

# BEELED

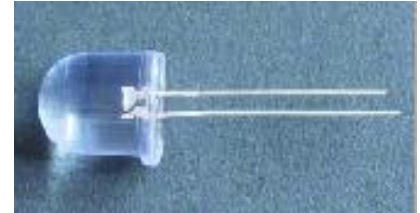
## BEELED -

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**MODEL: 10003A1C-CSB-B**

### Features

- High efficiency
- Low Power consumption
- General purpose leads
- Selected minimum intensities
- Available on tape and reel
- Pb free



### Descriptions

- The series is specially designed for applications requiring higher brightness
- The LED lamps are available with different colors, intensities, epoxy colors, etc
- Superior performance in outdoor environment

### Usage Notes:

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

### Applications

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

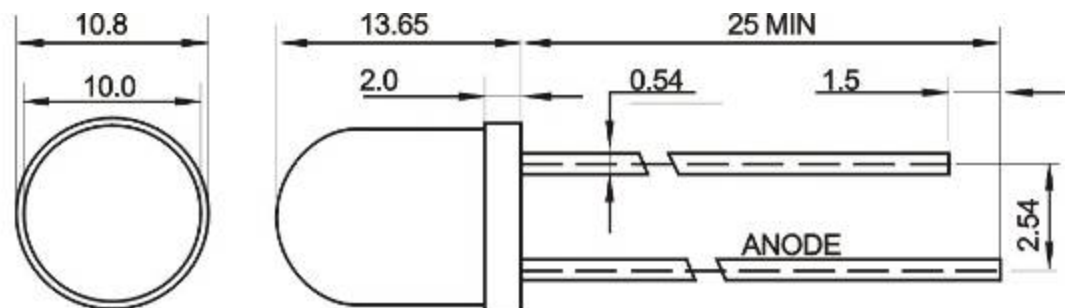
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### Device Selection Guide

LED Part No.	Chip		Lens Color
	Material	Emitted Color	
10003A1C-CSB-B	AlGaInP	Amber	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.

#### Absolute Maximum Rating ( $T_a=25^{\circ}\text{C}$ )

Parameter	Symbol	Absolute Maximum Rating	Unit
Forward Pulse Current	$I_{\text{FPM}}$	70	mA
Forward Current	$I_{\text{FM}}$	30	mA
Reverse Voltage	$V_{\text{R}}$	5	V
Power Dissipation	$P_{\text{D}}$	100	mW
Operating Temperature	$T_{\text{opr}}$	-40~+80	$^{\circ}\text{C}$
Storage Temperature	$T_{\text{stg}}$	-40~+100	$^{\circ}\text{C}$
Soldering Heat (5s)	$T_{\text{sol}}$	260	$^{\circ}\text{C}$

#### Electro-Optical Characteristics ( $T_a=25^{\circ}\text{C}$ )

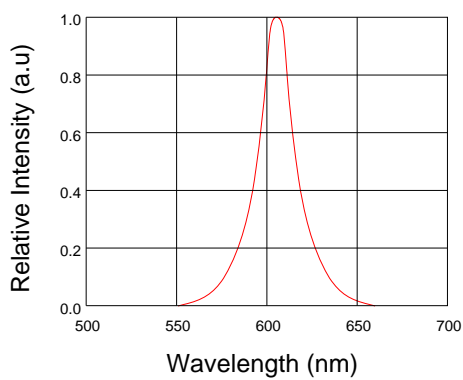
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	$I_{\text{v}}$	1500		2000	mcd	IF=20mA(Note1)
Viewing Angle	$2\theta_{1/2}$	20	25	30	Deg	(Note 2)
Peak Emission Wavelength	$\lambda_{\text{p}}$	600	605	610	nm	IF=20mA
Spectral Line Half-Width	$\Delta\lambda$	15	20	25	nm	IF=20mA
Forward Voltage	$V_{\text{F}}$	1.9	---	2.3	V	IF=20mA
Reverse Current	$I_{\text{R}}$	---	---	10	$\mu\text{A}$	VR=5V

#### Note:

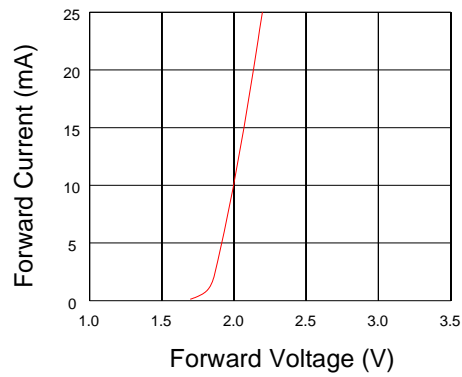
1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2.  $\theta_{1/2}$  is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

#### Typical Electro-Optical Characteristics Curves

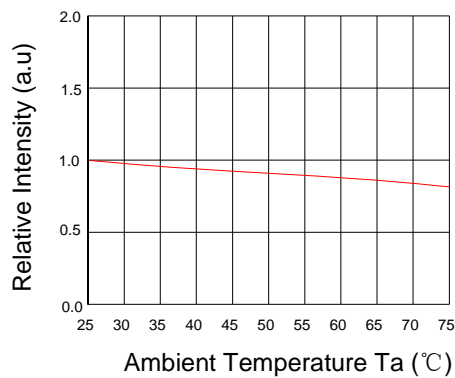
Relative Intensity VS. Wavelength



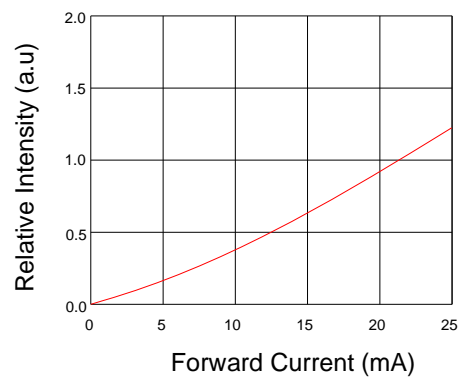
Forward Current VS. Forward Voltage



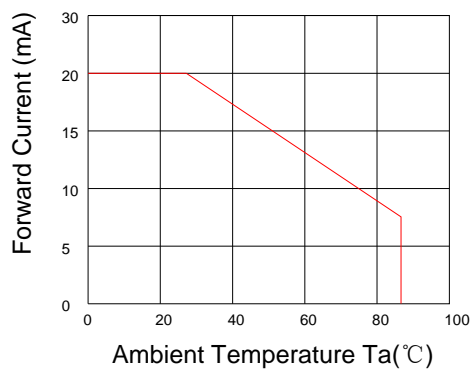
Relative Intensity VS. Ambient Temp



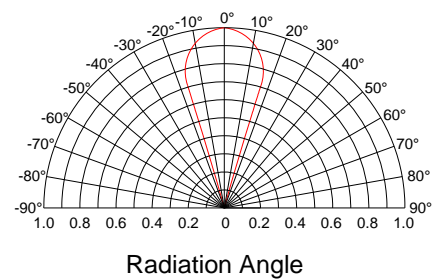
Forward Current VS. Relative Intensity



Forward Current VS. Ambient Temp.



Radiation Characteristics



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