ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

1608H184W **WHITE**

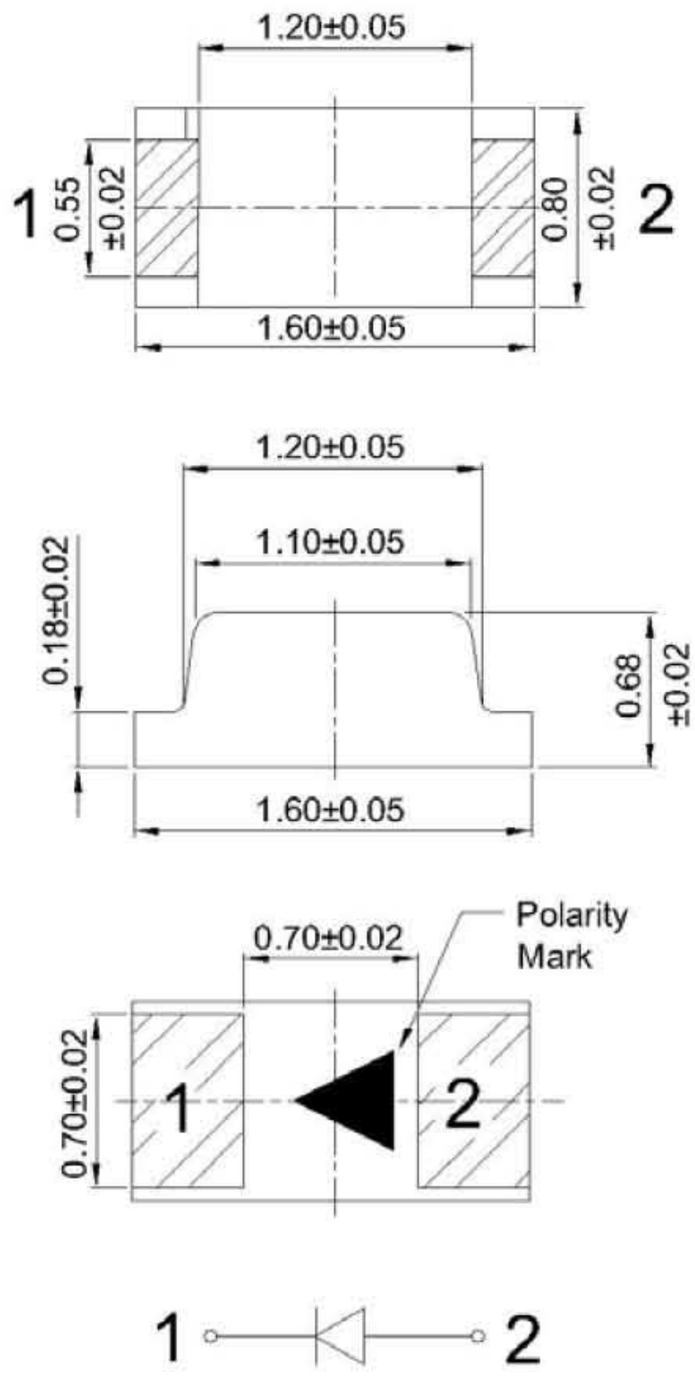
Features

- 1.6mmX0.8mm SMT LED, 0.68mm THICKNESS.
- LOW POWER CONSUMPTION.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- PACKAGE: 4000PCS / REEL .

Description

The White source color devices are made with DH InGaN on GaAs substrate Light Emitting Diode.

Package Dimensions



Notes:

1. All dimension units are millimeters.
2. All dimension tolerance is ±0.2mm unless otherwise noted.
3. An epoxy meniscus may extend about 1.5mm down the leads.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 20mA		Viewing Angle
			Min.	Typ.	2θ1/2
1608H184W	WHITE (InGaN)	Yellow Diffused	320	460	120°

Note:
1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

Electrical / Optical Characteristics at T_A=25°C

Symbol	Parameter	Device	Min.	Typ.	Units	Test Conditions
V_F	Forward Voltage	White	3.0	3.2	V	I_F=20mA
I_R	Reverse Current	White		5	uA	V_R = 5V
X	Chromaticity Coordinates	White		0.29		
Y				0.30		
C	Capacitance	White		100	pF	V_F=0V;f=1MHz

Absolute Maximum Ratings at T_A=25°C

Parameter	White	Units
Power dissipation	114	mW
DC Forward Current	30	mA
Peak Forward Current [1]	150	mA
Reverse Voltage	5	V
Operating/Storage Temperature	-40°C To +85°C	

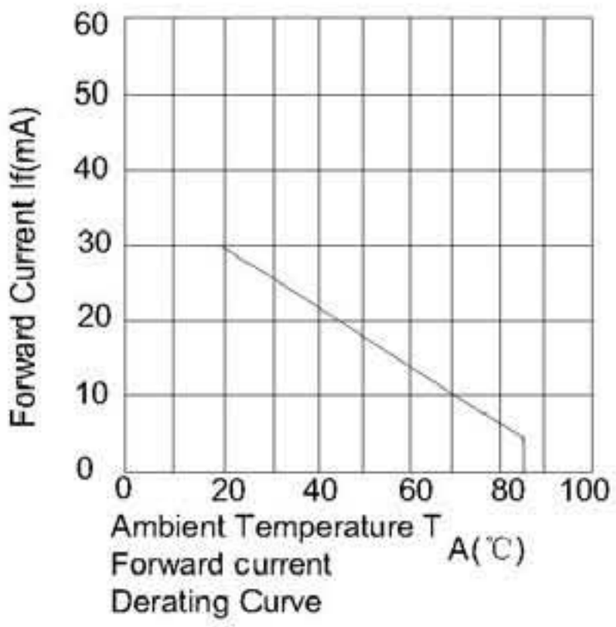
Note:
1. 1/10 Duty Cycle, 0.1ms Pulse Width.

WHITE

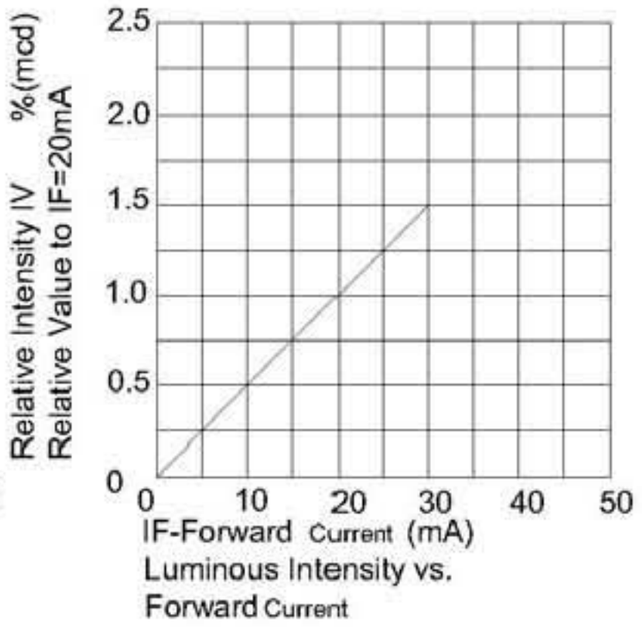
Reliability Test Items And Conditions

The reliability of products shall be satisfied with items listed below.
Confidence level :90% LTPD :10%

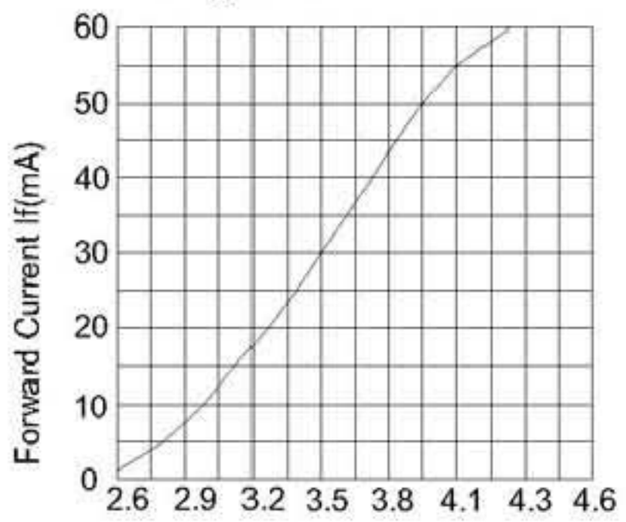
No.	Items	Test Condition	Test Hours/Cycles	Sample Size	Ac/Rc
1	Reflow	Temp:240℃±5℃ Min.5 sec.	6 Min.	22Pcs.	0/1
2	Temperature Cycle	H:+100℃ 15 min. ∽ 5 min L:-40℃ 15 min.	300 Cycles	22Pcs.	0/1
3	Thermal Shock	H:+100℃ 5 min. ∽ 10 sec. L:-10℃ 5 min.	300 Cycles	22Pcs.	0/1
4	High Temperature Storage	Temp.:100℃	1000Hrs.	22Pcs.	0/1
5	Low Temperature Storage	Temp.:-55℃	1000Hrs.	22Pcs.	0/1
6	DC Operating Life	I_F=20mA	1000Hrs.	22Pcs.	0/1
7	High Temperature/High Humidity	85℃/R.H85%	1000Hrs.	22Pcs.	0/1



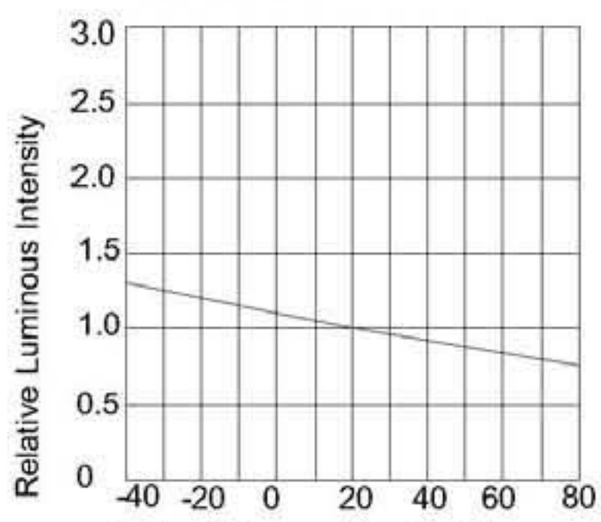
Forward current
Derating Curve



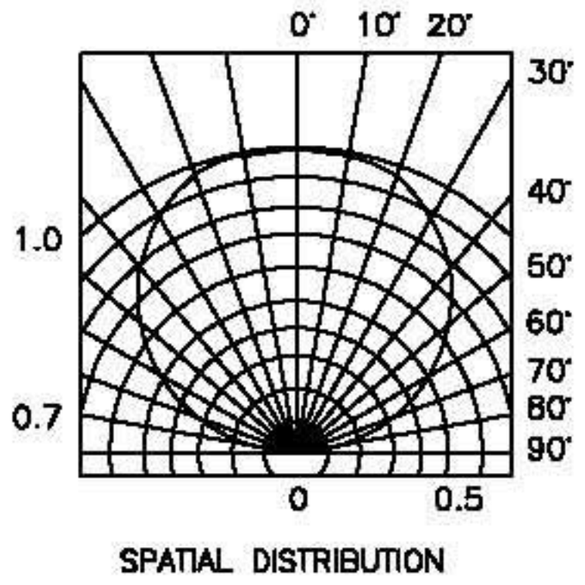
Luminous Intensity vs.
Forward Current



Forward Current VS.
Forward Voltage

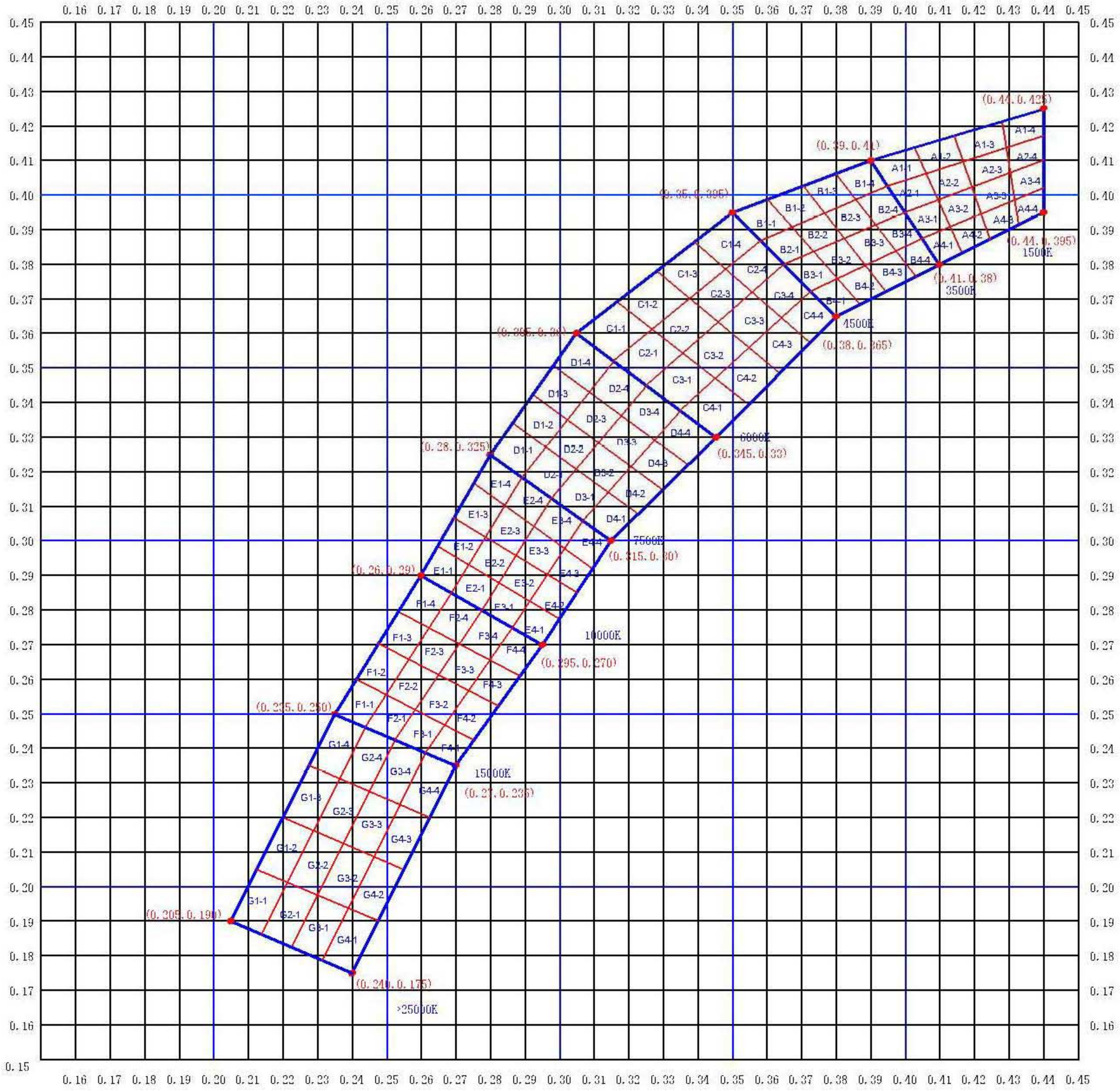


Luminous Intensity
Ambient Temperature



SPATIAL DISTRIBUTION

CIE CHROMATICITY DIAGRAM

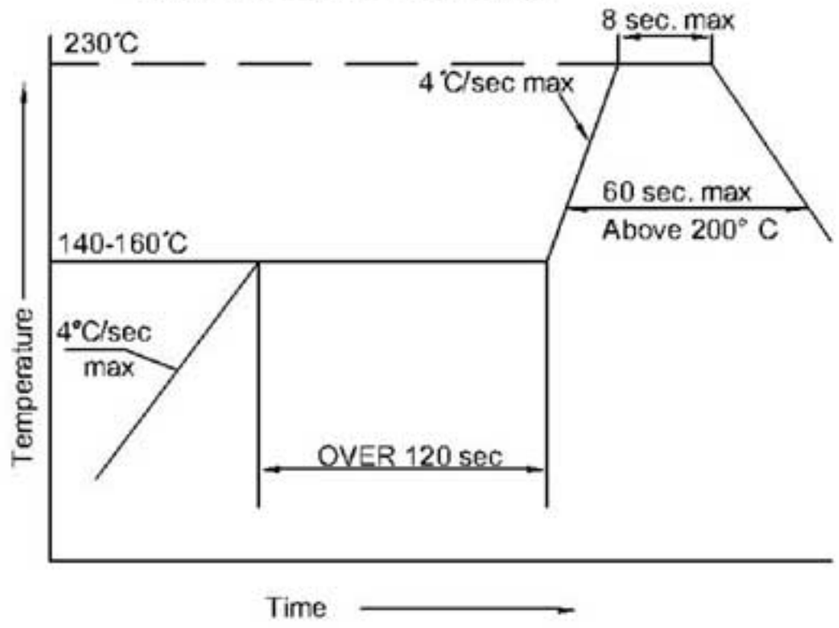


G区 X:0.24 Y:0.22	X	0.205	0.235	0.270	0.240	C区 X:0.35 Y:0.36	X	0.305	0.350	0.380	0.345
	Y	0.190	0.250	0.235	0.175		Y	0.360	0.395	0.365	0.330
F区 X:0.265 Y:0.26	X	0.235	0.260	0.295	0.270	B区 X:0.38 Y:0.38	X	0.350	0.390	0.410	0.380
	Y	0.250	0.290	0.270	0.235		Y	0.395	0.410	0.380	0.365
E区 X:0.285 Y:0.30	X	0.260	0.280	0.315	0.295	A区 X:0.41 Y:0.40	X	0.390	0.440	0.440	0.410
	Y	0.290	0.325	0.300	0.270		Y	0.410	0.425	0.395	0.380
D区 X:0.31 Y:0.33	X	0.280	0.305	0.345	0.315	Tolerance for each Bin limit is ±0.15 .					
	Y	0.325	0.360	0.330	0.300						

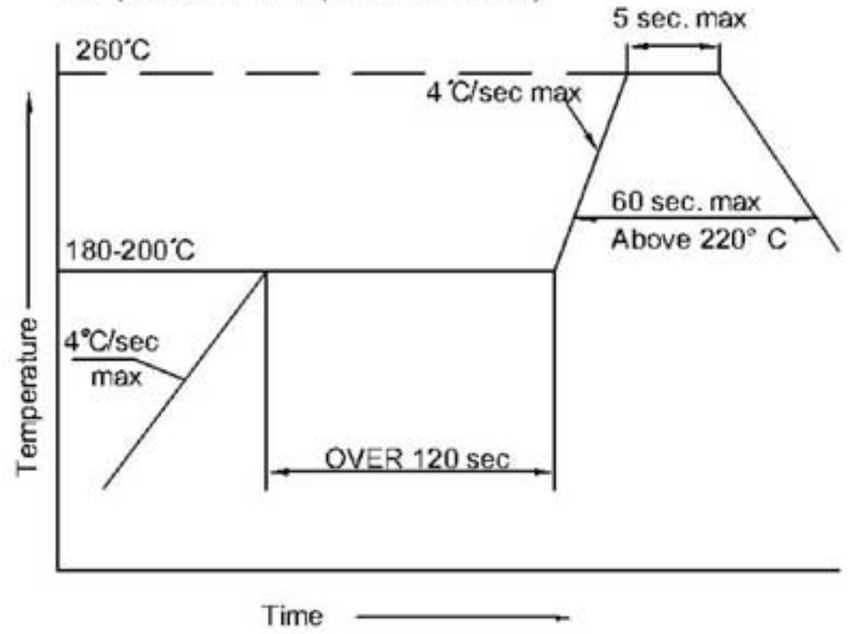
SMT Reflow Soldering Instructions

Number of reflow process shall be less than 2 times and cooling process to normal temperature is required between first and second soldering process.

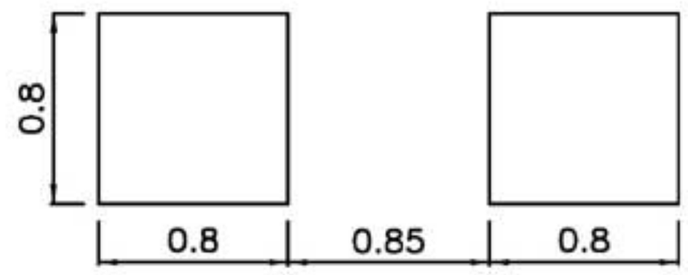
Temperature Profile (Lead Solder)



Temperature Profile (Lead-free Solder)



Recommended Soldering Pattern (Units : mm)



Tape Specifications (Units : mm)