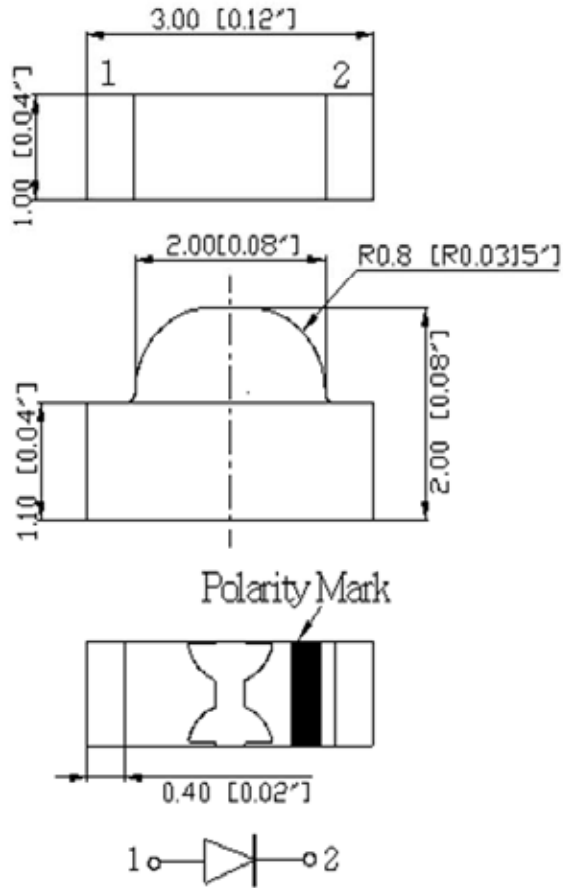
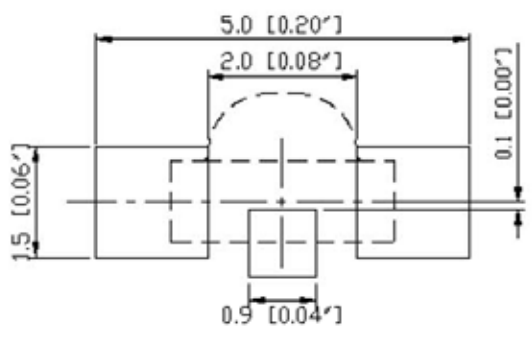


**SPECIFICATION** **CSR123IR880C**
**PACKAGE OUTLINES**

**RECOMMENDED PAD LAYOUT**


| ITEM          | MATERIALS         |
|---------------|-------------------|
| Resin (mold)  | Epoxy             |
| Lens color    | Water Transparent |
| Dice          | AlGaAs/GaAs       |
| Emitted Color | Infrared          |

- Notes:
1. All dimensions are in millimeters (inches).
  2. Tolerance is  $\pm 0.25\text{mm}$  ( $0.01''$ ) unless otherwise noted.
  3. Specifications are subject to change without notice.

| Part Number  | Chip Material | Color of Emission | Lens Type   | Viewing Angle |
|--------------|---------------|-------------------|-------------|---------------|
| CSR123IR880C | AlGaAs/GaAs   | Infrared          | Water Clear | 150°          |



ChromeLED Corp. reserves the right to make changes at any time in order to supply the best product possible. The most current version of this document will always be available at: [www.chromeled.com](http://www.chromeled.com)

**ABSOLUTE MAXIMUM RATINGS**
**(TA=25°C)**

| Parameter                                  | Symbol | Max Rating              | Unit |
|--|--------|-------------------------|------|
| Forward Current                            | IF     | 50                      | mA   |
| Reverse Current @ 5V                       | IR     | 10                      | μA   |
| Power Dissipation                          | Pd     | 90                      | mW   |
| Operating Temperature Range                | TOP    | -40~+80                 | °C   |
| Storage Temperature Range                  | TSTG   | -40~+85                 | °C   |
| Peak Pulsing Current (1/10 duty f = 10KHz) | IFP    | 1                       | A    |
| Soldering Temperature                      | TSOL   | Max 260°C for 5 sec Max |      |

**OPTICAL-ELECTRICAL CHARACTERISTICS**
**(TA=25°C)**

| Parameter               | Symbol | Test Condition | Value |      |     | Unit  |
|-------------------------|--------|----------------|-------|------|-----|-------|
|                         |        |                | Min   | Typ  | Max |       |
| Radiant Intensity       | Iv     | IF = 20mA      | 0.10  | 0.55 | -   | mW/sr |
| Forward Voltage         | VF     | IF = 20mA      | -     | 1.4  | 1.8 | V     |
| Reverse Leakage Current | IR     | VR = 5V        | -     | -    | 10  | μA    |
| Viewing Angle at 50% Iv | 2θ1/2  | IF = 20mA      | -     | 150  | -   | Deg   |
| Peak Wavelength         | λP     | IF = 20mA      | 870   | 880  | 890 | nm    |

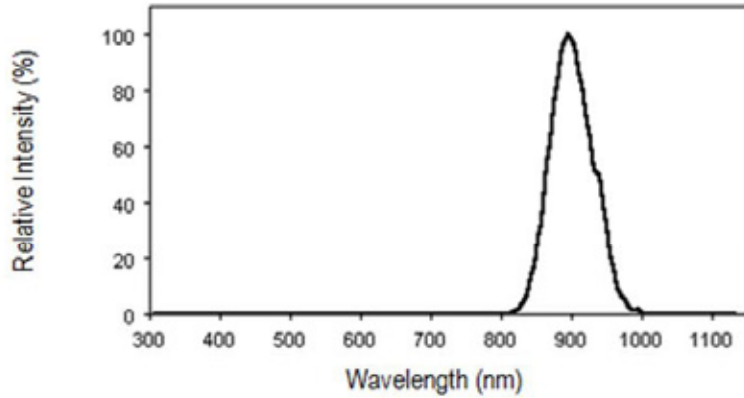
\*Tolerance of viewing angle: -10 / +5 deg.



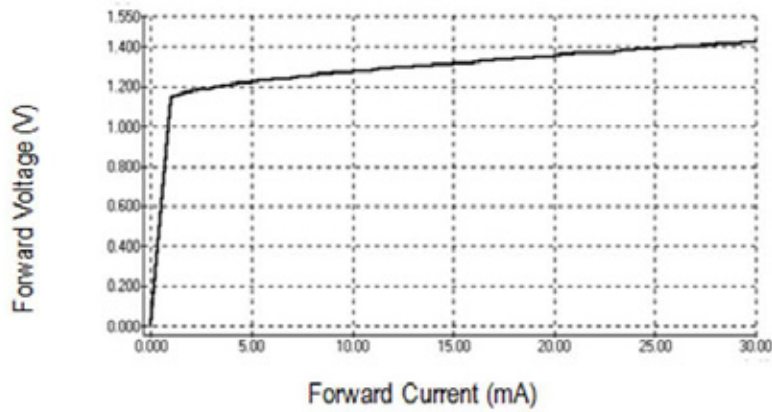
ChromeLED Corp. reserves the right to make changes at any time in order to supply the best product possible. The most current version of this document will always be available at: [www.chromeled.com](http://www.chromeled.com)

**OPTICAL CHARACTERISTIC CURVES**

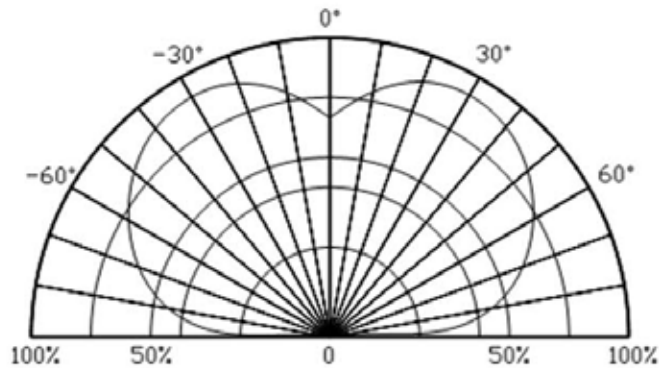
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage



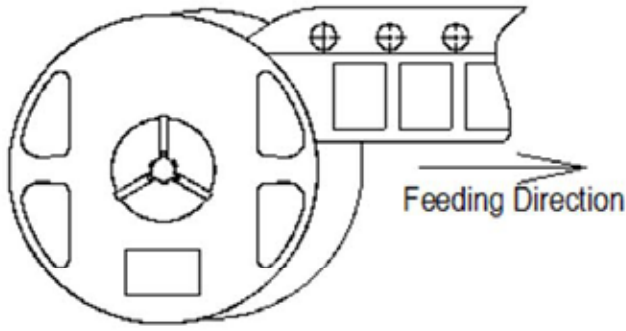
Directive Characteristics



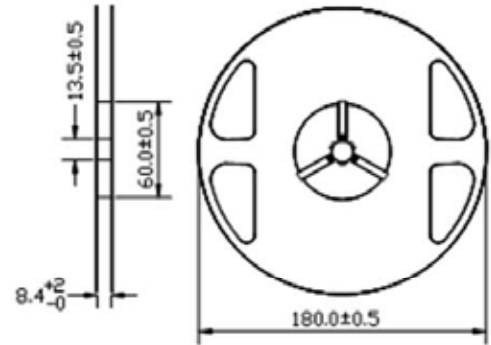
ChromeLED Corp. reserves the right to make changes at any time in order to supply the best product possible. The most current version of this document will always be available at: [www.chromeled.com](http://www.chromeled.com)

## PACKAGING SPECIFICATION

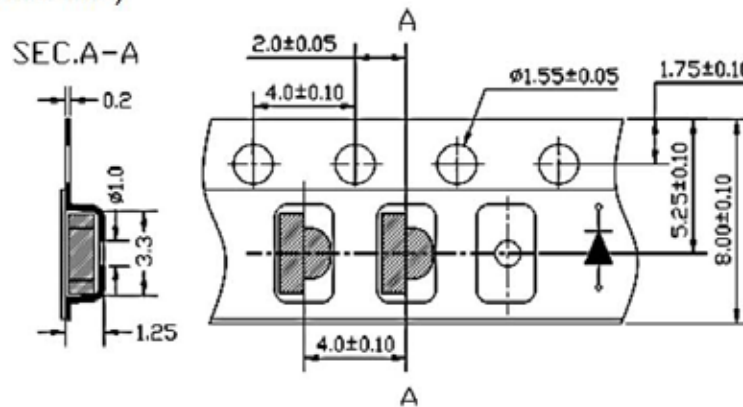
Feeding Direction



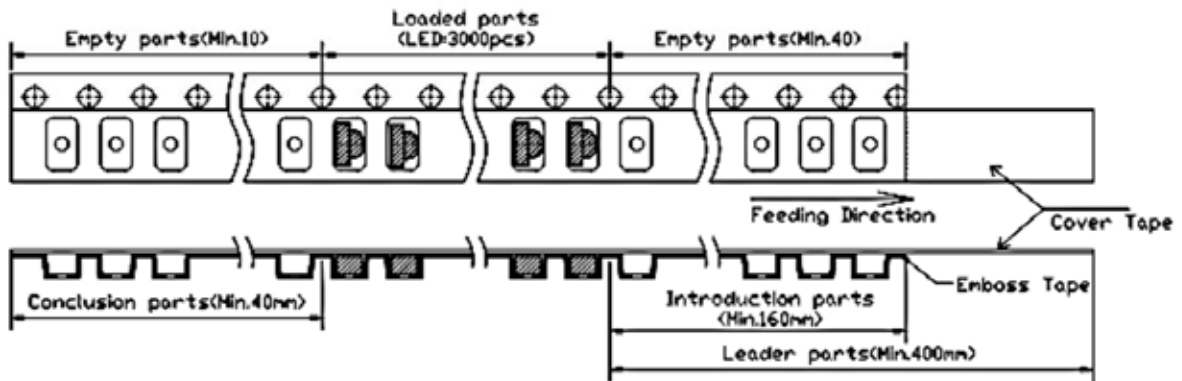
Dimensions of Reel (Unit: mm)



Dimensions of Tape (Unit: mm)



Arrangement of Tape



Notes:

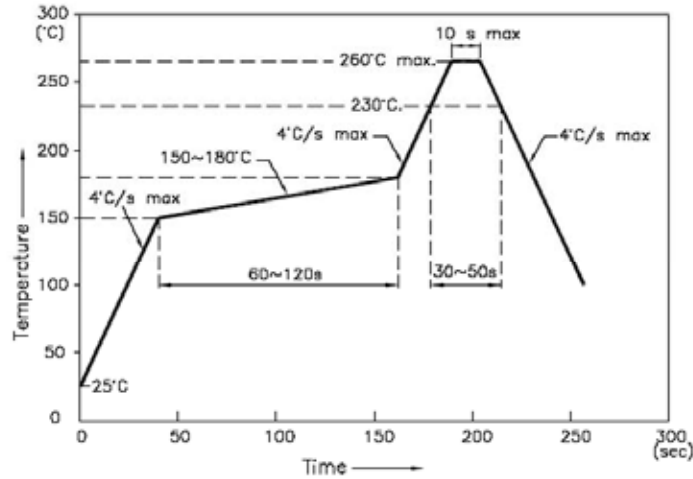
1. Empty component pockets are sealed with top cover tape.
2. The maximum number of missing lamp is two.
3. The cathode is oriented towards the tape sprocket hole.
4. 3,000 pcs/Reel



ChromeLED Corp. reserves the right to make changes at any time in order to supply the best product possible. The most current version of this document will always be available at: [www.chromeled.com](http://www.chromeled.com)

## SOLDERING CONDITIONS

- Reflow Temp/Time



Notes:

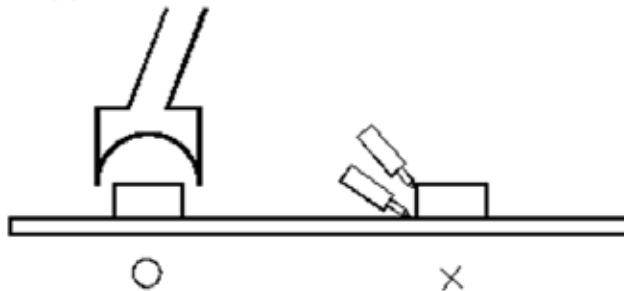
- We recommend the reflow temperature 245°C (±5°C). The maximum soldering temperature should be limited to 260°C.
- Don't cause stress to the epoxy resin while it is exposed to high temperature.
- Number of reflow process should be 2 times or less.

- Soldering Iron

Basic spec is ≤ 5 sec when 260°C. If temperature is higher, time should be shorter (+10°C → -1sec). Power dissipation of iron should be smaller than 20W and temperatures should be controllable. Surface temperature of the device should be under 230°C.

- Rework

- Customer must finish rework within 5 sec under 260°C.
- The head of iron cannot touch copper foil.
- Twin-head type is preferred.



ChromeLED Corp. reserves the right to make changes at any time in order to supply the best product possible. The most current version of this document will always be available at: [www.chromeled.com](http://www.chromeled.com)