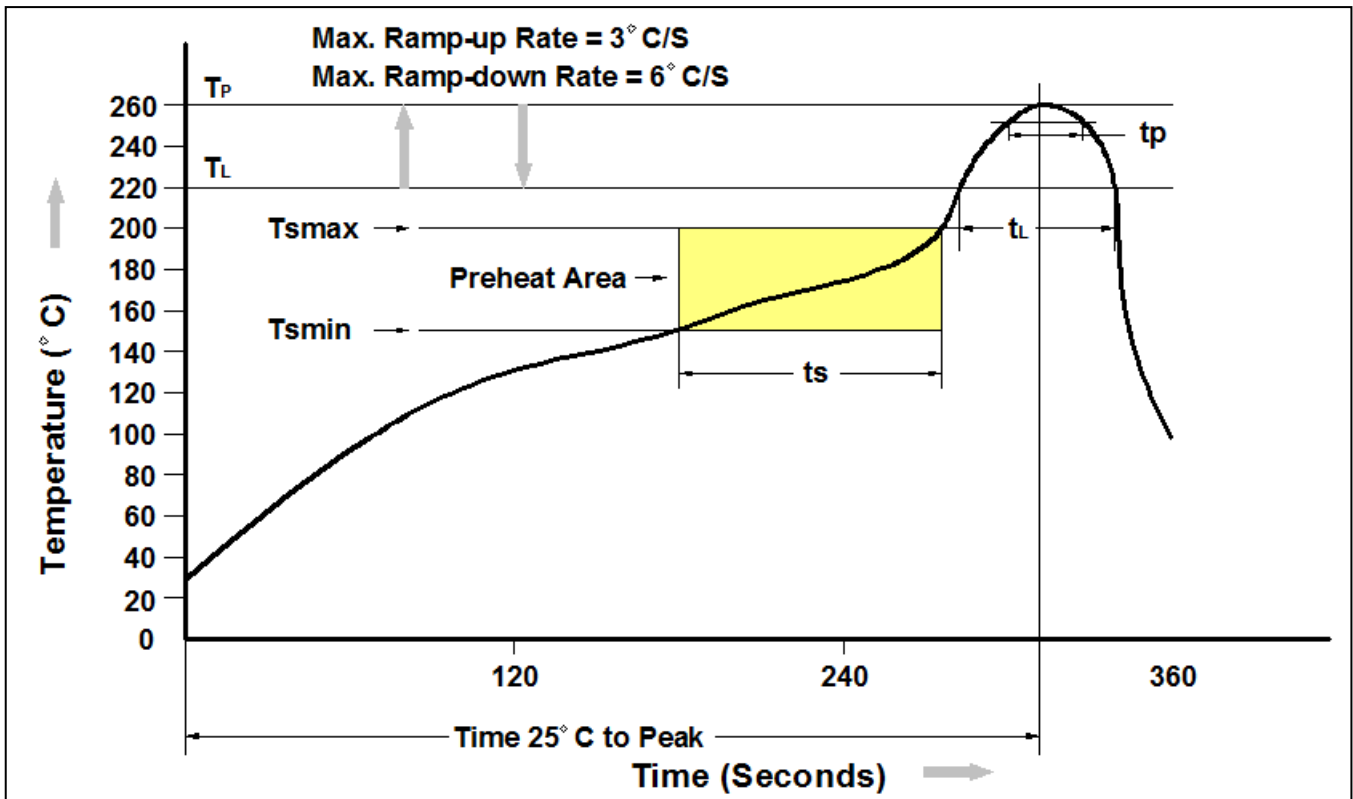
Part no: CTM Production Number
Serial no: Production Number
Lot no: Lot number
Q'ty: Packing Quantity
Date Code: Manufacture Date
Bin Code: Iv Ranks
MADE IN CHINA: Production Place

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 _{sm})	150°C
Temperature Max. (T _{sm})	200°C
Time (t _s) from (T _{sm} to T _{sm})	60-120 seconds
Ramp-up Rate (t _L to t _P)	3°C/second max.
Liquidous Temperature (T _L)	217°C
Time (t _L) Maintained Above (T _L)	60 – 150 seconds
Peak Body Package Temperature	260°C +0°C / -5°C
Time (t _P) within 5°C of 260°C	30 seconds
Ramp-down Rate (T _P to T _L)	6°C/second max
Time 25°C to Peak Temperature	8 minutes max.



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