BRGP201208-CTC3

Multi-Wavelength SMD Type

Features

- Top view 0805 package
- Wide viewing angle
- High reliability
- RoHS compliance

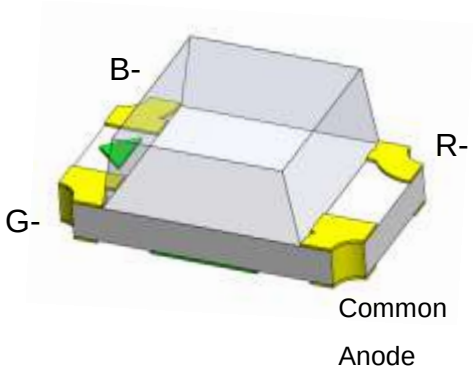
Description

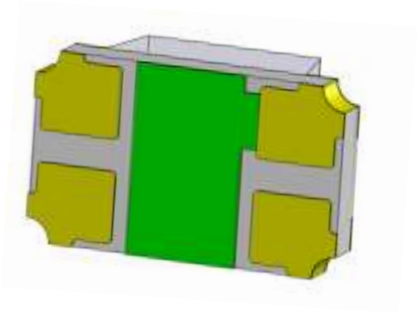
The BRGP201208-CTC3 is a high brightness device designed for demanding applications in efficiency and reduced space. An ideal device in emphasizing visual effects, advertisement, decoration as well as general backlighting needs.

Applications

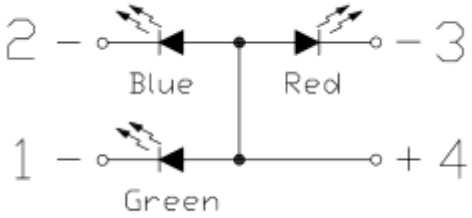
- General lighting
- Indoor signage display applications
- Switch light
- Decorative and Entertainment lighting

Package Outline





Schematic



Absolute Maximum Rating at 25^{0}C

Symbol	Parameters		Ratings	Units	Notes
I_F	Continuous Forward Current	R	25	mA	
		G	25		
		B	25		
I_{FP}	Peak Forward Current	R	60	mA	1
		G	60		
		B	60		
V_R	Reverse Voltage		5	V	
T_{opr}	Operating Temperature		-40 ~ +85	^{0}C	
T_{stg}	Storage Temperature		-40 ~ +100	^{0}C	
T_{sol}	Soldering Temperature		260	^{0}C	2
P_D	Power Dissipation at(or below) 25℃ Free Air Temperature	R	60	mW	
		G	95		
		B	95		

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

Optical Characteristics (Red)

Symbol	Parameters	Test Conditions	Min	Typ	Max	Units	Notes
Iv	Luminous Intensity	I_F=5mA	36	-	90	mcd	3
λp	Peak Wavelength	I_F=5mA	-	632	-	nm	
λd	Dominant Wavelength	I_F=5mA	-	621	-	nm	
θ1/2	Angle of Half Intensity	I_F=5mA	-	±65	-	deg	

Electrical Characteristics (Red)

Symbol	Parameters	Test Conditions	Min	Typ	Max	Units	Notes
V_F	Forward Voltage	I_F=5mA	1.6	-	2.1	V	
I_R	Reverse Current	V_R=5V	-	-	1	μA	

Optical Characteristics (Green)

Symbol	*Parameters*	*Test Conditions*	*Min*	*Typ*	*Max*	*Units*	*Notes*
Iv	Luminous Intensity	I_F=5mA	180	-	450	mcd	3
λp	Peak Wavelength	I_F=5mA	-	516	-	nm	
λd	Dominant Wavelength	I_F=5mA	520	-	535	nm	4
θ1/2	Angle of Half Intensity	I_F=5mA	-	±65	-	deg	

Electrical Characteristics (Green)

Symbol	*Parameters*	*Test Conditions*	*Min*	*Typ*	*Max*	*Units*	*Notes*
V_F	Forward Voltage	I_F=5mA	2.4	-	3.1	V	
I_R	Reverse Current	V_R=5V	-	-	1	μA	

Optical Characteristics (Blue)

Symbol	*Parameters*	*Test Conditions*	*Min*	*Typ*	*Max*	*Units*	*Notes*
Iv	Luminous Intensity	I_F=5mA	45	-	112	mcd	3
λp	Peak Wavelength	I_F=5mA	-	466	-	nm	
λd	Dominant Wavelength	I_F=5mA	465	-	475	nm	4
θ1/2	Angle of Half Intensity	I_F=5mA	-	±65	-	deg	

Electrical Characteristics (Blue)

Symbol	*Parameters*	*Test Conditions*	*Min*	*Typ*	*Max*	*Units*	*Notes*
V_F	Forward Voltage	I_F=5mA	2.4	-	3.1	V	
I_R	Reverse Current	V_R=5V	-	-	1	μA	

Notes:

1. I_{FP} Conditions--Pulse Width≦ 100μs and Duty≦ 10%.
2. Soldering time≦ 10 seconds.

3. Bin Range of Luminous Intensity

Red				
Bin Code	Min	Max	Unit	Condition
NA	36	57	mcd	I_F=5mA
PA	57	90		
Green				
S	180	285	mcd	I_F=5mA
T	285	450		
Blue				
Bin Code	Min	Max	Unit	Condition
P	45	72	mcd	I_F=5mA
Q	72	112		

Tolerance of Luminous Intensity ±10%.

4. Bin Range of Dominant Wavelength

Green				
A5	520	525	nm	I_F=5mA
A6	525	530		
A7	530	535		
Blue				
A6	465	470	nm	I_F=5mA
A7	470	475		

Tolerance of Dominant Wavelength: ±1nm.

Typical Characteristic Curves

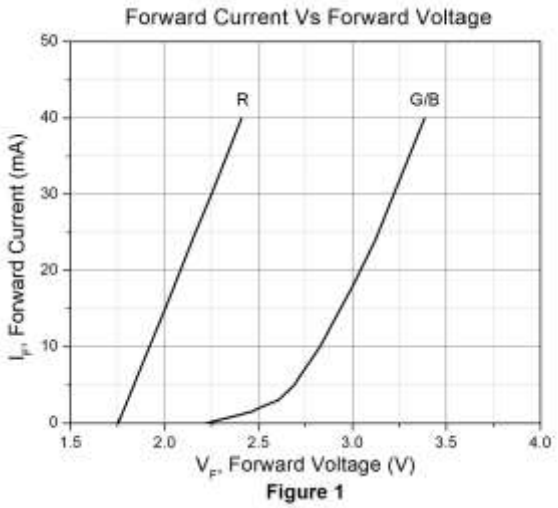


Figure 1

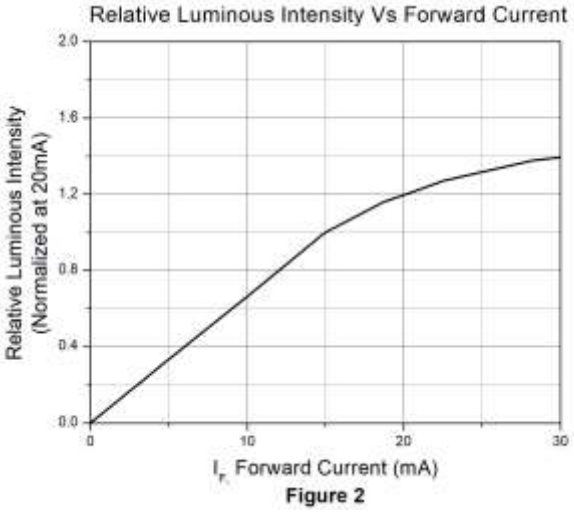


Figure 2

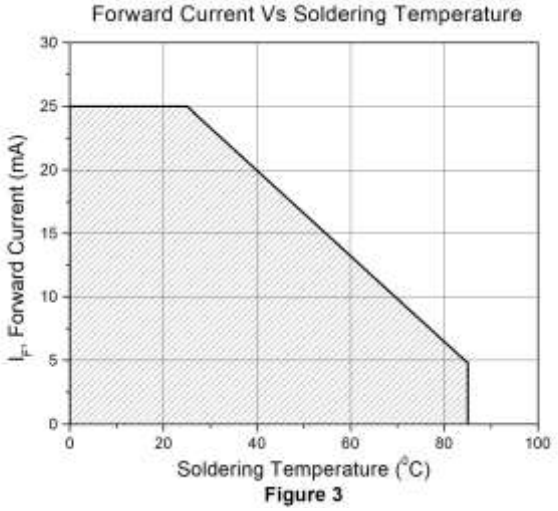


Figure 3

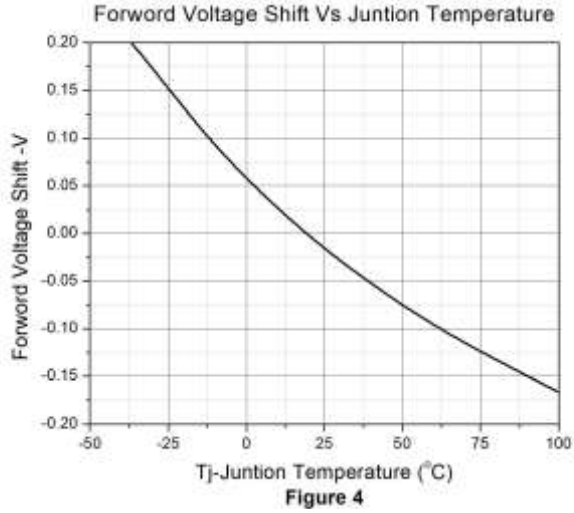


Figure 4

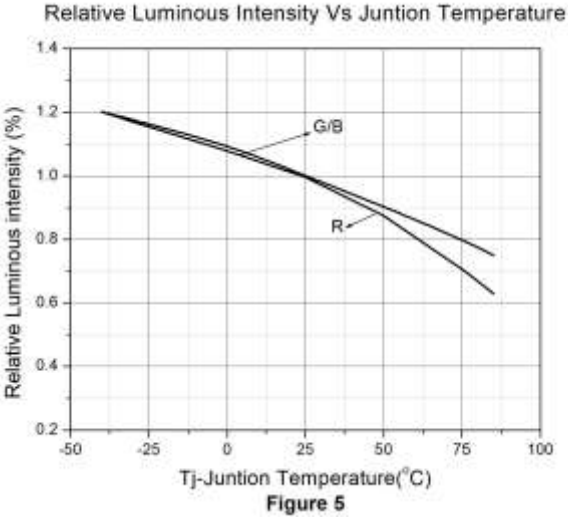


Figure 5

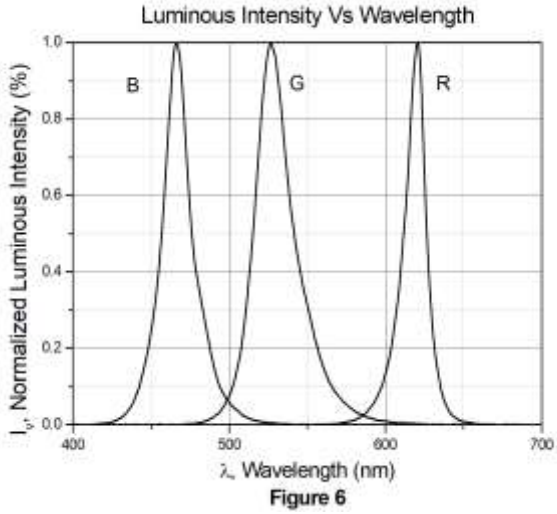


Figure 6

Typical Characteristic Curves

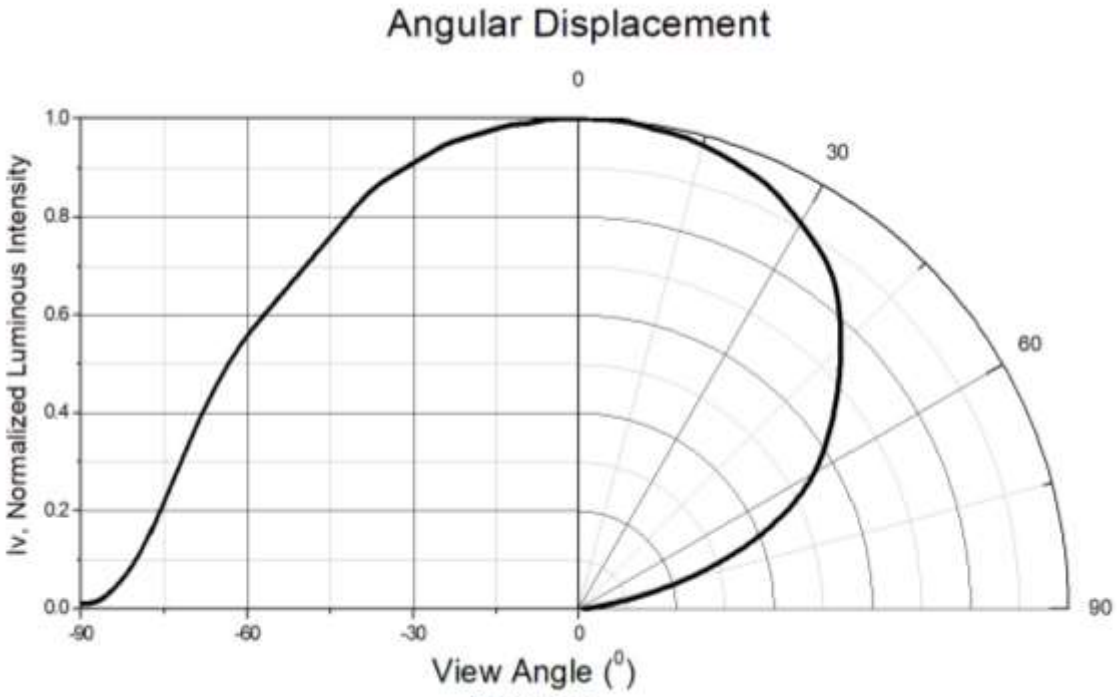
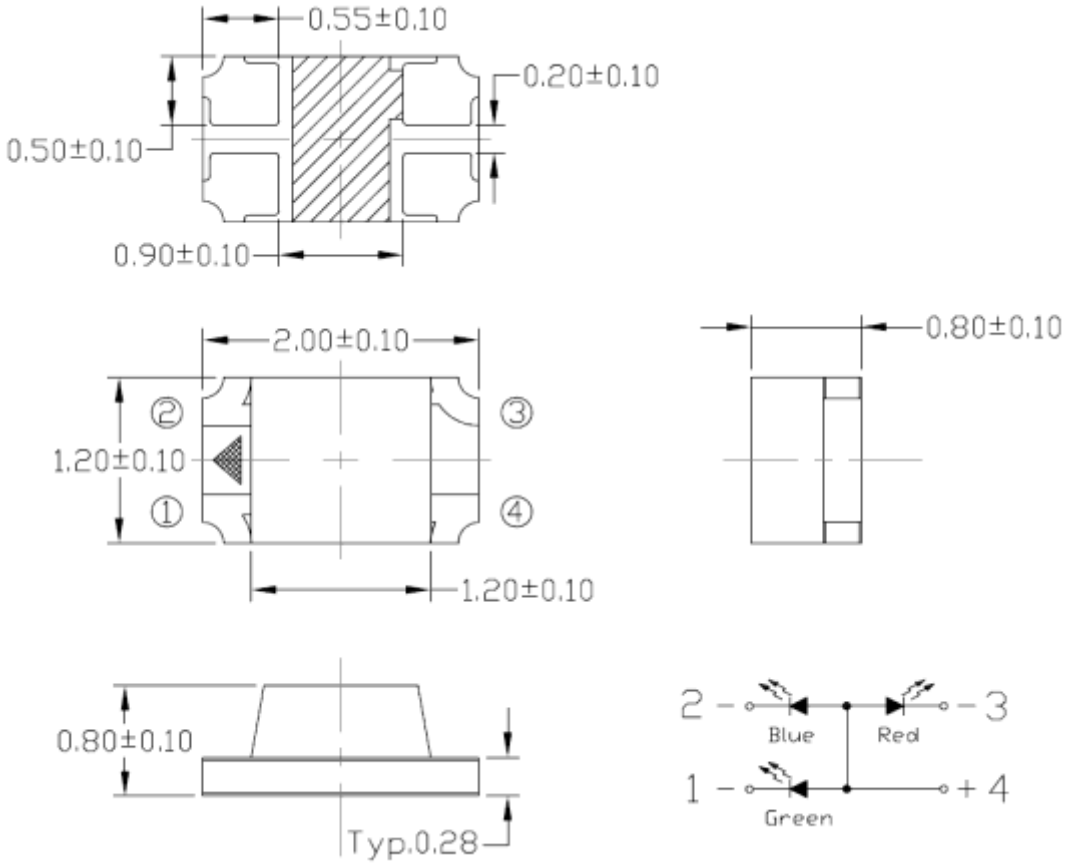
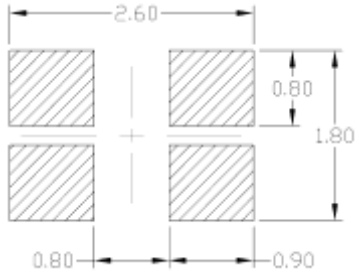


Figure 7

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



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

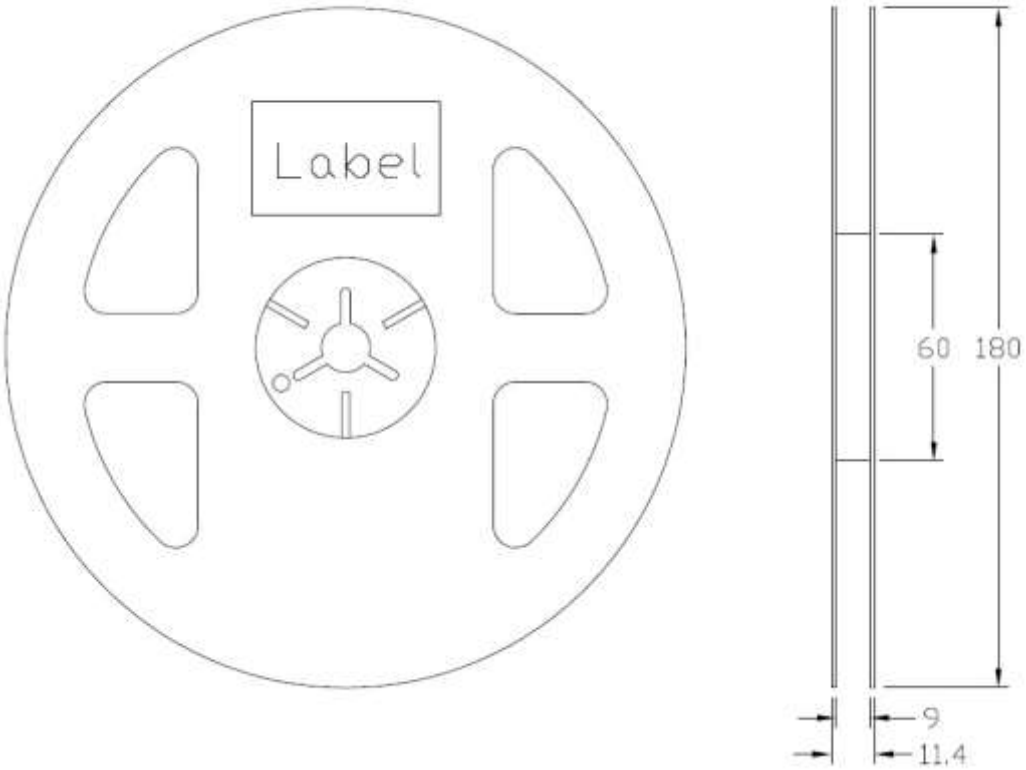


Note: Tolerance unless mentioned is ±0.1mm

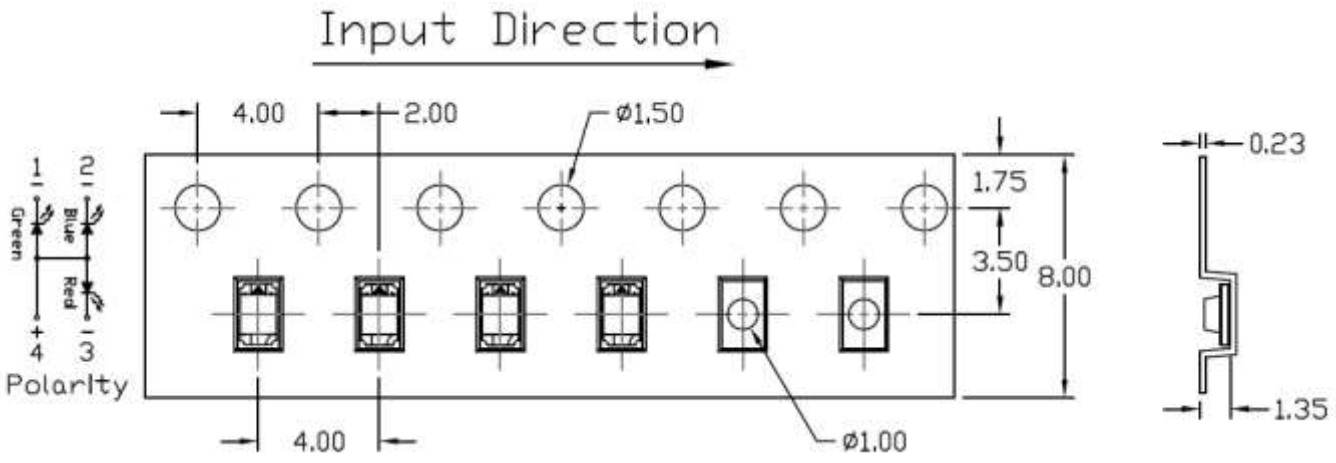
Ordering Information

Part Number	*Description*	*Quantity*
BRGP201208-CTC3	Tape & Reel	3000 pcs

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

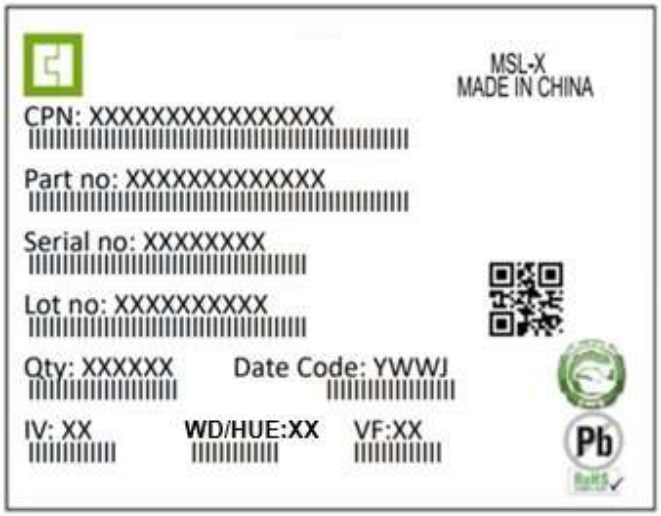


Tape Dimension *All dimensions are in mm, unless otherwise stated*



Note: Tolerance unless mentioned is ±0.1mm

Label Form Specification



CPN : Customer Part Number

Part no: CTM Production Number

Serial no: Production Number

Lot no: Lot number

Qty: Packing Quantity

Date Code: Manufacture Date

IV : Bin Code of Luminous Intensity

WD : Bin Code of Dominant Wavelength

HUE: Bin Code of Chromaticity Coordinates

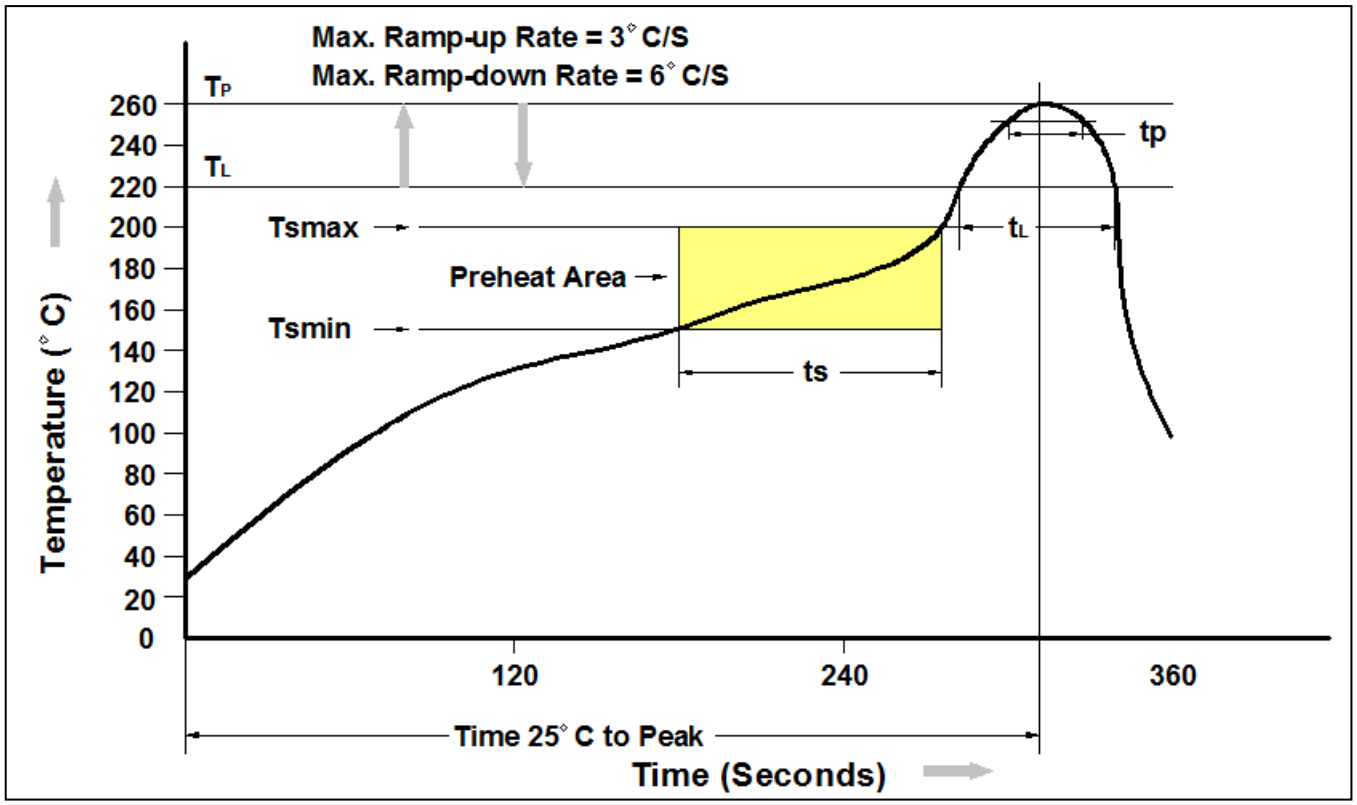
VF : Bin Code of Forward Voltage

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. (Tsmin)	150°C
Temperature Max. (Tsmax)	200°C
Time (ts) from (Tsmin to Tsmax)	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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2. *A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.*