



BC101606-ATC4

SMD Type Blue Emitter

Features

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

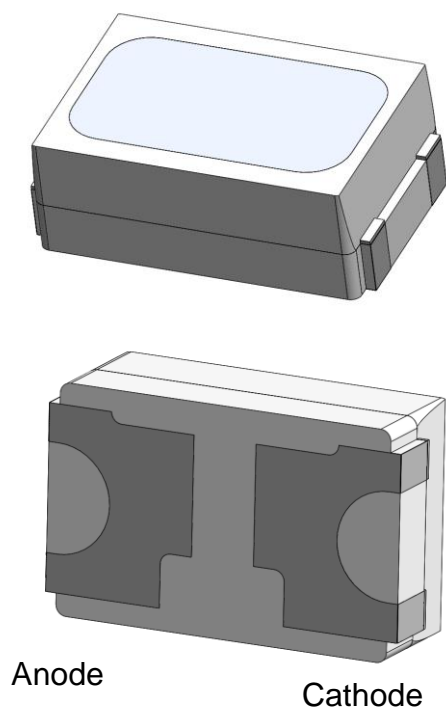
Applications

- Optical indicator.
- Switch and Symbol Display.

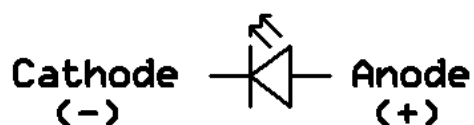
Description

The BC101606-ATC4 InGaN Blue LED housed in a miniature SMD package. The device has a dominant wavelength of 470 nm LED.

Package Outline



Schematic





BC101606-ATC4

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Absolute Maximum Rating at 25°C

Symbol	Parameters	Ratings	Units	Notes
I _F	Continuous Forward Current	30	mA	
I _{FP}	Peak Forward Current	120	mA	1
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	2
P _D	Power Dissipation at(or below) 25°C Free Air Temperature	120	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 =20mA	225	-	565	mcd	3
λ _d	Dominant Wavelength	I _F =20mA	460	-	475	nm	4
θ _{1/2}	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	2.75	-	3.65	V	5
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
S2	225	285	mcd	I _F =20mA
T1	285	360		
T2	360	450		
U1	450	565		



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4. Bin Range of Dominant Wavelength

Bin Code	Min	Max	Unit	Condition
A5	460	465	nm	$I_F=20\text{mA}$
A6	465	470		
A7	470	475		

5. Bin Range of Forward Voltage

Bin Code	Min	Max	Unit	Condition
5	2.75	3.05	V	$I_F=20\text{mA}$
6	3.05	3.35		
7	3.35	3.65		

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



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Typical Characteristic Curves

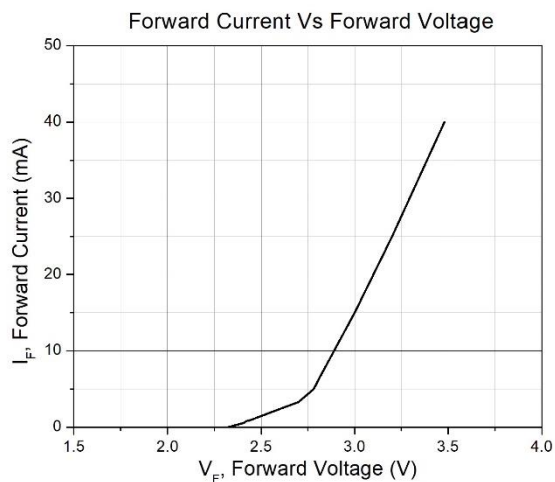


Figure 1

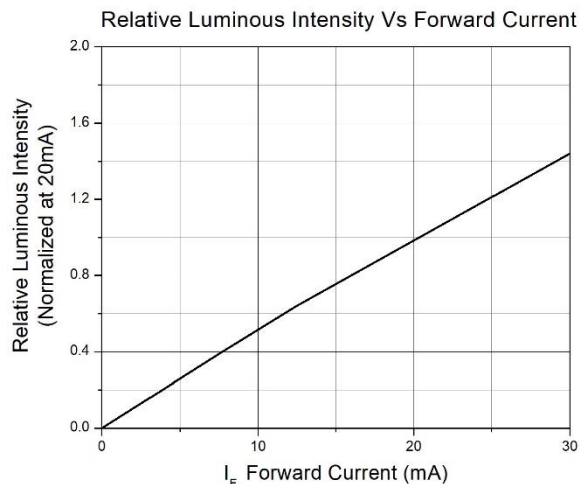


Figure 2

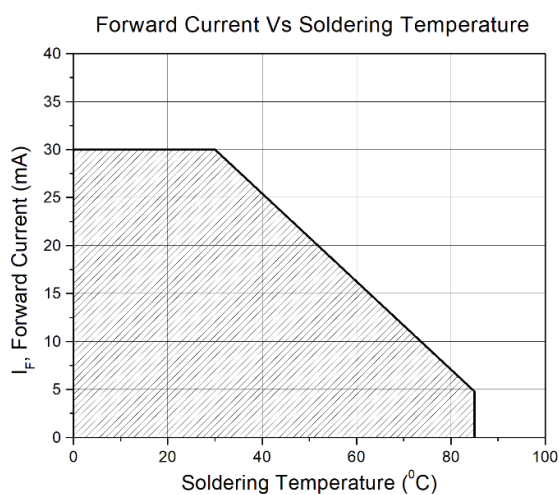


Figure 3

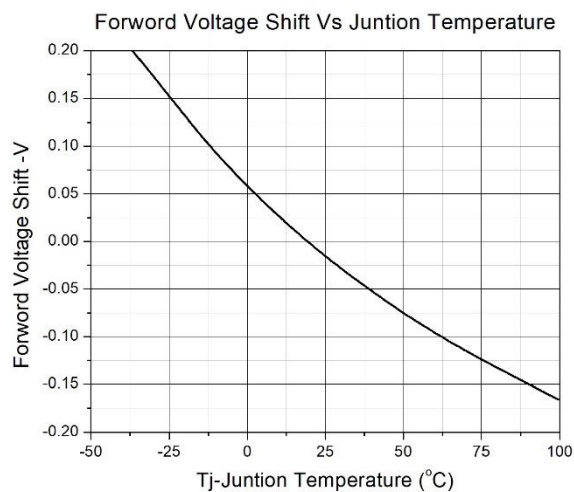


Figure 4

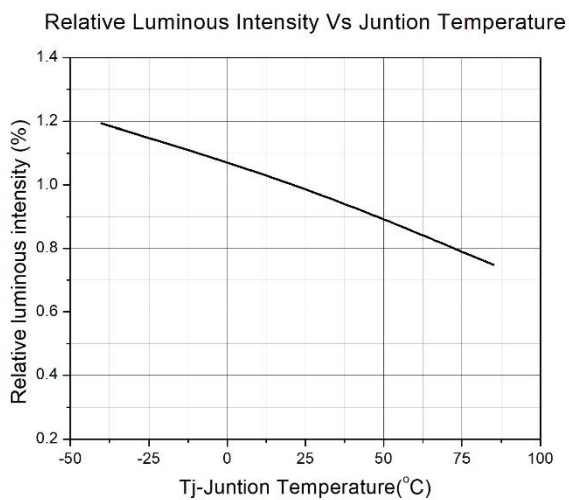


Figure 5

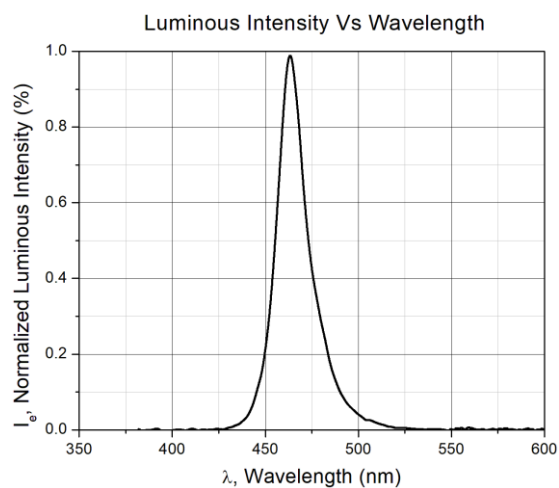


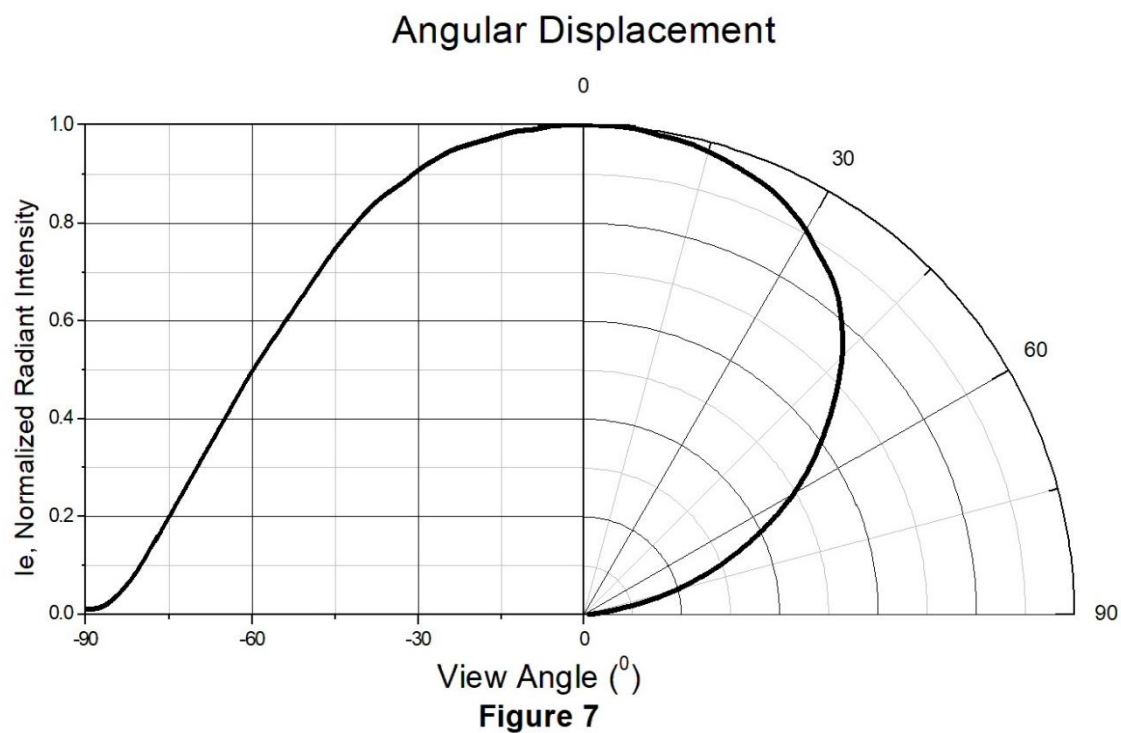
Figure 6



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SMD Type Blue Emitter

Typical Characteristic Curves

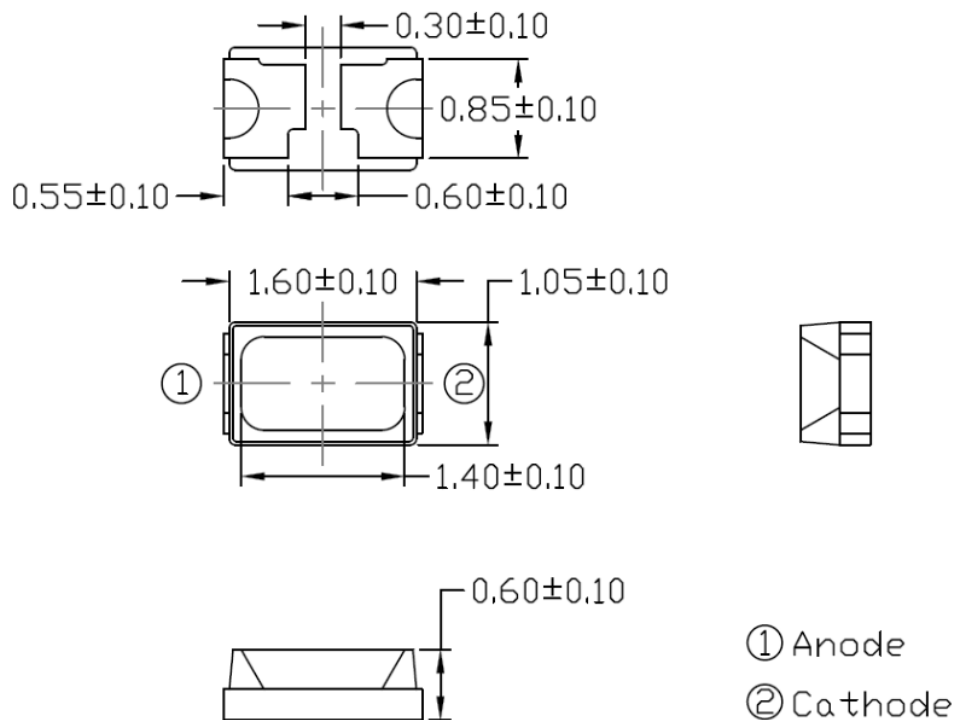




BC101606-ATC4

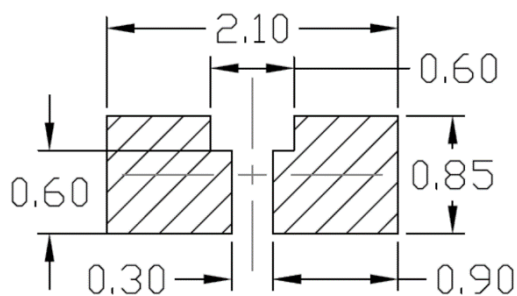
SMD Type Blue Emitter

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



Note: Tolerance unless mentioned is ± 0.1 mm

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



Note: Tolerance unless mentioned is ± 0.1 mm

Ordering Information

Part Number	Description	Quantity
BC101606-ATC4	Tape & Reel	4000 pcs

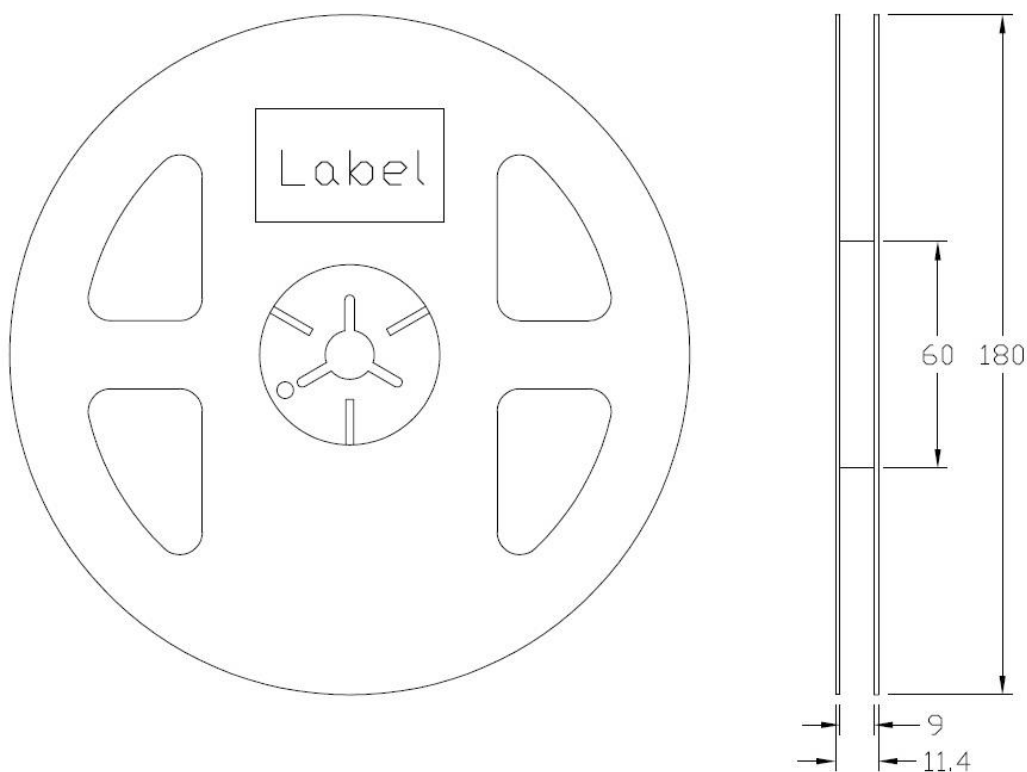


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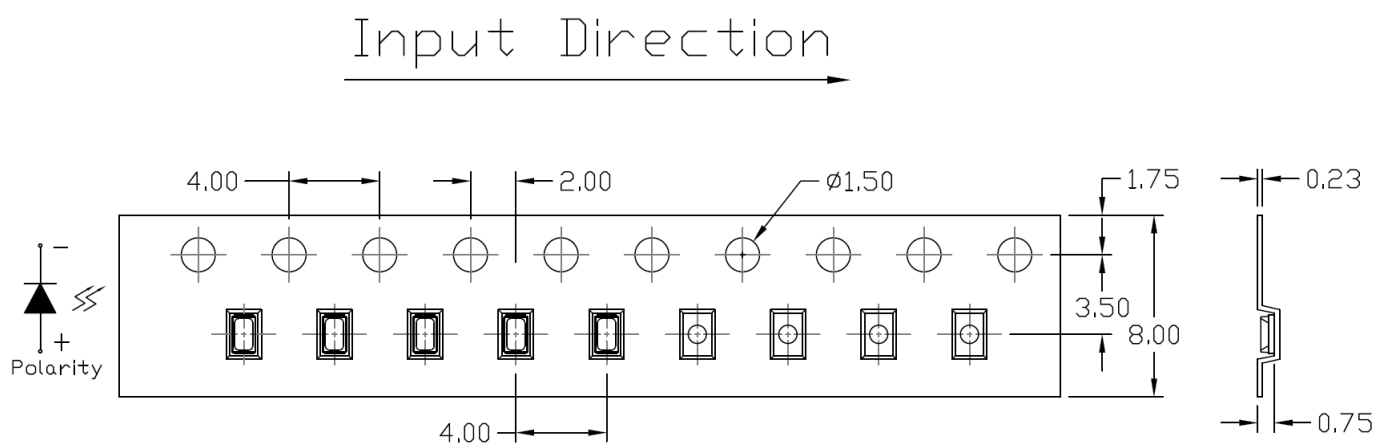
Reel Dimension

All dimensions are in mm, unless otherwise stated



Tape Dimension

All dimensions are in mm, unless otherwise stated



Note: Tolerance unless mentioned is $\pm 0.1\text{mm}$



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Label Form Specification

CT Micro
International Corporation

MSL-X
MADE IN CHINA

CPN: XXXXXXXXXXXXXXXXXX
|||||

Part no: XXXXXXXXXXXXXXXX
|||||

Serial no: XXXXXXXX
|||||

Lot no: XXXXXXXX
|||||

Qty: XXXXXX Date Code: YWWJ
||||| |||||

IV: XX WD:XX VF:XX
||||| ||||| |||||

QR Code

Pb
RoHS

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

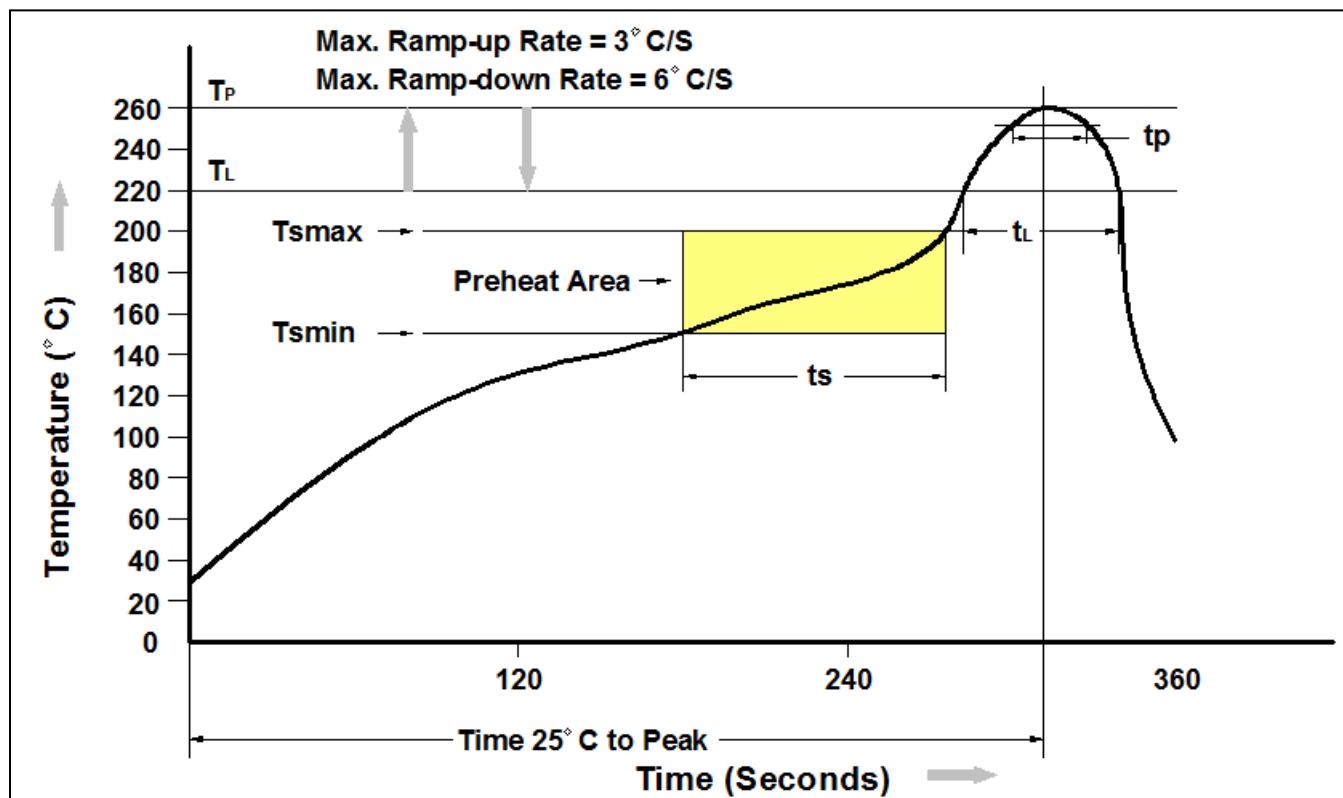
Storage Condition

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.



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Reflow Profile



Profile Feature	Pb-Free Assembly Profile
Temperature Min. (T _{smin})	150°C
Temperature Max. (T _{smax})	200°C
Time (t _s) from (T _{smin} to T _{smax})	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.

DISCLAIMER



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