OptoSupply
Light It Up

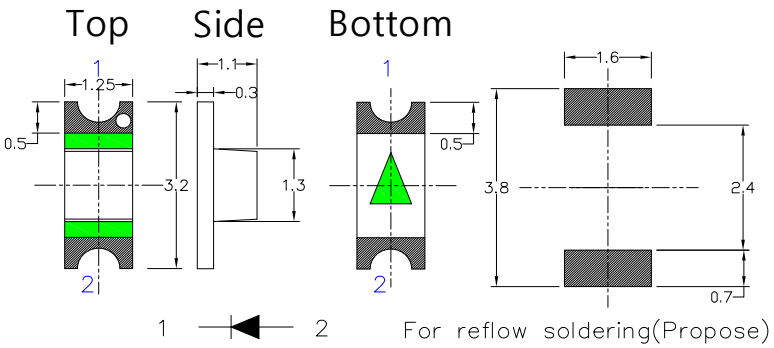
3.2x1.25 x1.1mm Reverse Mount Chip LED

OSXX1205C1N

▪Features

- Single chip LED
- Super high brightness of reverse mount LED
- Compact package outline
  (L x W x T) of 3.2mm x 1.25mm x 1.1mm
- Compatible to IR reflow soldering.
- Water Clear Type

▪Outline Dimension



Unit: mm
Tolerance: ±0.20mm
unless otherwise noted

▪Applications

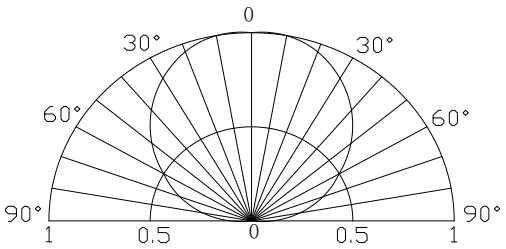
- Backlighting (switches, keys, etc.)
- Marker lights (e.g. steps, exit ways, etc.)

▪Absolute Maximum Rating (Ta=25℃)

Item	Symbol	Value		Unit
		W5/M5/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℃/5sec		-

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

▪Directivity



▪Electrical -Optical Characteristics (Ta=25℃)

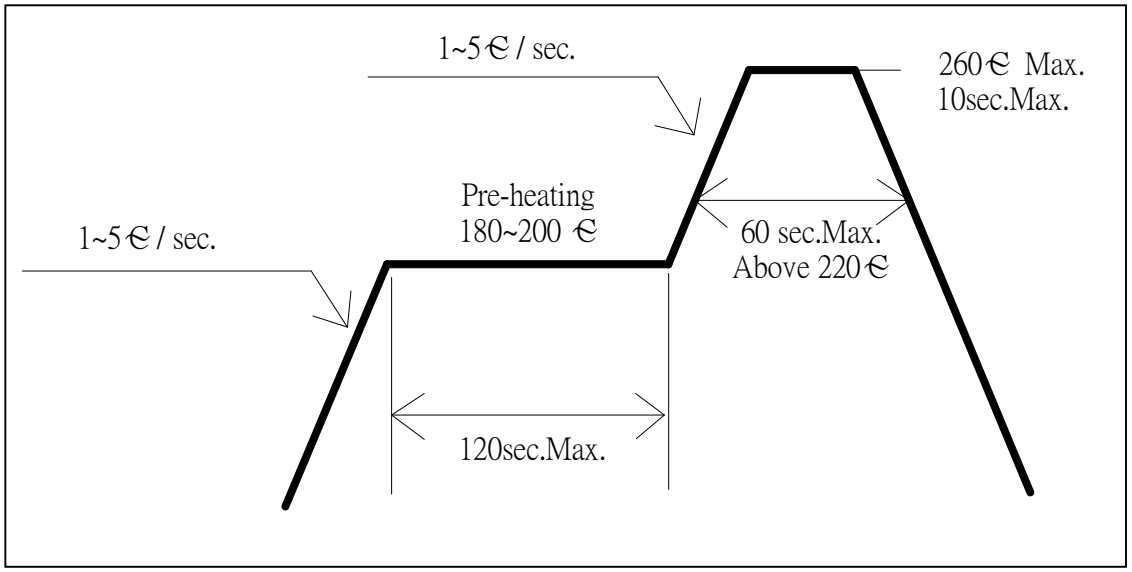
Part Number	Color			V_F (V)			I_R(μA)	Iv(mcd)			λD(nm)			2θ1/2(deg)
				Min.	Typ.	Max.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Typ.
				I_F=10mA			V_R=5V	I_F=10mA						
OSW51205C1N	White	W5		-	2.8	3.4	10	250	350	-	8000-18000K			120
OSM51205C1N	Warm White	M5		-	2.8	3.4	10	250	350	-	2700-3300K			120
OSB51205C1N	Blue	B5		-	2.8	3.4	10	60	80	-	460	465	475	120
OSG51205C1N	True Green	G5		-	2.8	3.4	10	300	400	-	515	525	530	120
OSG81205C1N	Yellow Green	G8		-	1.8	2.4	10	15	20	-	565	570	575	120
OSY51205C1N	Yellow	Y5		-	1.8	2.4	10	60	80	-	585	590	595	120
OSO51205C1N	Orange	O5		-	1.8	2.4	10	60	80	-	600	605	610	120
OSR51205C1N	Red	R5		-	1.8	2.4	10	60	80	-	615	625	630	120

***1 Tolerance of measurements of chromaticity coordinate is ±10%**
***2 Tolerance of measurements of dominant wavelength is ±1nm**
***3 Tolerance of measurements of luminous intensity is ±15%**
***4 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.

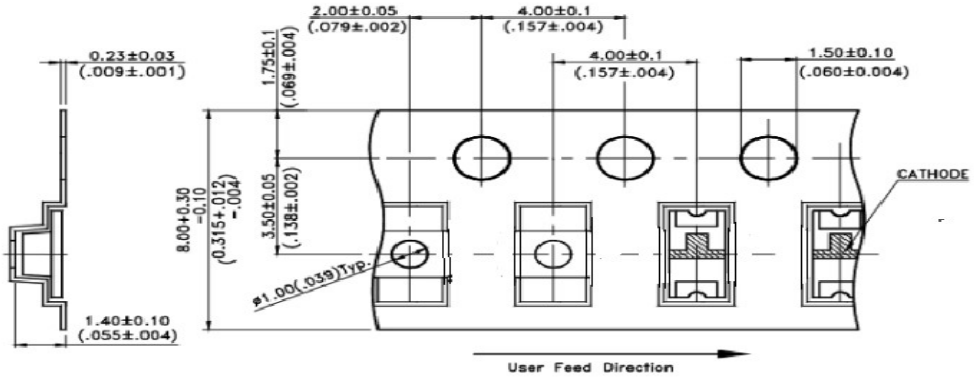
• Reflow soldering should not be done more than two times.

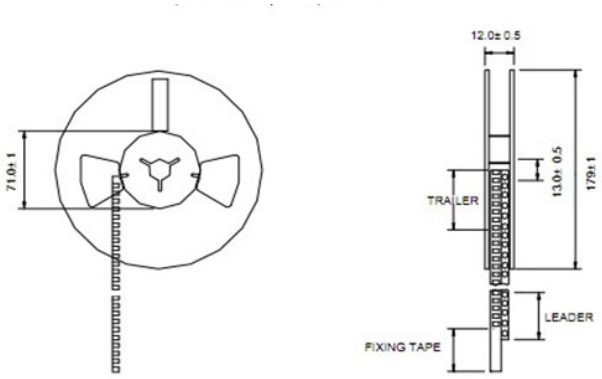
• When soldering, do not put stress on the LEDs during heating.

• After soldering, do not warp the circuit board.

■Reel & Tape Dimensions

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.