OptoSupply
Light It Up

2.0x1.25x0.8mm Chip LED

OSXX0805C2E

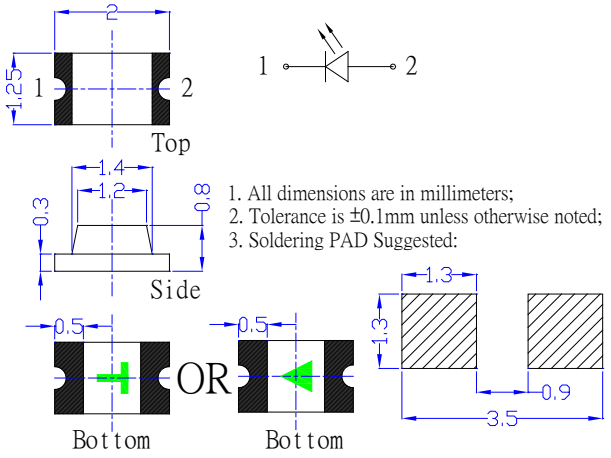
▪Features

- Single chip
- 2.0x1.25x0.8mm (0805) standard package.
- Suitable for all SMT assembly methods.
- Compatible with infrared and vapor phase reflow solder process.
- Compatible to IR reflow soldering.
- White Diffused Type

▪Applications

- Automotive: Dashboards, stop lamps, turn signals.
- Backlighting: LCDs, Key pads advertising.

▪Outline Dimension

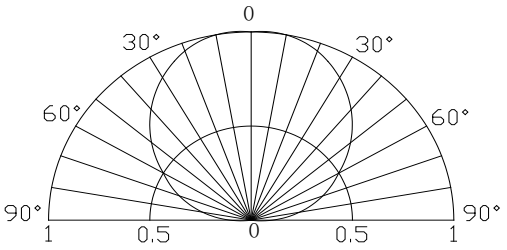


▪Absolute Maximum Rating (Ta=25℃)

Item	Symbol	Value		Unit
		B5/G5	G8/Y5/O5/R5	
DC Forward Current	I_F	20	20	mA
Pulse Forward Current#	I_{FP}	100	100	mA
Reverse Voltage	V_R	5	5	V
Power Dissipation	P_D	68	48	mW
Operating Temperature	Topr	-40 ~ +85		℃
Storage Temperature	Tstg	-40~ +85		℃
Lead Soldering Temperature	Tsol	260℃/10sec		-

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

▪Directivity



▪Electrical -Optical Characteristics (Ta=25℃)

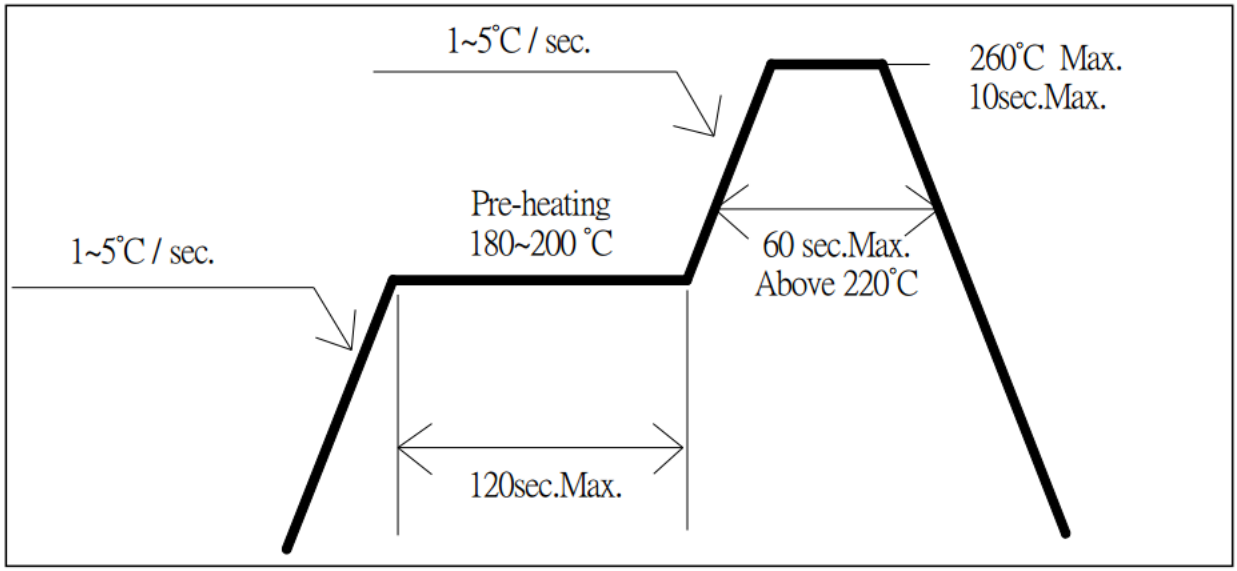
Part Number	Color			V_F (V)			I_R(μA)	Iv(mcd)			λD(nm)			2θ1/2(deg)
				Min.	Typ.	Max.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Typ.
				I_F=10mA			V_R=5V	I_F=10mA						
OSB50805C2E	Blue	B5	■	-	2.8	3.4	10	50	60	-	465	470	475	120
OSG50805C2E	Pure Green	G5	■	-	2.8	3.4	10	200	250	-	520	525	530	120
OSG80805C2E	Yellow Green	G8	■	-	1.8	2.4	10	10	15	-	565	570	575	120
OSY50805C2E	Yellow	Y5	■	-	1.8	2.4	10	50	60	-	585	590	595	120
OSO50805C2E	Orange	O5	■	-	1.8	2.4	10	50	60	-	600	605	610	120
OSR50805C2E	Red	R5	■	-	1.8	2.4	10	50	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

■ Soldering Conditions

Reflow Soldering		Hand Soldering	
Pre-Heat	180 ~ 200°C	Temperature Soldering time	350°C Max. 3 sec. Max. (one time only)
Pre-Heat Time	120 sec. Max.		
Peak Temperature	260°C Max.		
Dipping Time	**10 sec. Max.**		
Condition	Refer to Temperature-profile		

• Reflow Soldering Condition(Lead-free Solder)



*Recommended soldering conditions vary according to the type of LED

*Although the recommended soldering conditions are specified in the above table, reflow, or hand soldering at the lowest possible temperature is desirable for the LEDs.

*A rapid-rate process is not recommended for cooling the LEDs down from the peak temperature.

•All SMD LED products are pb-free soldering available.

• Occasionally there is a brightness decrease caused by the influence of heat or ambient atmosphere during air reflow. It is recommended that the User use the nitrogen reflow method.

• Repairing should not be done after the LEDs have been soldered. When repairing is unavoidable a double-head soldering iron should be used. It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.

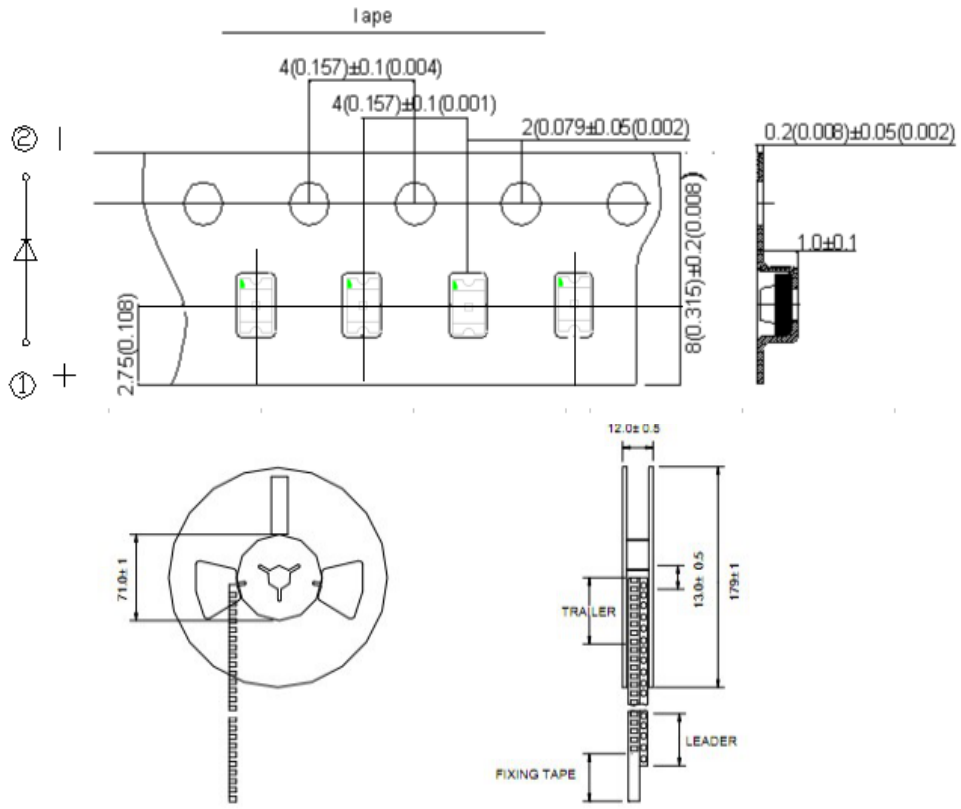
• Reflow soldering should not be done more than two times.

• When soldering, do not put stress on the LEDs during heating.

• After soldering, do not warp the circuit board.

■ Taping and Orientation

1. Quantity:3000pcs/Reel
2. Note: The tolerances unless mentioned is ±0.1mm, Unit: mm



■ Cautions:

1. After open the package, the LED´s floor life is 4 Weeks under 30℃ or less and 60%RH or less(MSL:2a).
2. Heat generation must be taken into design consideration when using the LED.
3. Power must be applied resistors for protection, over current would be caused the optic damage to the devices and wavelength shift.
4. Manual tip solder may cause the damage to Chip devices, so advised that heat of iron should be lower than 15W with temperature control under 5 seconds at 230-260 deg. C. (The device would be got damage in re working process, recommended under 5 seconds at 230-260 deg. C)
5. All equipment and machinery must be properly grounded. It is recommended to use a wristband or anti-electrostatic glove when handing the LED.
6. Use IPA as a solvent for cleaning the LED. The other solvent may dissolve the LED package and the epoxy, Ultrasonic cleaning should not be done.
7. Damaged LED will show unusual characteristics such as leak current remarkably increase, turn-on voltage becomes lower and the LED get unlight at low current.