# СВЕТОДИОДЫ BEELED - ТЕХНИЧЕСКОЕ ОПИСАНИЕ

**MODEL：5013R1R2C-DHA**

## Features

- Two chips are matched for uniform light output, wide viewing angle
- Long life-solid state reliability
- I.C.compatible/Low power consumption
- Pb free

## Descriptions

- The LED lamps contain two integral chips and is available as both bicolor and bipolar types
- The Bright Red emitted by diodes of GaAsP/GaP and AlGaInP respectively
- Type of bipolar lamps are both White Diffused and Color diffused while the bicolor are White Diffused

## Applications

- Status indicators
- Commercial use
- Advertising Signs
- Back lighting

## Device Selection Guide

| LED Part No. | Chip | | Lens Color |
|---|---|---|---|
| | Material | Emitted Color | |
| 5013R1R2C-DHA | AlGaInP | Red | Water clear |
| | GaAsP | Red | |

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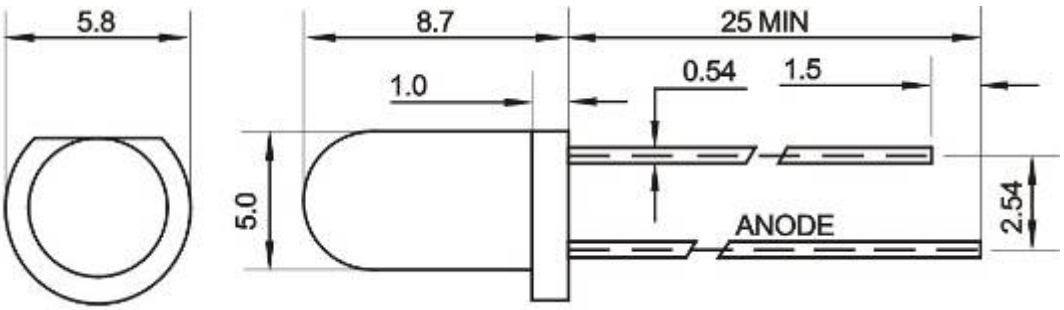
## Package Dimensions




UNIT:mm

## Notes:

- Other dimensions are in millimeters, tolerance is 0.25mm except being specified.
- Protruded resin under flange is 1.5mm Max LED.
- Bare copper alloy is exposed at tie-bar portion after cutting.

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## Absolute Maximum Rating ($T_a$=25℃)

| Parameter | Symbol | Absolute Maximum Rating | Unit |
|---|---|---|---|
| Forward Pulse Current | $I_{FPM}$ | 100 | mA |
| Forward Current | $I_{FM}$ | 30 | mA |
| Reverse Voltage | $V_R$ | 5 | V |
| Power Dissipation | $P_D$ | 140 | mW |
| Operating Temperature | Topr | -40～+80 | ℃ |
| Storage Temperature | Tstg | -40～+100 | ℃ |
| Soldering Heat (5s) | Tsol | 260 | ℃ |

## Electro-Optical Characteristics ($T_a$=25℃)

| Parameter | Symbol | Device | Min. | Typ. | Max. | Unit | Test Condition |
|---|---|---|---|---|---|---|---|
| Luminous Intensity | Iv | Red | 800 | 1100 | 1500 | mcd | IF=20mA |
| | | Red | 250 | 400 | 600 | | |
| Viewing Angle | $2\theta_{1/2}$ | Red | --- | 30 | 40 | Deg | (Note 1) |
| | | Red | | | | | |
| Peak Emission Wavelength | λp | Red | 620 | 625 | 630 | nm | IF=20mA |
| | | Red | 625 | 630 | 640 | | |
| Spectral Line Half-Width | △λ | Red | 25 | 30 | 35 | nm | IF=20mA |
| | | Red | 25 | 30 | 50 | | |
| Forward Voltage | $V_F$ | Red | 1.7 | 2.2 | 2.3 | V | IF=20mA |
| | | Red | 1.7 | 2.0 | 2.3 | | |
| Reverse Current | $I_R$ | | --- | --- | 100 | μA | VR=5V |

## Note:

1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

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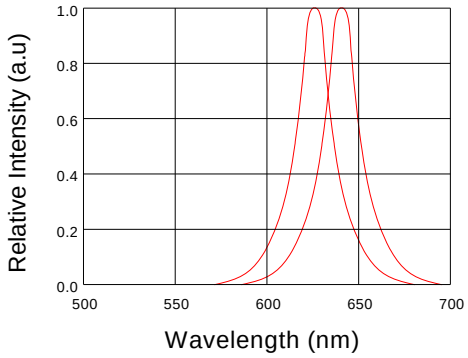
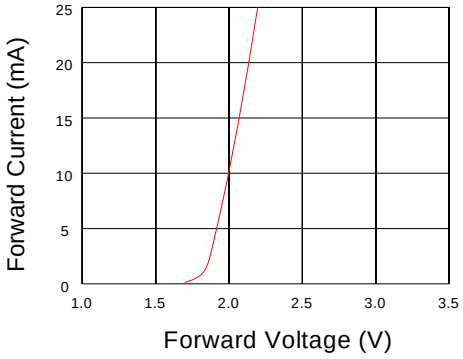
## Typical Electro-Optical Characteristics Curves

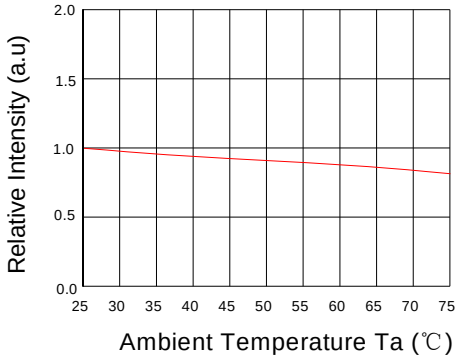
Relative Intensity VS. Wavelength



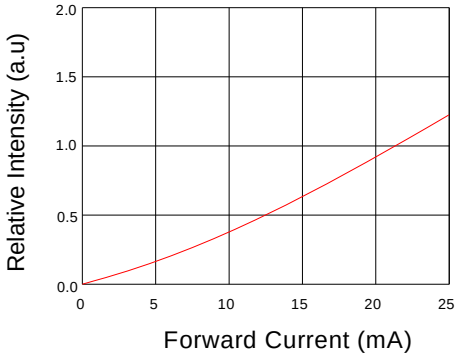

Forward Current VS.Forward Voltage



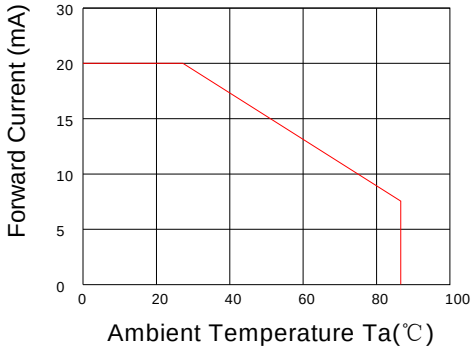

Relative Intensity VS. Ambient Temp



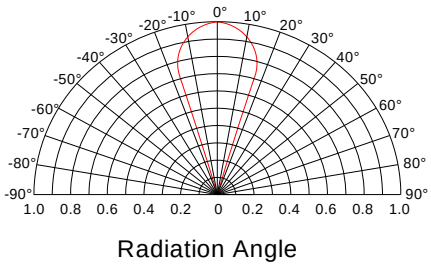

Forward Current VS.Relative Intensity




Forward Current VS.Ambient Temp.




Radiation Characteristics



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