RWP160406-PCSC3

Dual Wavelength SMD Type Emitter

Features

- Top view 0602 package
- Viewing Angle = $\pm 65^0$
- Compatible with infrared and vapor phase reflow solder process
- High reliability
- RoHS compliance

Description

The RWP160406-PCSC3 is a double LED housed in a miniature SMD package. The device has a White and Red LED.

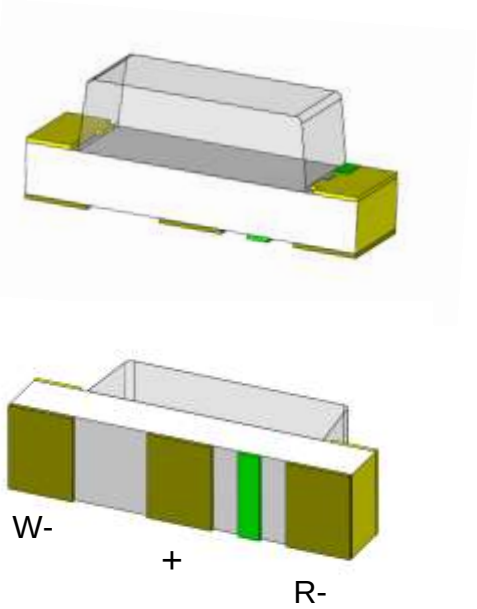
Static electricity and surge damage the LEDs.

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

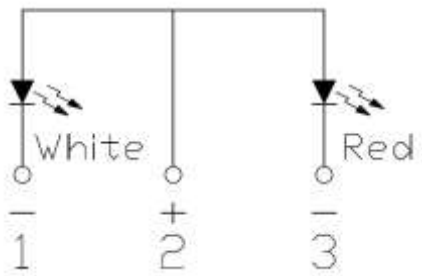
Applications

- Indoor signage display applications
- Indoor decorating and design
- Switch and Symbol Display.

Package Outline



Schematic



Absolute Maximum Rating at 25^{0}C

Symbol	*Parameters*		*Ratings*	*Units*	*Notes*
I_F	Continuous Forward Current	R	25	mA	
		W	25		
I_{FP}	Peak Forward Current	R	60	mA	1
		W	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	
		W	90		

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

ptical Characteristics (Red)

Symbol	*Parameters*	*Test Conditions*	*Min*	*Typ*	*Max*	*Units*	*Notes*
Iv	Luminous Intensity	I_F=5mA	22.5	-	57	mcd	3
λd	Dominant Wavelength	I_F=5mA	-	620	-	nm	4
θ1/2	Angle of Half Intensity	I_F=5mA	-	±65	-	deg	

Electrical Characteristics

Symbol	*Parameters*	*Test Conditions*	*Min*	*Typ*	*Max*	*Units*	*Notes*
V_F	Forward Voltage	I_F=5mA	1.6	-	2.2	V	5
I_R	Reverse Current	V_R=5V	-	-	1	μA	

Optical Characteristics (White)

Symbol	*Parameters*	*Test Conditions*	*Min*	*Typ*	*Max*	*Units*	*Notes*
Iv	Luminous Intensity	I_F=5mA	112	-	285	mcd	3
θ1/2	Angle of Half Intensity	I_F=5mA	-	±65	-	deg	

Electrical Characteristics

Symbol	*Parameters*	*Test Conditions*	*Min*	*Typ*	*Max*	*Units*	*Notes*
V_F	Forward Voltage	I_F=5mA	2.6	-	3.2	V	5
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
MA	22.5	36.0	mcd	I_F=5mA
NA	36.0	57.0		
White				
R	112	180	mcd	I_F=5mA
S	180	285		

Tolerance of: Luminous Intensity ±10%

4. Tolerance of Dominant Wavelength: ±1nm.
5. Tolerance of Forward Voltage ±0.1V.

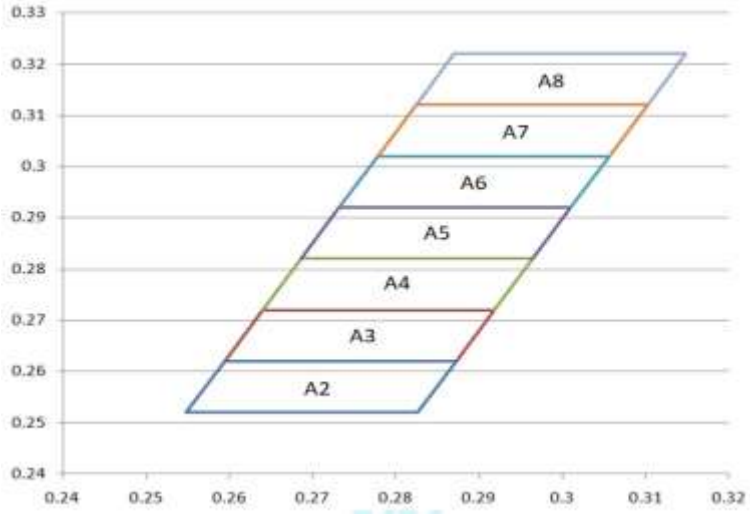
6. Bin Range of Chromaticity Coordinates

Bin Code	CIE_x	CIE_y	Bin Code	CIE_x	CIE_y
A2	0.2548	0.2520	A3	0.2594	0.2620
	0.2594	0.2620		0.2640	0.2720
	0.2872	0.2620		0.2918	0.2720
	0.2826	0.2520		0.2872	0.2620
A4	0.2640	0.2720	A5	0.2686	0.2820
	0.2686	0.2820		0.2732	0.2920
	0.2964	0.2820		0.3010	0.2920
	0.2918	0.2720		0.2964	0.2820
A6	0.2732	0.2920	A7	0.2778	0.3020
	0.2778	0.3020		0.2824	0.3120
	0.3056	0.3020		0.3102	0.3120
	0.3010	0.2920		0.3056	0.3020
A8	0.2824	0.3120			
	0.2870	0.3220			
	0.3148	0.3220			
	0.3102	0.3120			

Notes:

1. The value is based on driving current by 5mA
2. Tolerance of Chromaticity Coordinates:±0.01

The C.I.E. 1931 Chromaticity Diagram



Typical Characteristic Curves

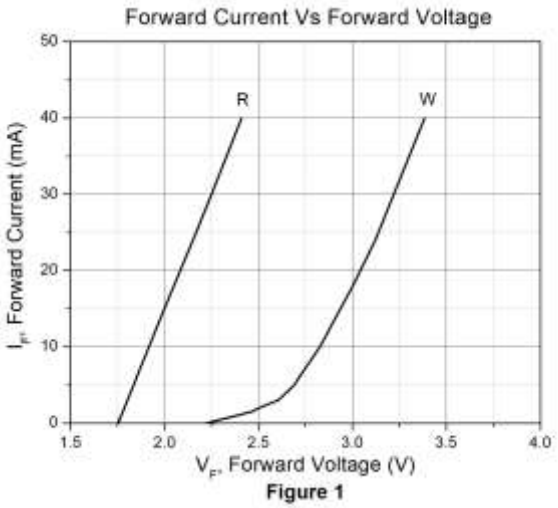


Figure 1

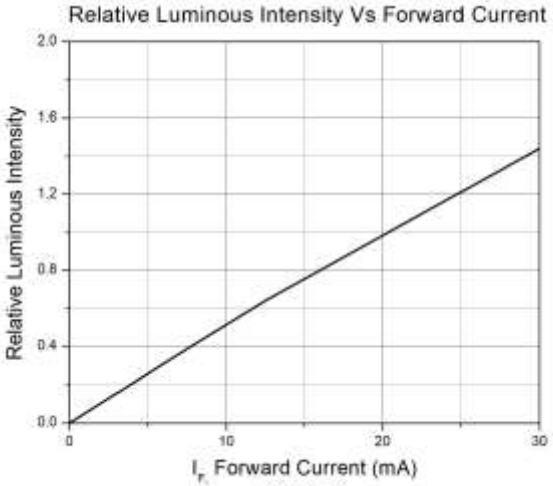


Figure 2

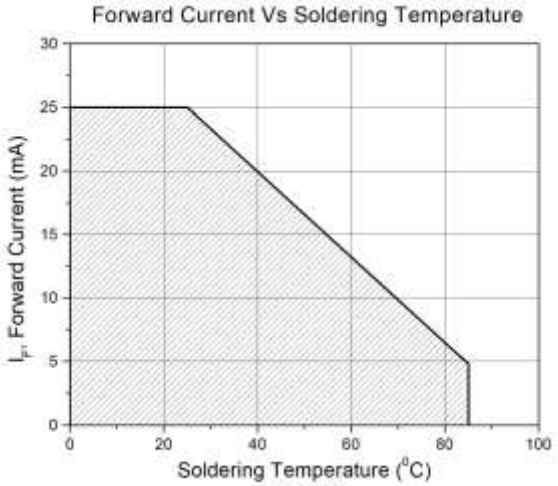


Figure 3

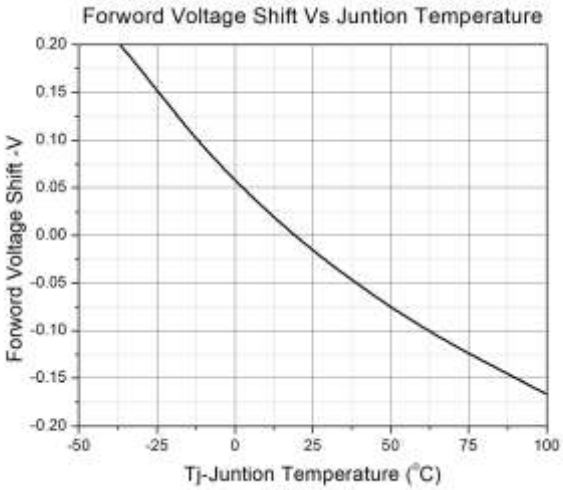


Figure 4

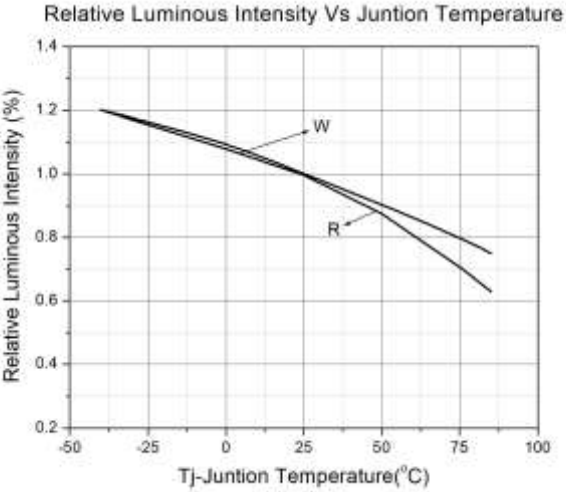


Figure 5

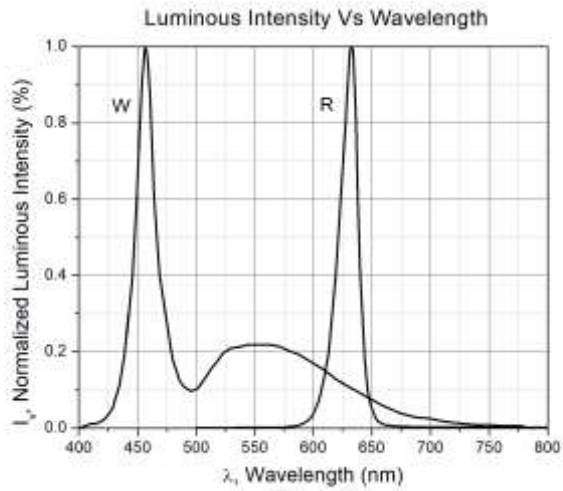


Figure 6

Typical Characteristic Curves

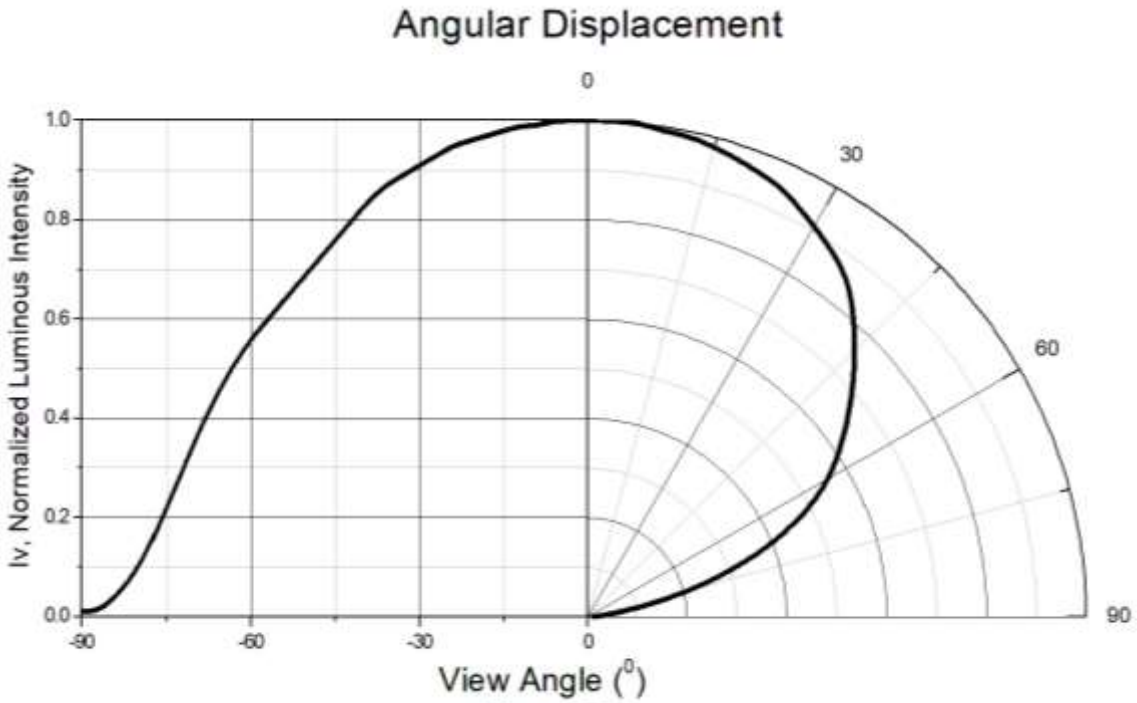
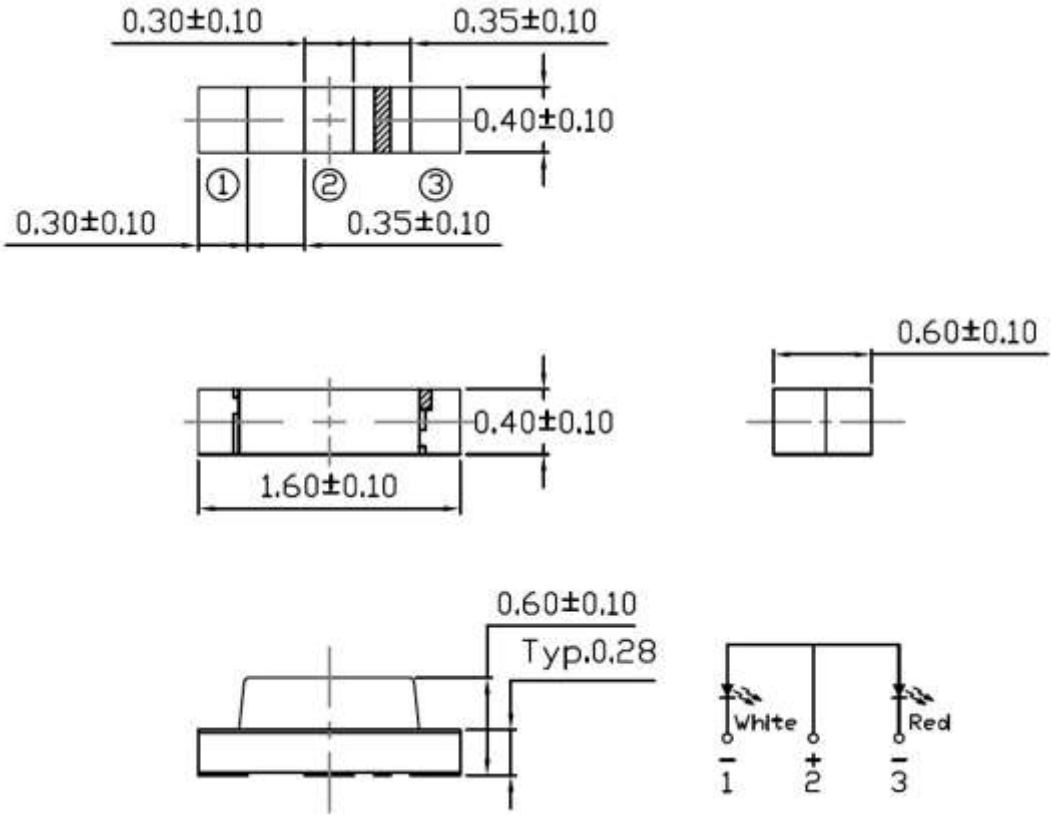


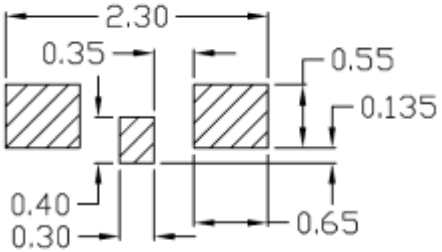
Figure 7

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*

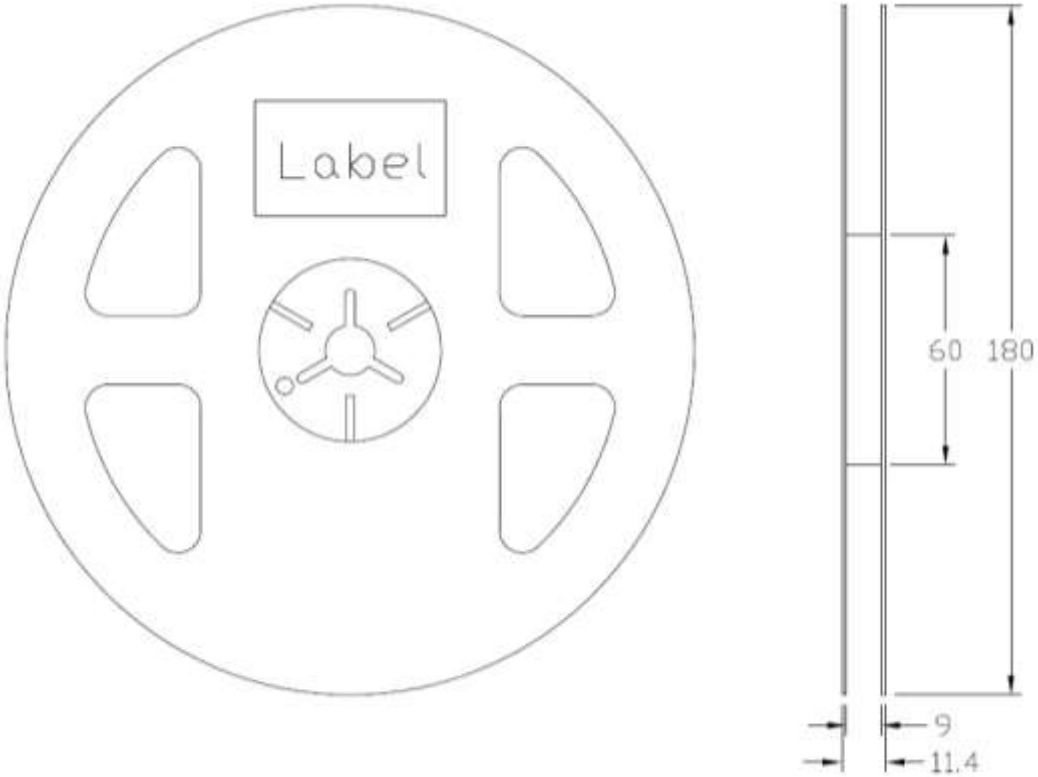


Note: Tolerance unless mentioned is ±0.1mm.

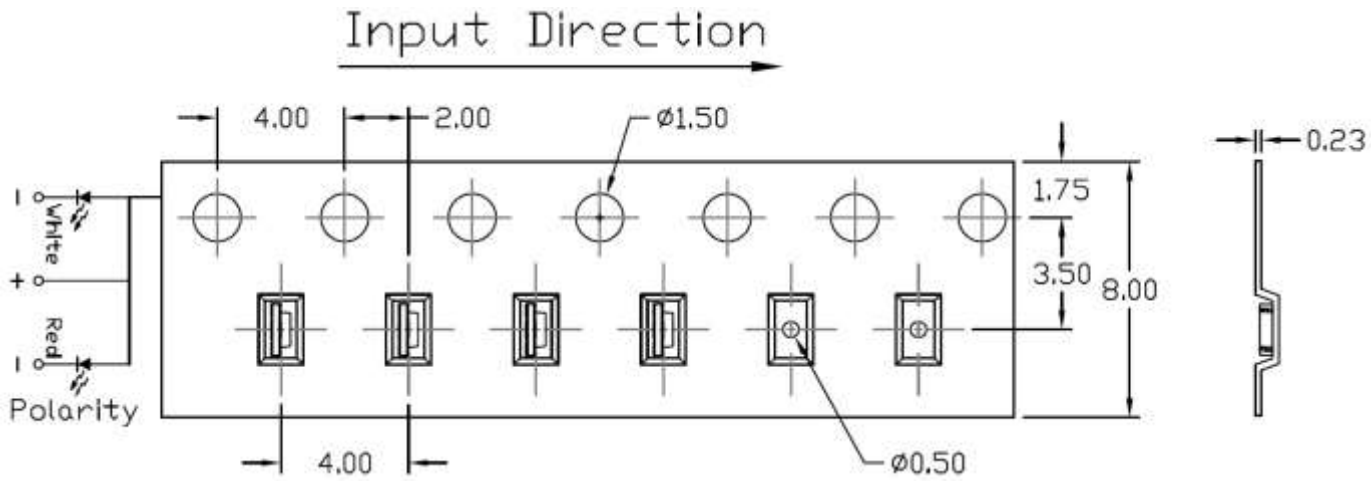
Ordering Information

Part Number	*Description*	*Quantity*
RWP160406-PCSC3	Tape & Reel	3000 pcs

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

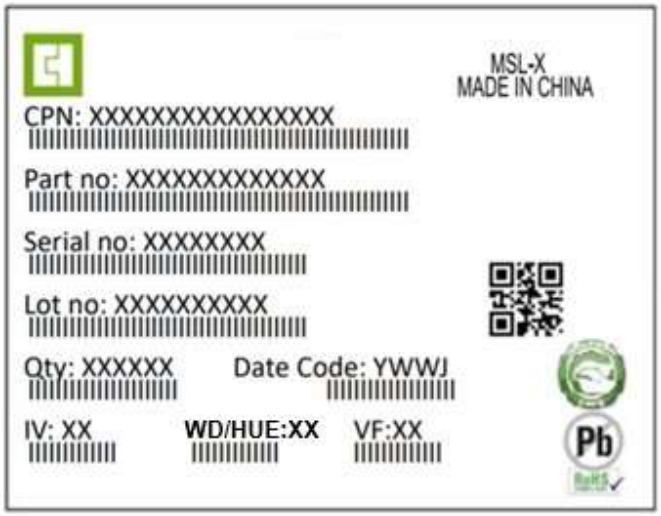


Tape Dimension *All dimensions are in mm, unless otherwise stated*



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

Q'ty: Packing Quantity

Date Code: Manufacture Date

IV : Bin Code of Luminous Intensity

WD : Bin Code of Dominant Wavelength

HUE: Bin Code of Chromaticity Coordinates

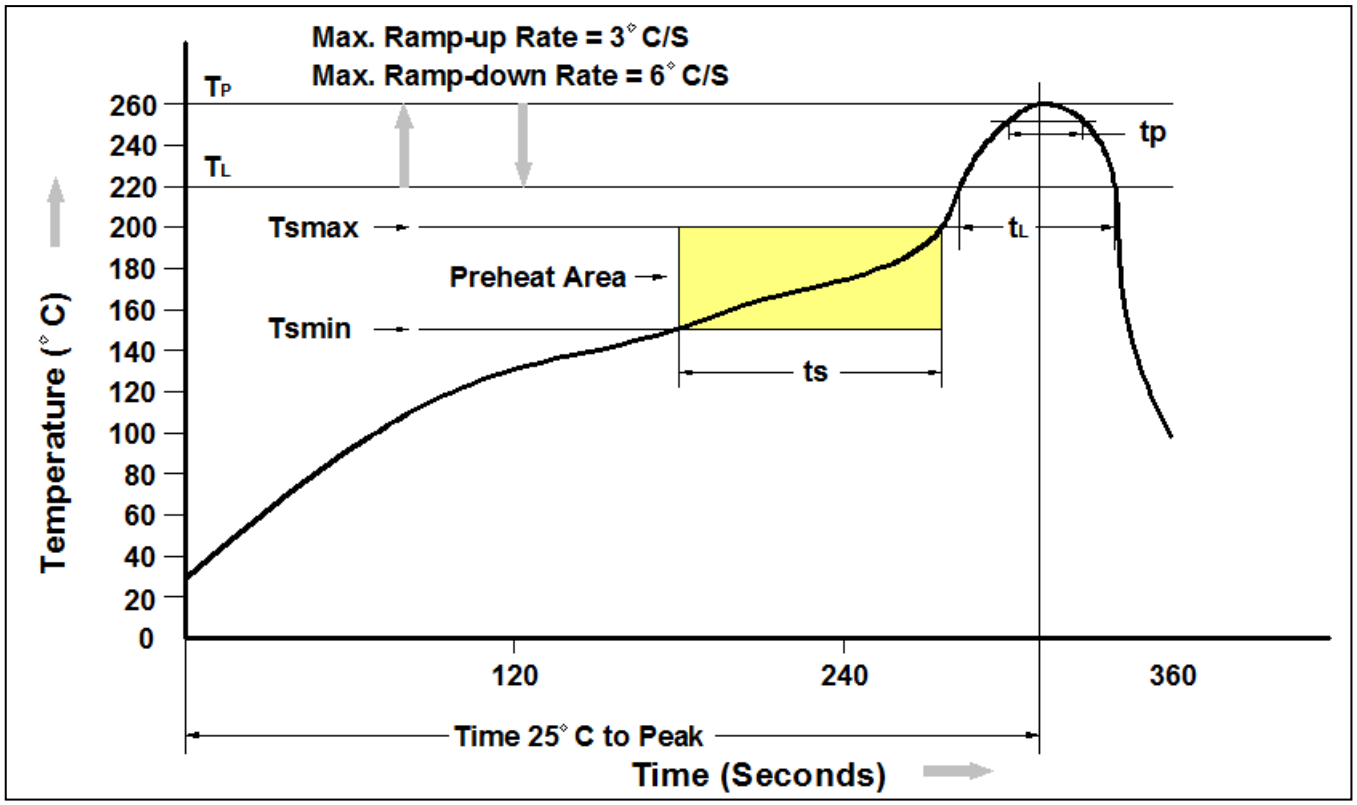
VF : Bin Code of Forward Voltage

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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