OptoSupply
Light It Up

1.6 x 1.5 x 0.5mm Red & Pure green & Blue SMD

OSTB0603C1C-A

VER A.2

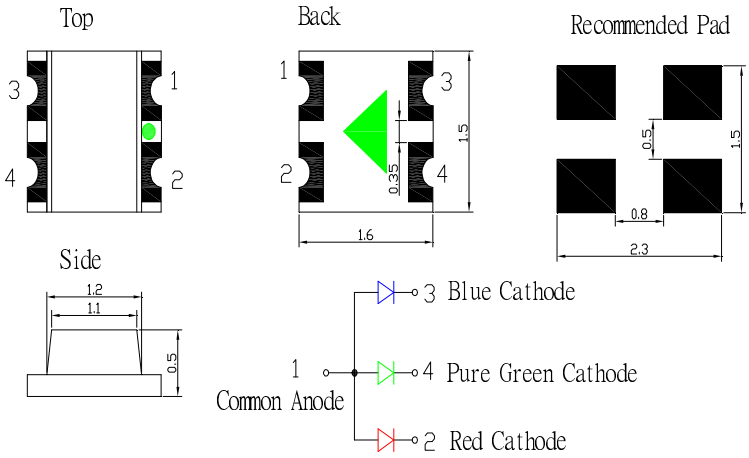
■Features

- Full-Color
- Super high brightness of surface mount LED
- Water Clear Flat Mold
- Compact package outline (LxWxT) of 1.6mm x 1.5mm x 0.5mm
- Compatible to IR reflow soldering.

■Applications

- Backlighting (switches, keys, etc.)
- Marker lights (e.g. steps, exit ways, etc.)

■Outline Dimension



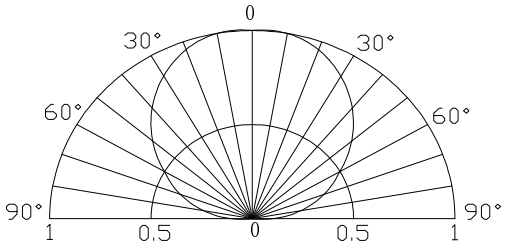
Notes: 1. All dimensions are in millimeters ;
2. Tolerance is ± 0.10 mm unless otherwise noted.

■Absolute Maximum Rating (Ta=25℃)

Item	Symbol	Value		Unit
		R	G/B	
DC Forward Current	I_F	30	30	mA
Pulse Forward Current*	I_{FP}	100	100	mA
Reverse Voltage	V_R	5	5	V
Power Dissipation	P_D	78	108	mW
Operating Temperature	Topr	-40 ~ +85		℃
Storage Temperature	Tstg	-40~ +85		℃
Lead Soldering Temperature	Tsol	260℃/5sec		-

*Pulse width Max 0.1ms, Duty ratio max 1/10

■Directivity



■Electrical -Optical Characteristics (Ta=25℃)

Part Number	Color			V_F (V)			I_R(μA)	Iv(mcd)			λD(nm)			2θ1/2(deg)
				Min.	Typ.	Max.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Typ.
				I_F=5mA			V_R=5V	I_F=5mA						
OSTB0603C1C-A	Blue	B		2.6	2.8	3.4	10	30	-	70	465	470	475	120
	Pure Green	G		2.4	2.6	3.4	10	80	-	160	520	525	530	120
	Red	R		1.6	2.0	2.4	10	20	-	60	620	625	630	120

*1 Tolerance of measurements of dominant wavelength is ±1nm

*2 Tolerance of measurements of luminous intensity is ±15%

*3 Tolerance of measurements of forward voltage is±0.1V

■ Recommended Soldering Temperature – Time Profile (Reflow Soldering)

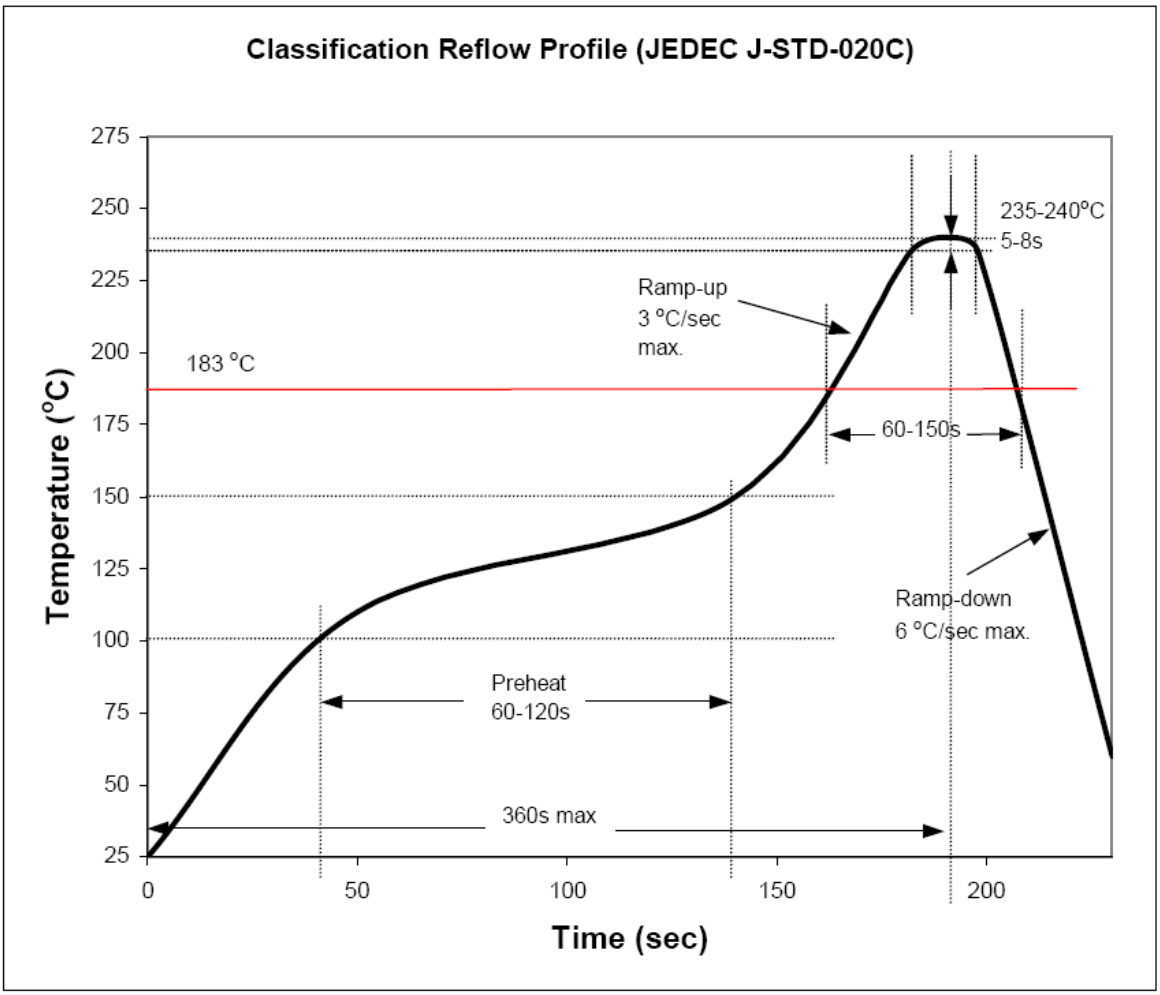
Surface Mounting Condition

In automatic mounting of the SMD LEDs on printed circuit boards, any bending, expanding and pulling forces or shock against the SMD LEDs should be kept min. to prevent them from electrical failures and mechanical damages of the devices.

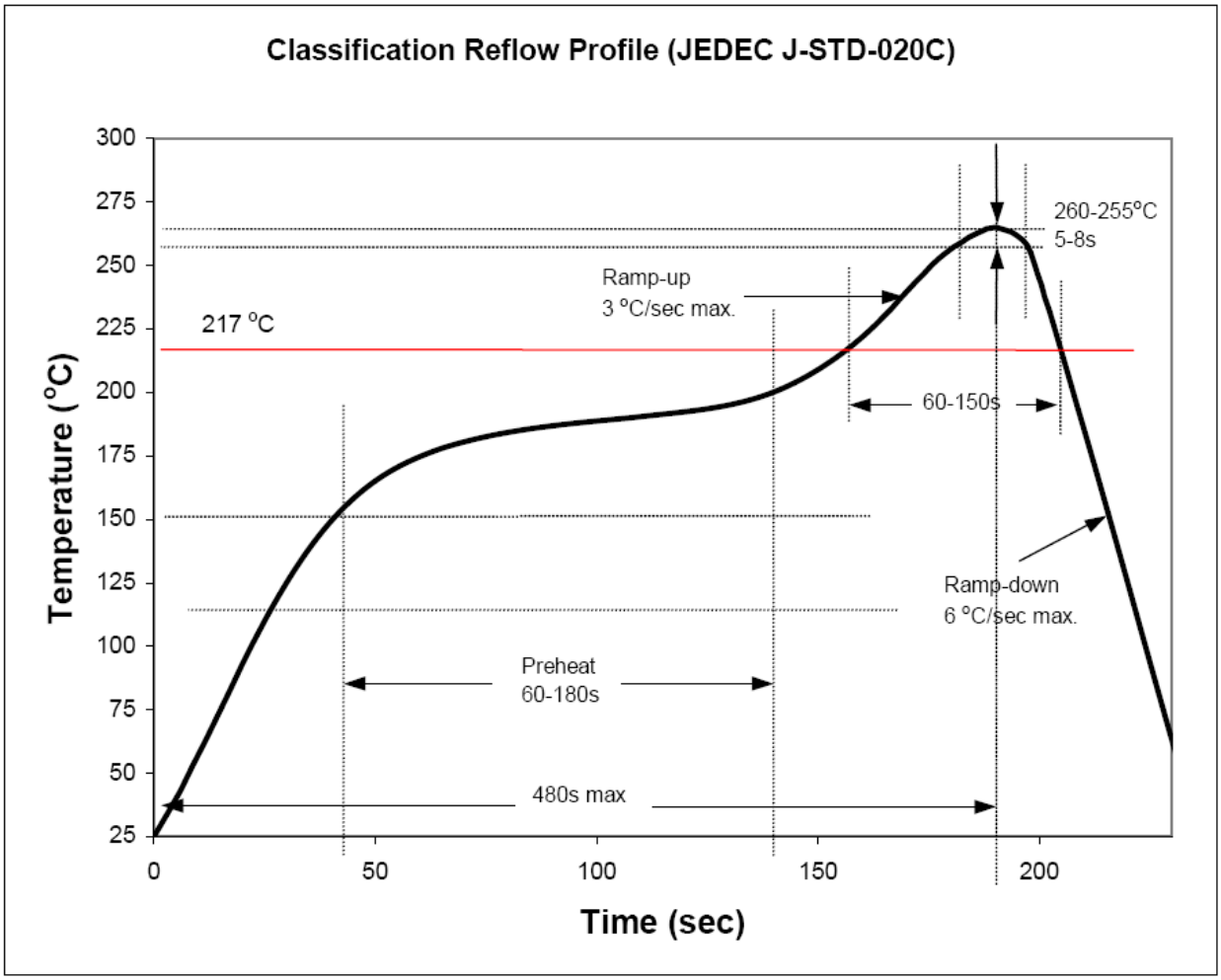
Soldering Reflow

-Soldering of the SMD LEDs should conform to the soldering condition in the individual specifications.
-SMD LEDs are designed for Reflow Soldering.
-In the reflow soldering, too high temperature and too large temperature gradient such as rapid heating/cooling may cause electrical & optical failures and damages of the devices.
-We cannot guarantee the LEDs after they have been assembled using the solder dipping method.

1) Lead Solder



2) Lead-Free Solder



3) Manual Soldering conditions.

- Lead Solder

Max. 300 for Max. 3sec, and only one time. ℃

- Lead-free Solder

Max. 350 for Max. 3sec, and only one time. ℃

- There is possibility that the brightness of LEDs is decreased, which is influenced by heat or ambient atmosphere during reflow. It is recommended to use the nitrogen reflow method.

- After LEDs have been soldered, repair should not be done. As repair is unavoidable, a double-head soldering iron should be used. It should be confirmed beforehand whether the characteristics of the LEDs will be damaged by repairing or not.

- Reflow soldering should not be done more than two times.