

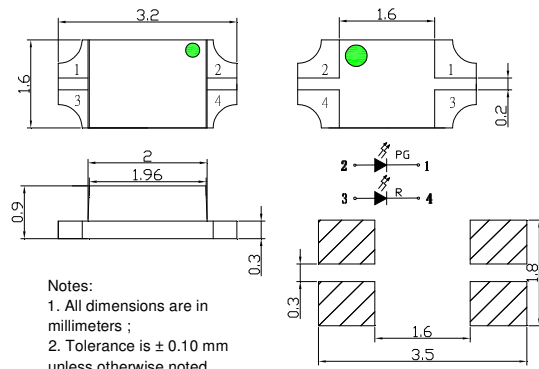
**■Features**

- Bi-Color
- Super high brightness of surface mount LED
- Water Clear Flat Mold
- Compact package outline  
(LxWxT) of 3.2mm x 1.6mm x 0.9mm
- 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  $\pm 0.10$  mm unless otherwise noted.

Recommended Soldering Pattern  
(Units : mm)

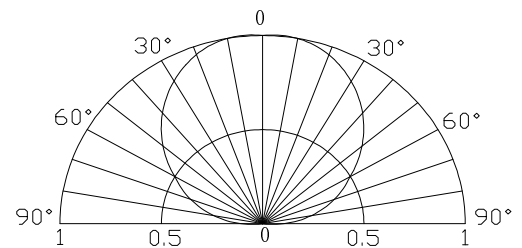
**■Absolute Maximum Rating**

( $T_a=25^\circ\text{C}$ )

| Item                       | Symbol    | Value                       |     | Unit             |
|----------------------------|-----------|-----------------------------|-----|------------------|
|                            |           | HR                          | PG  |                  |
| 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      | $T_{opr}$ | -40 ~ +85                   |     | $^\circ\text{C}$ |
| Storage Temperature        | $T_{stg}$ | -40 ~ +85                   |     | $^\circ\text{C}$ |
| Lead Soldering Temperature | $T_{sol}$ | 260 $^\circ\text{C}$ /10sec |     | -                |



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

**■Directivity**



**■Electrical -Optical Characteristics**

( $T_a=25^\circ\text{C}$ )

| Part Number | Color      |    |   | $V_F$ (V)         |      |      | $I_R$ ( $\mu\text{A}$ ) | $I_v$ (mcd)       |      |      | $\lambda D$ (nm) |      |      | $2\theta_{1/2}$ (deg) |
|-------------|------------|----|---|-------------------|------|------|-------------------------|-------------------|------|------|------------------|------|------|-----------------------|
|             |            |    |   | Min.              | Typ. | Max. | Max.                    | Min.              | Typ. | Max. | Min.             | Typ. | Max. | Typ.                  |
|             |            |    |   | $I_F=20\text{mA}$ |      |      | $V_R=5\text{V}$         | $I_F=20\text{mA}$ |      |      |                  |      |      |                       |
| OSRG1206C1F | Red        | HR |  | 1.8               | 2.1  | 2.6  | 10                      | -                 | 100  | -    | 620              | 625  | 630  | 120                   |
|             | Pure Green | PG |  | 2.6               | 3.1  | 3.6  | 10                      | -                 | 350  | -    | 515              | 525  | 530  | 120                   |

\*1 Tolerance of measurements of dominant wavelength is  $\pm 1\text{nm}$

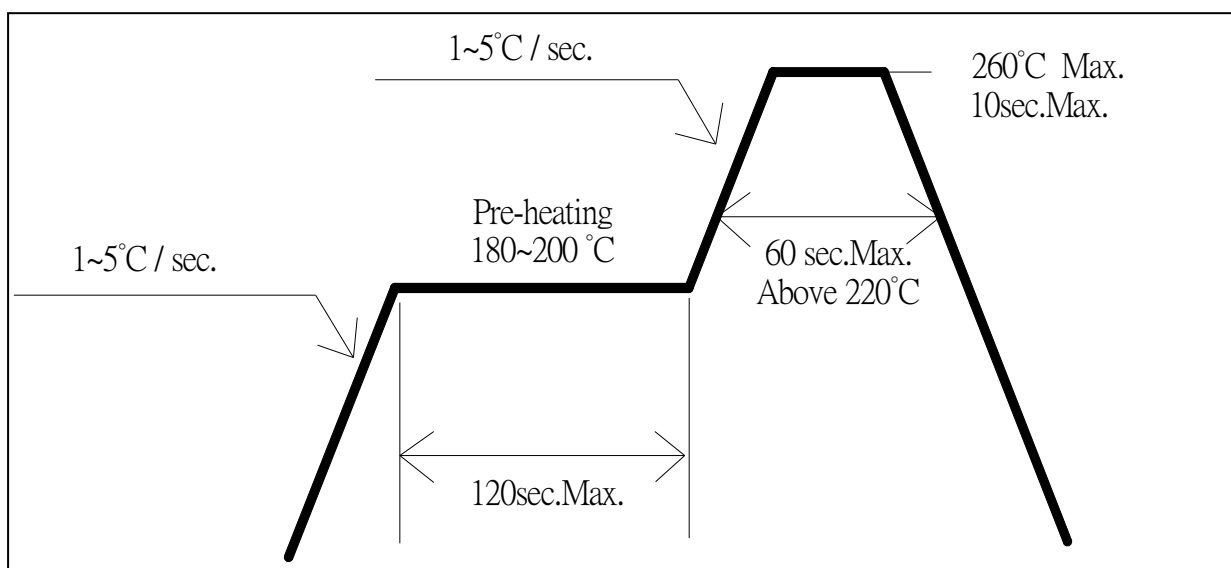
\*2 Tolerance of measurements of luminous intensity is  $\pm 15\%$

\*3 Tolerance of measurements of forward voltage is  $\pm 0.1\text{V}$

■ Soldering Conditions

| Reflow Soldering |                              | Hand Soldering                |  |
|------------------|------------------------------|-------------------------------|--|
| Pre-Heat         | 180 ~ 200°C                  | Temperature<br>Soldering time | 350°C Max.<br>3 sec. Max.<br>(one time only) |
| Pre-Heat Time    | 120 sec. Max.                |                               |  |
| Peak temperature | 260°C Max.                   |                               |  |
| Dipping Time     | <b>10 sec. Max.</b>          |                               |  |
| 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.