



HUIYUAN ELECTRONIC CO.,LTD.

TECHNOLOGY DATA SHEET & SPECIFICATIONS

MODEL: 5003R1D-EHB-A

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



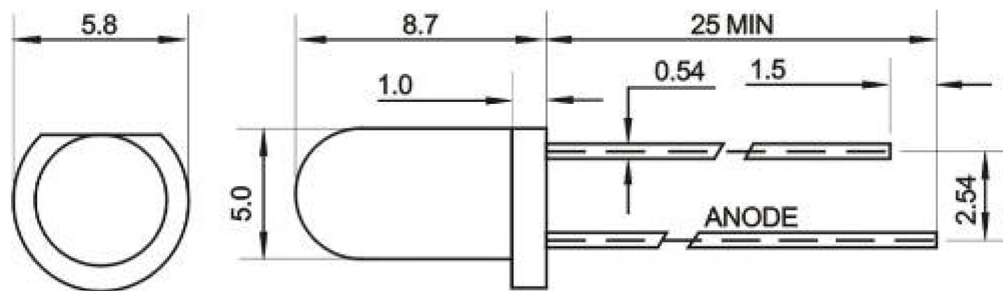
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Device Selection Guide

LED Part No.	Chip		Lens Color
	Material	Emitted Color	
5003R1D-EHB-A	AlGaInP	Red	Color Diffused

Package Dimensions



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 ($T_a=25^{\circ}\text{C}$)

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	T_{opr}	-40~+80	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-40~+100	$^{\circ}\text{C}$
Soldering Heat (5s)	T_{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_{v}	100	---	150	mcd	IF=20mA(Note1)
Viewing Angle	$2\theta_{1/2}$	40	---	60	Deg	(Note 2)
Peak Emission Wavelength	λ_{p}	620	630	635	nm	IF=20mA
Spectral Line Half-Width	$\Delta\lambda$	15	20	25	nm	IF=20mA
Forward Voltage	V_{F}	1.9	---	2.3	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

