

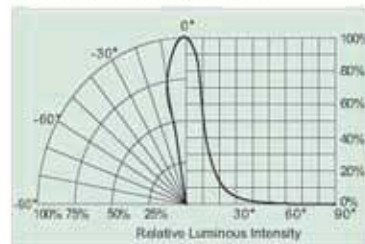
## φ 10.0mm Round Water Clear Lamp



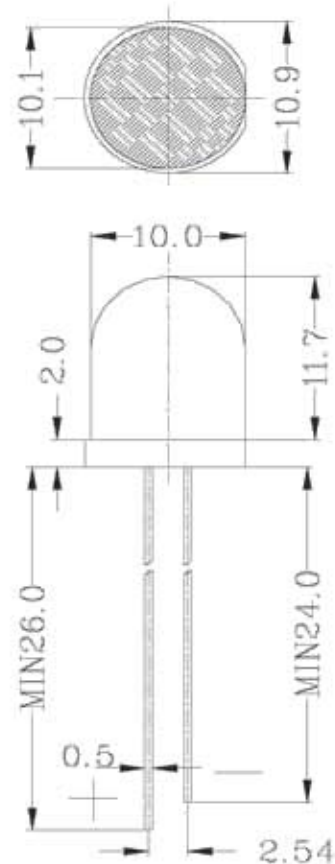
### Characters

- Viewing angle 20°
- For LED light, indication, illumination
- UV resistant epoxy

### Directive Characteristics



### Package Outlines (Unit:mm)



General Tolerance: ±0.2  
Unless note otherwise

### Absolute Maximum Ratings (Ta=25°C)

| Parameter              | Symbol    | Value            |                   | Unit |
|------------------------|-----------|------------------|-------------------|------|
|                        |           | Green/Blue/White | Red/Orange/Yellow |      |
| Power Dissipation      | $P_D$     | 100              | 125               | mW   |
| DC forward Current     | $I_F$     | 30               | 50                | mA   |
| Pulsed Forward Current | $I_{FP}$  | 100              | 150               | mA   |
| Reverse Voltage        | $V_R$     | 5                | 5                 | V    |
| Operating Temperature  | $T_{opr}$ | -30~+80          |                   | °C   |
| Storage Temperature    | $T_{stg}$ | -40~+100         |                   | °C   |

\* Duty 1/10 Pulse Width 0.1ms

### Electrical Optical Characteristics (Ta=25°C)

| Part Number | Material     | Chip $\Delta p$ (nm)           |     | Emitted Color | Lens Type   | IF(mA) | VF(V) |     | IV(mcd) |       |
|-------------|--------------|--------------------------------|-----|---------------|-------------|--------|-------|-----|---------|-------|
|             |              | Min                            | Max |               |             |        | Min   | Max | Min     | Max   |
| RL81-UR543  | AlGaInP/GaAs | 625                            | 635 | Ultra Red     | Water Clear | 20     | 1.7   | 2.8 | 3000    | 5000  |
| RL81-UO523  | AlGaInP/GaAs | 615                            | 625 | Ultra Orange  | Transparent | 20     | 1.7   | 2.8 | 2500    | 4000  |
| RL81-UY543  | InGaAlP/GaAs | 585                            | 595 | Ultra Yellow  | Water Clear | 20     | 1.7   | 2.8 | 3000    | 5000  |
| RL81-GH744D | InGaN/GaN    | 515                            | 525 | Pure Green    | Water Clear | 20     | 3.0   | 3.8 | 7000    | 11000 |
| RL81-CB744D | InGaN/GaN    | 465                            | 475 | Blue          | Water Clear | 20     | 3.0   | 3.8 | 5000    | 8000  |
| RL81-WH744D | InGaN/GaN    | Typical.x=0.3<br>Typical.y=0.3 |     | White         | Water Clear | 20     | 3.0   | 3.8 | 9000    | 16000 |

\* Luminous intensity rank please see 《Standard Bin Grade》

### Precautions in handling

1. When soldering, leave 2.0mm of minimum clearance between the resin and the soldering point.
2. Blue, Green and White products are so sensitive to ESD, that users required to handle with care.

### Package

Bulk-----200Pcs/bag

## Reliability Test

| No | Item                               | Test Condition                   | Test Hours/Cycles | Samples Tested | Acc./Rej |
|----|------------------------------------|----------------------------------|-------------------|----------------|----------|
| 1  | Room Temperature DC Operating Life | Ta=25°C,IF=20mA                  | 1000 Hrs          | 76             | 0/1      |
| 2  | Thermal Shock                      | -10°C(5min)→(10sec)→+100°C(5min) | 100 Cycles        | 76             | 0/1      |
| 3  | Temperature ycle                   | -40°C(30min)→(5min)→+85°C(30min) | 100 Cycles        | 76             | 0/1      |
| 4  | High Temp./ High Humi. Test        | 85°C/85%RH                       | 1000 Hrs          | 76             | 0/1      |
| 5  | High Temperature Storage           | Ta=100°C                         | 1000 Hrs          | 76             | 0/1      |
| 6  | Low Temperature Storage            | Ta= - 40°C                       | 1000 Hrs          | 76             | 0/1      |
| 7  | Soldering Heat                     | 260°C ± 5°C                      | 5 Seconds         | 76             | 0/1      |

Typical Electrical / Optical Characteristics Curves  
25°C Ambient Temperature Unless Otherwise Noted)

