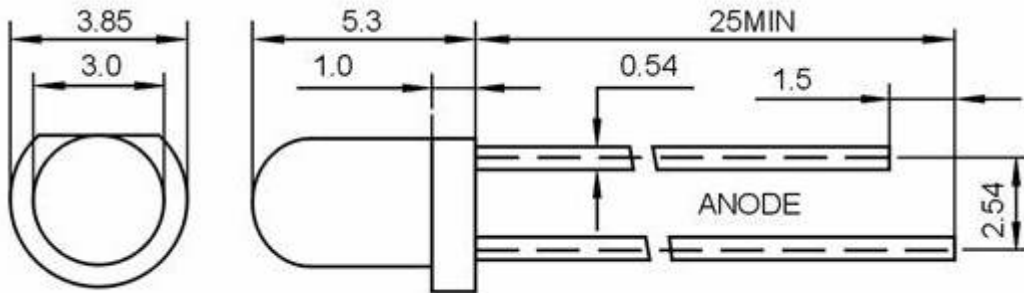


Light Emitting Diode Lamp

★ Package Dimensions



UNIT: mm

★ 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

★ Applications

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

★ Usage Notes:

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

★ Device Selection Guide

LED Part No.	Chip		Lens Color
	Material	Emitted Color	
3-22b-CD46-10	AlGaInP	Red	Color Diffused

Light Emitting Diode Lamp

Part No.: 3-22b-CD46-10

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_{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}	$-40^\circ\text{C} +85$	
Storage Temperature	T_{stg}	$-40^\circ\text{C} +100$	
Soldering Heat (5s)	T_{sol}	260°C	

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I_v	200	350	---	mcd	IF=20mA(Note1)
Viewing Angle	$2\theta_{1/2}$	---	50	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	$V_R=5\text{V}$

Note:

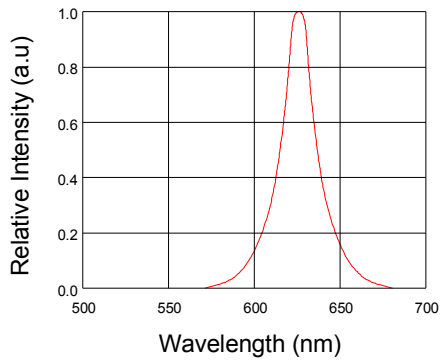
- Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
- $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

Light Emitting Diode Lamp

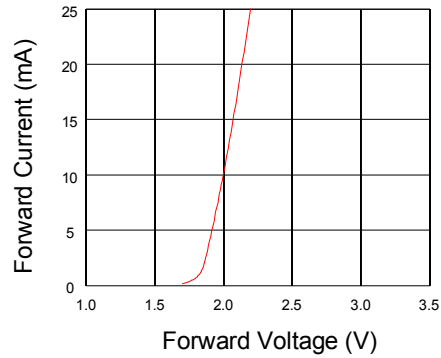
Part No.: 3-22b-CD46-10

★ Typical Electro-Optical Characteristics Curves

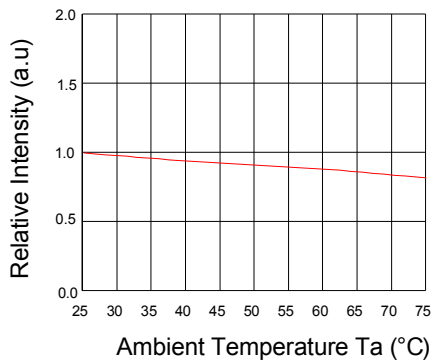
Relative Intensity VS. Wavelength



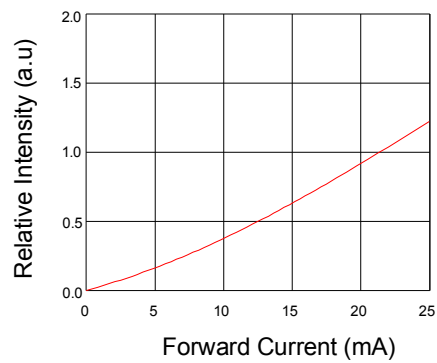
Forward Current VS. Forward Voltage



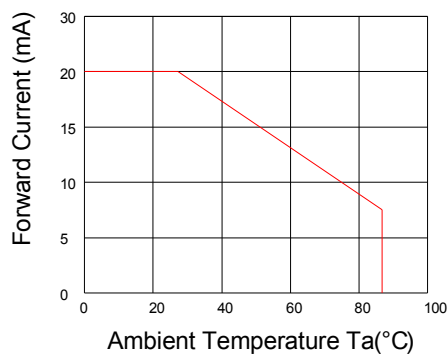
Relative Intensity VS. Ambient Temp



Forward Current VS. Relative Intensity



Forward Current VS. Ambient Temp.



Radiation Characteristics

