IBC101606-ATC4

SMD Type Ice Blue Emitter

Features

- Top view 1016 package
- Viewing Angle = $\pm 60^0$
- Compatible with infrared and vapor phase reflow solder process
- High reliability
- Ultra Ice Blue
- RoHS compliance

Description

The IBC101606-ATC4 lnGaN Ice Blue LED housed in a miniature SMD package.

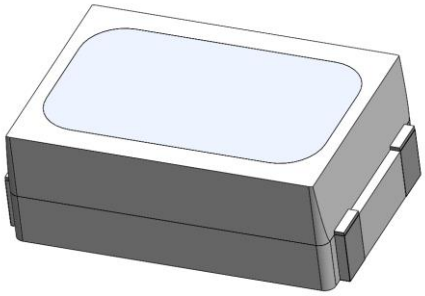
Static electricity and surge damage the LEDs.

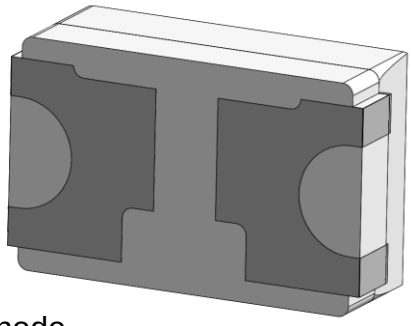
It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

Applications

- Optical indicator.
- Switch and Symbol Display.

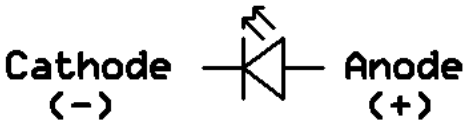
Package Outline





Anode Cathode

Schematic



Absolute Maximum Rating at 25^{0}C

Symbol	*Parameters*	*Ratings*	*Units*	*Notes*
I_F	Continuous Forward Current	30	mA	
I_{FP}	Peak Forward Current	90	mA	1
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	108	mW	

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

Optical Characteristics

Symbol	*Parameters*	*Test Conditions*	*Min*	*Typ*	*Max*	*Units*	*Notes*
Iv	Luminous Intensity	I_F=20mA	1420	-	3600	mcd	3
θ1/2	Angle of Half Intensity	I_F=20mA	-	±60	-	deg	

Electrical Characteristics

Symbol	*Parameters*	*Test Conditions*	*Min*	*Typ*	*Max*	*Units*	*Notes*
V_F	Forward Voltage	I_F=20mA	2.8	-	3.4	V	
I_R	Reverse Current	V_R=5V	-	-	1	μA	

Notes:

1. Tolerance of Luminous Intensity ±10%.
2. Tolerance of Dominant Wavelength: ±1nm.
3. Bin Range of Luminous Intensity

Bin Code	Min	Max	Unit	Condition
V2	900	1120	mcd	I_F=20mA
W1	1120	1420		
W2	1420	1800		
X1	1800	2250		

4. Bin Range of Forward Voltage

Bin Code	Min	Max	Unit	Condition
35	2.8	2.9	V	I_F=20mA
36	2.9	3.0		
37	3.0	3.1		
38	3.1	3.2		
39	3.2	3.3		
40	3.3	3.4		

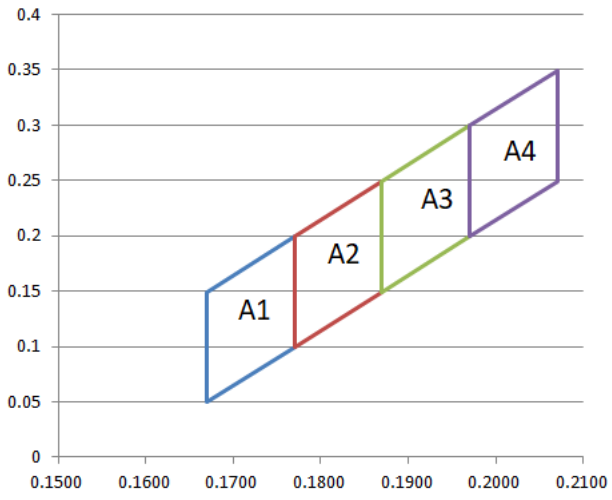
Tolerance of Forward Voltage: ±0.1V.

5. Bin Range of Chromaticity Coordinates

Bin Code	CIE_x	CIE_y	Bin Code	CIE_x	CIE_y
A1	0.1670	0.0495	A2	0.1770	0.0995
	0.1670	0.1495		0.1770	0.1995
	0.1770	0.1995		0.1870	0.2495
	0.1770	0.0995		0.1870	0.1495
A3	0.1870	0.1495	A4	0.1970	0.1995
	0.1870	0.2495		0.1970	0.2995
	0.1970	0.2995		0.2070	0.3495
	0.1970	0.1995		0.2070	0.2495

Tolerance of Chromaticity Coordinates: ±0.01

The C.I.E. 1931 Chromaticity Diagram



Typical Characteristic Curves

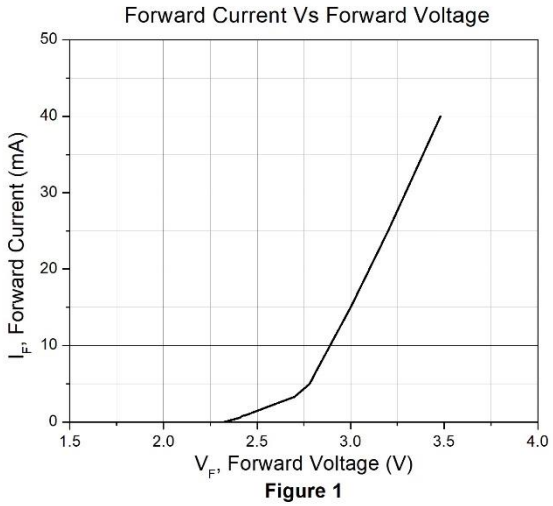


Figure 1

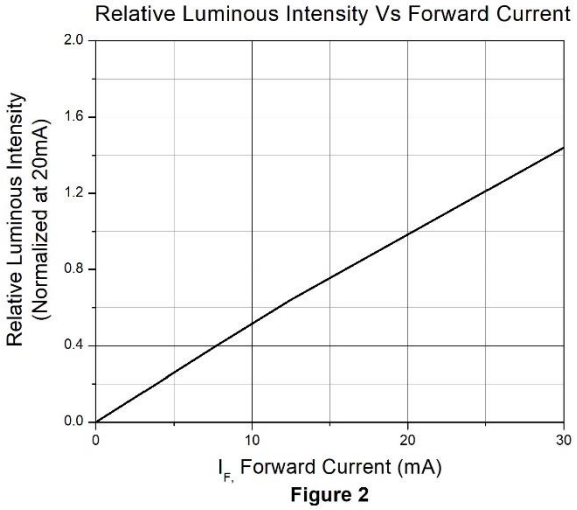


Figure 2

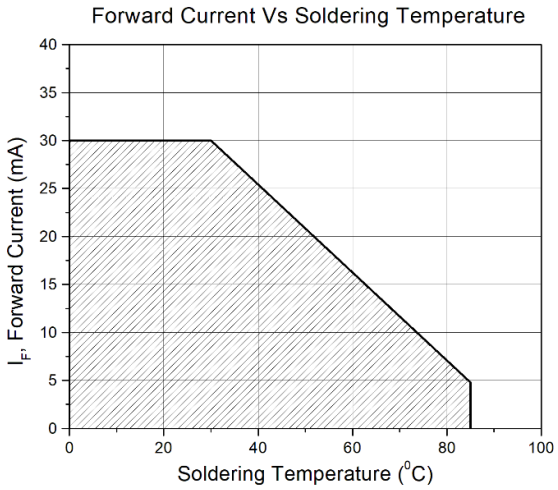


Figure 3

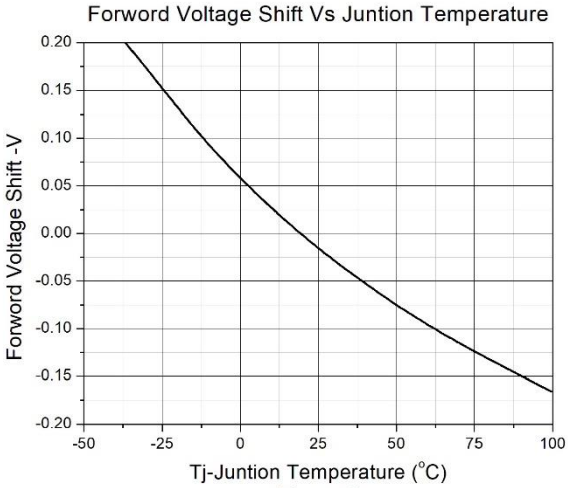


Figure 4

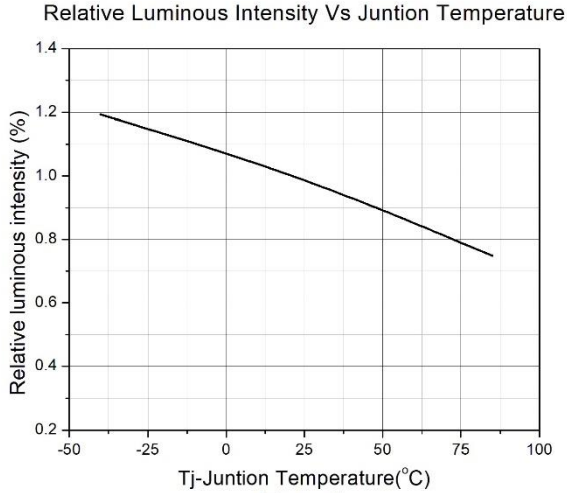


Figure 5

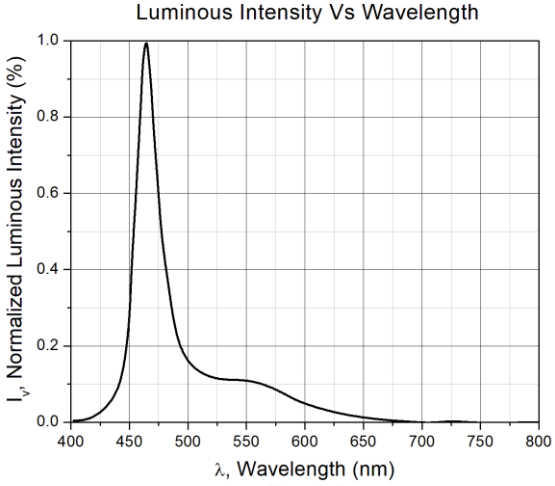


Figure 6

Typical Characteristic Curves

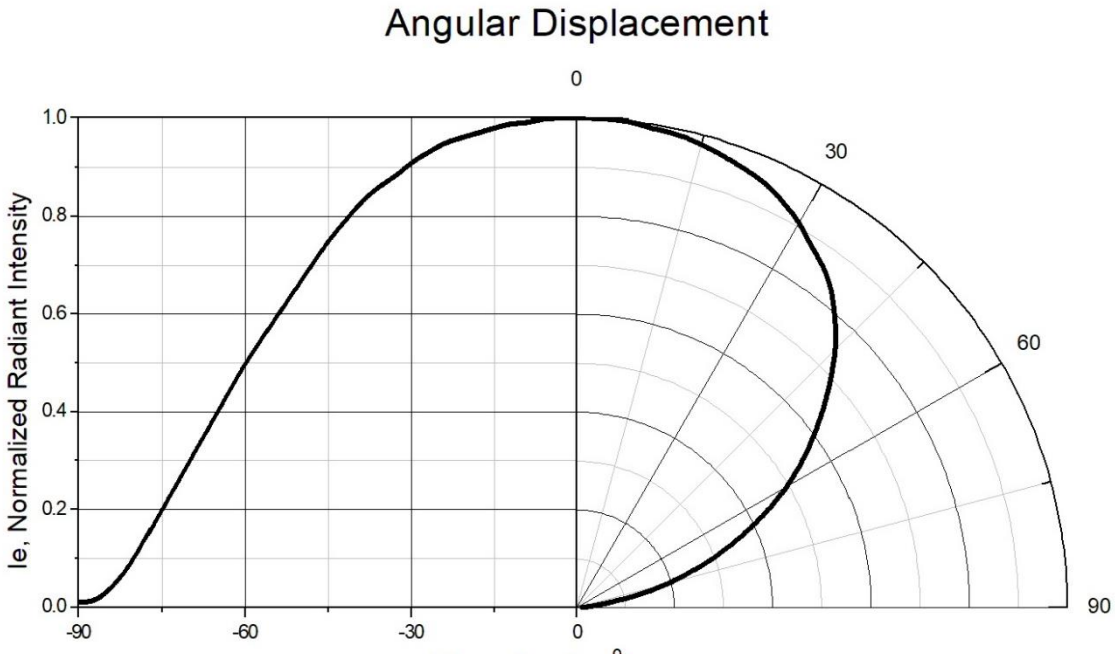
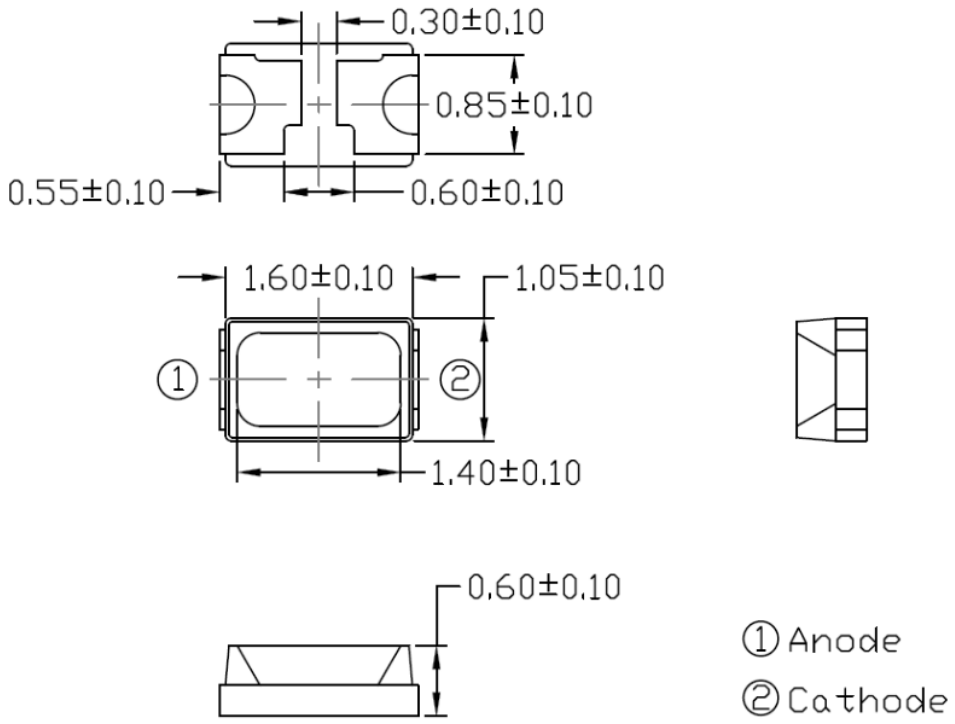


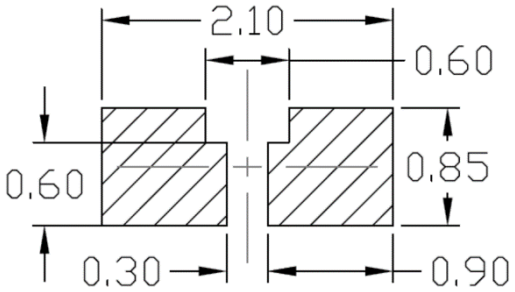
Figure 7

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



Note: Tolerance unless mentioned is ±0.1mm

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

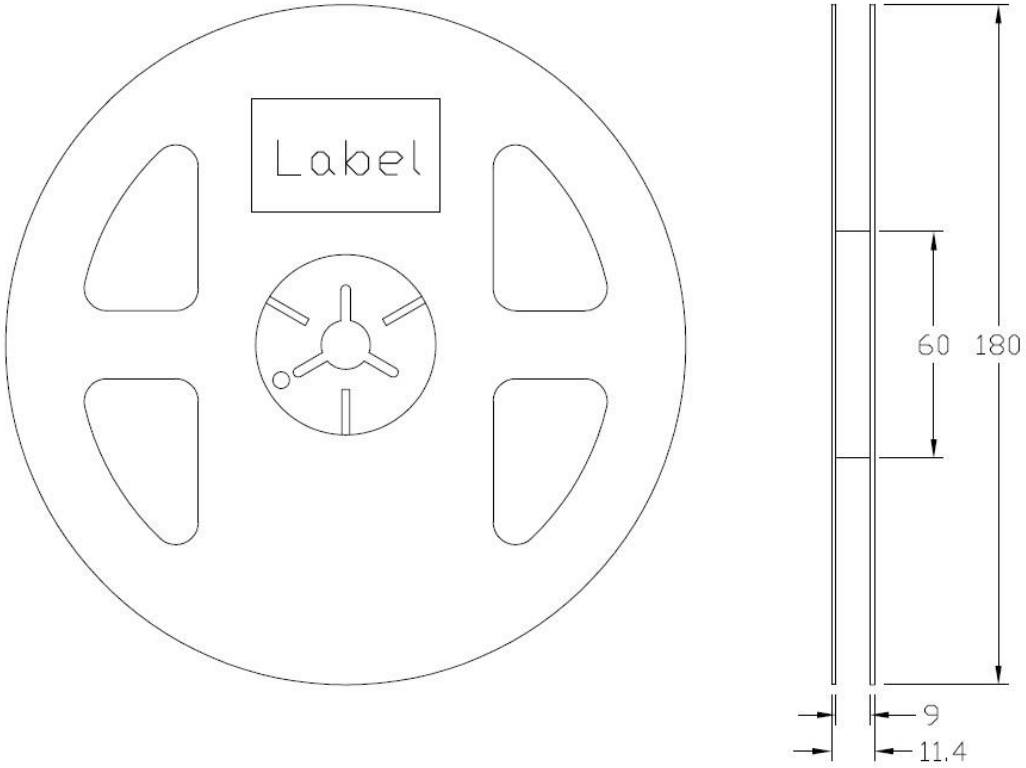


Note: Tolerance unless mentioned is ±0.1mm

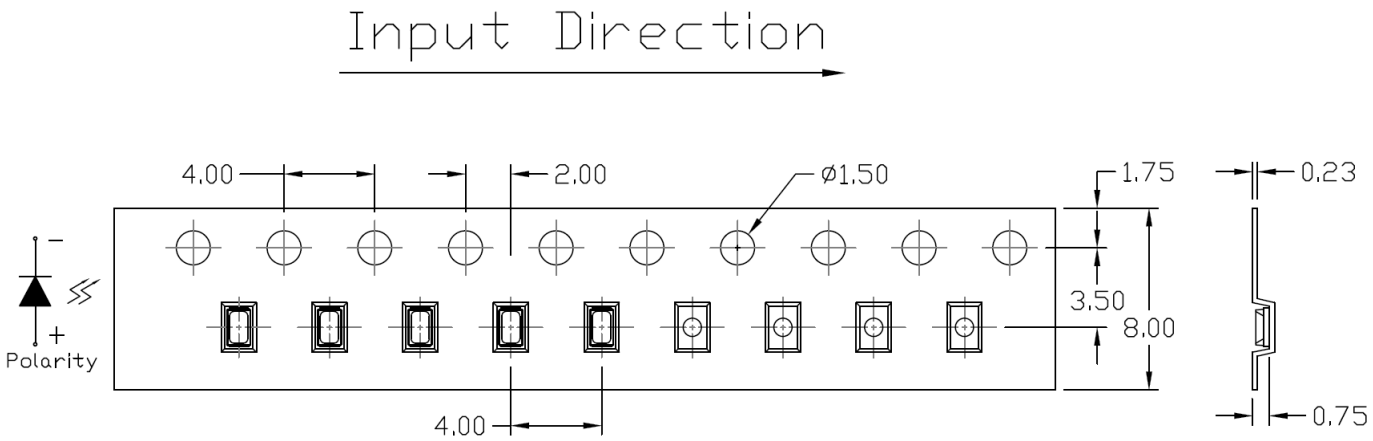
Ordering Information

Part Number	*Description*	*Quantity*
IBC101606-ATC4	Tape & Reel	4000 pcs

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

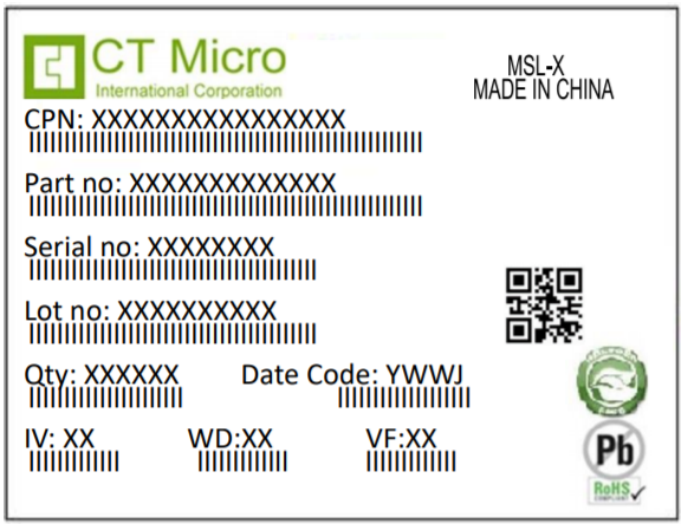


Tape Dimension *All dimensions are in mm, unless otherwise stated*



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

Q'ty: Packing Quantity

Date Code: Manufacture Date

IV : Bin Code of Luminous Intensity

WD : Bin Code of Dominant Wavelength

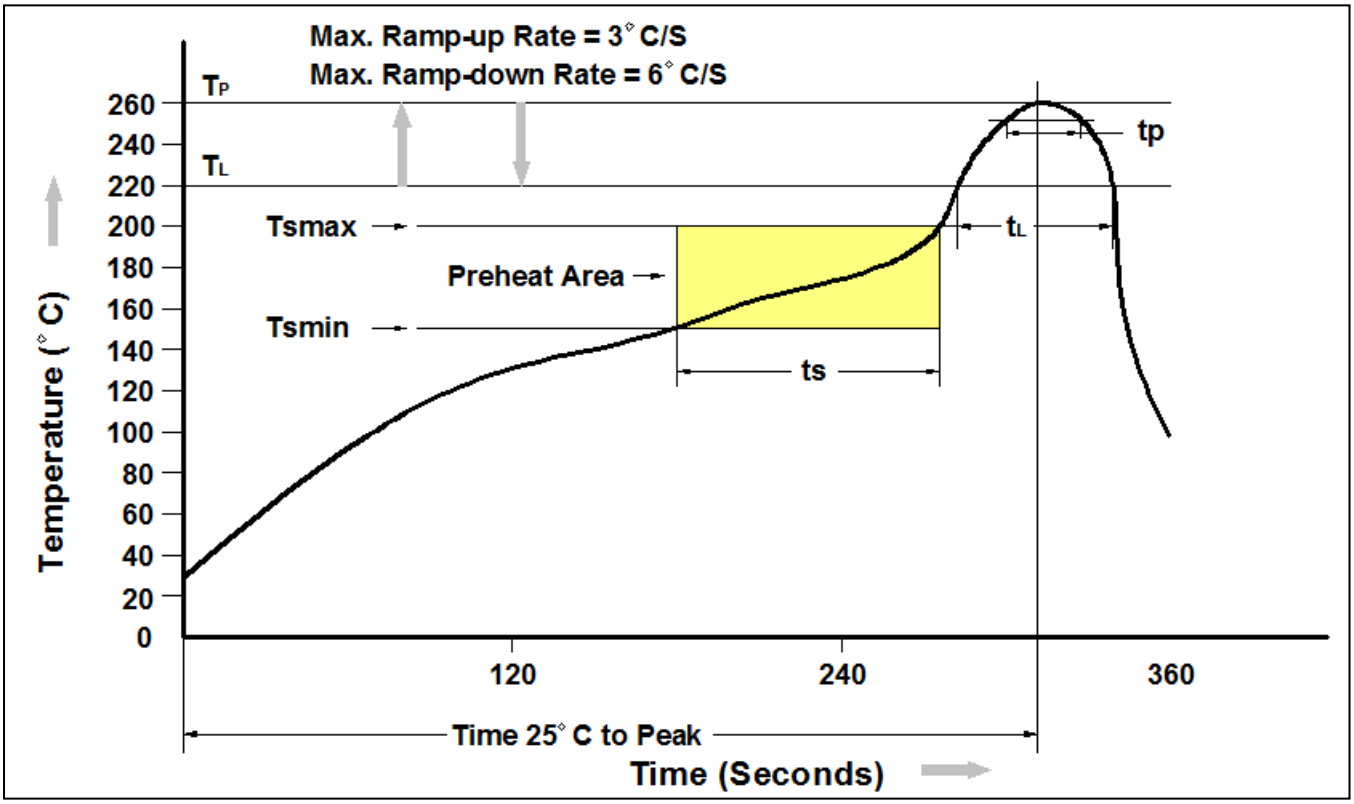
VF : Bin Code of Forward Voltage

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 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. (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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