

#### **OSRG1204C1E**

#### **■Features**

- · Bi-Color
- · Super high brightness of surface mount LED
- Compact package outline
   (L x W x T) of 3.2mm x 1.0mm x1.5mm
- · Compatible to IR reflow soldering.

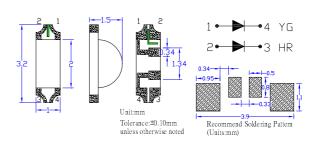
## **■**Applications

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

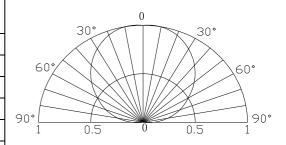
## ■Absolute Maximum Rating

#### Value Item Symbol Unit Red Yellow Green DC Forward Current $I_F$ 30 30 mΑ Pulse Forward Current# 80 100 $I_{FP}$ mA Reverse Voltage $V_R$ 5 5 V Power Dissipation 78 mW $P_{\rm D}$ $^{\circ}$ C -40 ~ +85 Operating Temperature Topr $^{\circ}$ C Storage Temperature Tstg -40~ +85 Lead Soldering Temperature Tsol 260°C/10sec

#### **■Outline Dimension**



### **■Directivity**



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

#### **■**Electrical -Optical Characteristics

				$V_{F}(V)$		$I_R(\mu A)$	Iv	v(mcd)		λD(nm)			2θ1/2(deg)
Part Number	Color		Min.	Тур.	Max.	Max.	Min.	Тур.	Max.	Min.	Тур.	Max.	Тур.
				I <sub>F</sub> =20mA		V <sub>R</sub> =5V				I <sub>F</sub> =20	)mA		
OSRG1204C1E	Red	R5	1.8	2.1	2.6	10	70	150	-	617	620	625	120

10

25

50

565

570

2.6

(Ta=25°C)

(Ta=25°C)

Yellow Green

G8

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2.1

1.8







575

120

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<sup>\*1</sup> Tolerance of measurements of dominant wavelength is  $\pm 1$ nm

<sup>\*2</sup> Tolerance of measurements of luminous intensity is ±15%

<sup>\*3</sup> Tolerance of measurements of forward voltage is  $\pm 0.1$ V

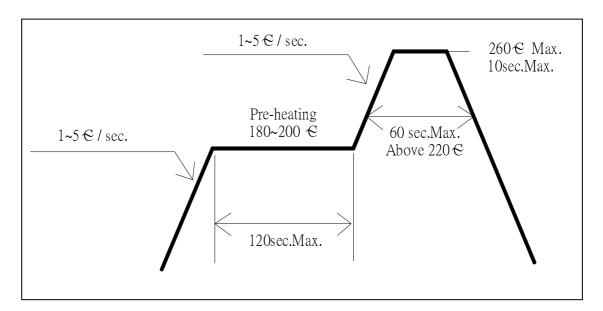


#### **OSRG1204C1E**

#### **■ Soldering Conditions**

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

#### • 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.







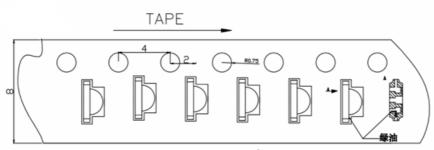




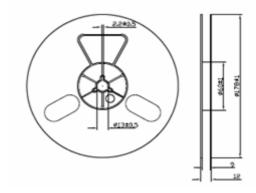
## OSRG1204C1E

### **■**Packaging

## 1. Reel & Tape Dimensions (3000PCS/Reel)

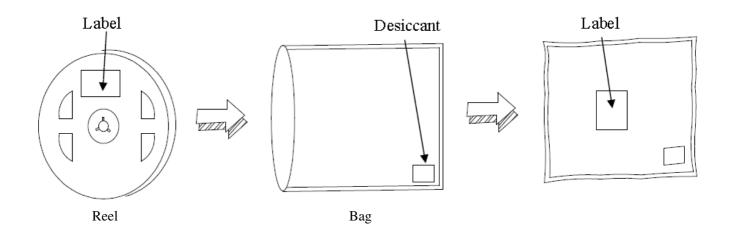






Notes: All dimensions are in millimeters

## 2. Bag packaging



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#### **OSRG1204C1E**

#### **■ 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.

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