# СВЕТОДИОДЫ BEELED - ТЕХНИЧЕСКОЕ ОПИСАНИЕ

**MODEL：3004K3C-CA**

## Features

- High reliability
- High radiant intensity
- Peak wavelength λp=940nm
- 2.54mm Lead spacing
- Low forward voltage
- Pb free

## Descriptions

- HYLED Infrared Emitting Diode is a high intensity diode, molded in a blue transparent plastic package
- The device is spectrally matched with phototransistor, photodiode and infrared receiver module

## Usage Notes:

- Surge will damage the LED
- When using LED, it must use a protective resistor in series with DC current about 20mA

## Applications

- Free air transmission system
- Infrared remote control units with high power requirement
- Smoke detector
- Infrared applied system

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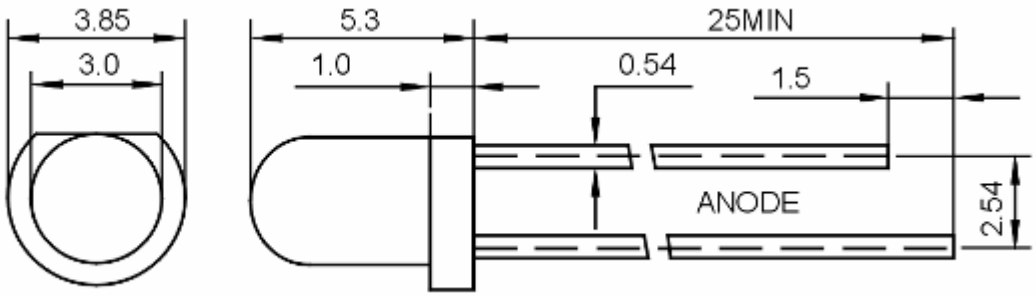
## Device Selection Guide

| LED Part No. | Chip | | Lens Color |
|---|---|---|---|
| | Material | Emitted Color | |
| 3004K3C-CA | AlGaAs | Infrared | Water clear |

## 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 | $I_{FM}$ | 25 | mA |
| Reverse Voltage | $V_R$ | 5 | V |
| Power Dissipation | $P_D$ | 150 | mW |
| Operating Temperature | Topr | -40～+80 | ℃ |
| Storage Temperature | Tstg | -40～+100 | ℃ |
| Soldering Heat (5s) | Tsol | 260 | ℃ |

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

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Test Condition |
|---|---|---|---|---|---|---|
| Radiant intensity | Ee | 7 | --- | 12 | mW/Sr | IF=20mA(Note1) |
| Viewing Angle | $2\theta_{1/2}$ | --- | 30 | --- | Deg | (Note 2) |
| Peak Emission Wavelength | λp | --- | 940 | --- | nm | IF=20mA |
| Spectral Line Half-Width | △λ | --- | 45 | --- | nm | IF=20mA |
| Forward Voltage | $V_F$ | 1.2 | --- | 1.5 | V | IF=20mA |
| Reverse Current | $I_R$ | --- | --- | 10 | 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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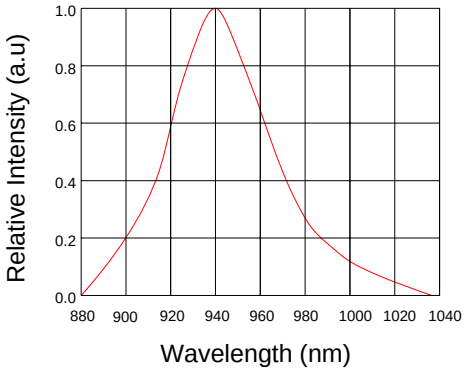
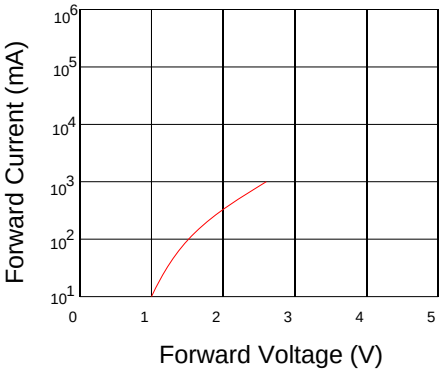
## Typical Electro-Optical Characteristics Curves

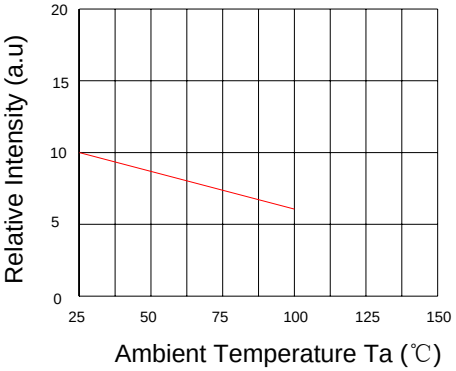
Relative Intensity VS. Wavelength



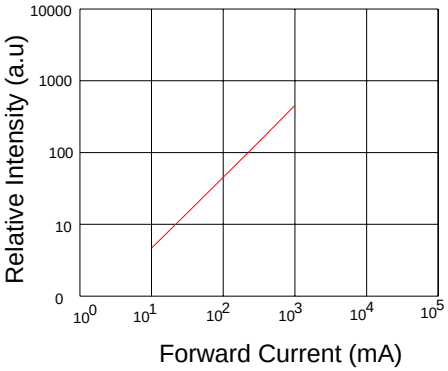

Forward Current VS.Forward Voltage



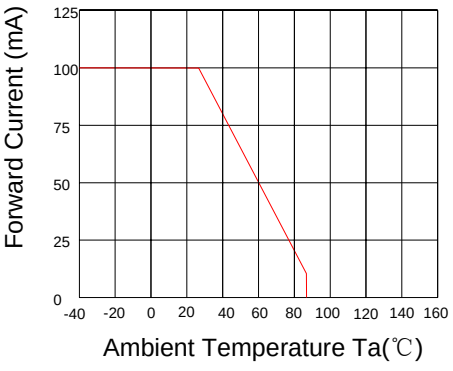

Relative Intensity VS. Ambient Temp




Forward Current VS.Relative Intensity




Forward Current VS.Ambient Temp.




Radiation Characteristics