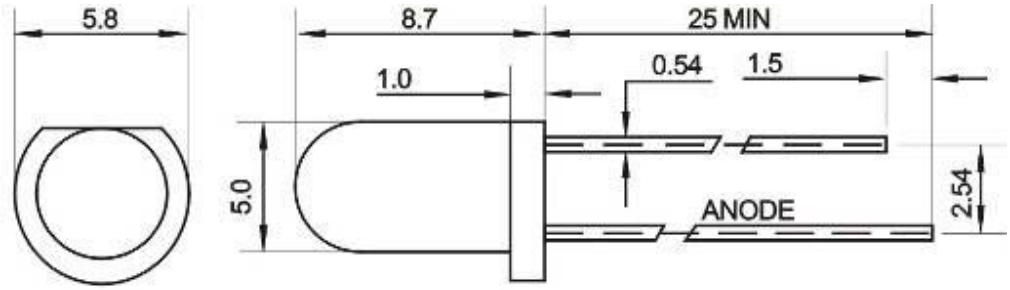
ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

ARL-5013LRD-B

Package Dimensions



UNIT:mm

Features

- Electricity control IC embedded
- Fancy, fun, hottest in the market.
- Lens size with 5mm / 8mm / 10mm options
- Viewing Angles: 60°.
- Operating voltage range: 3V-5V DC.
- Blinking frequency: 1.8Hz
- Frequency tolerance: ±20%
- RoHS compliant

Applications

- Toys / sports utilities
- Miniature key chains
- Effect Lights.
- Display / decoration lights .
- Electronic displays and signals
- Interior decoration lights.
- Indicator lights.
- Solar energy lights / garden lights

Usage Notes

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

Description

- New trend creations
- Low energy consumptions
- Low maintenance costs
- High application design flexibility
- High reliability

Device Selection Guide

Part No.	Chip		Lens Color
	Material	Emitted Color	
ARL-5013LRD-B	AlGaInP	Red	Red Diffused

Absolute Maximum Rating (T_a=25°C)

Parameter	Symbol	Absolute Maximum Rating	Units
Peak Forward Current (Duty /10 @ 1KHZ)	I_{FPM}	100	mA
Forward Current	I_{FM}	30	mA
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	100	mW
Operating Temperature	Topr	-40 ~ +80	°C
Storage Temperature	Tstg	-40 ~ +100	°C
Soldering Temperature	Tsol	260	°C

Electrical / Optical Characteristics at TA=25°C

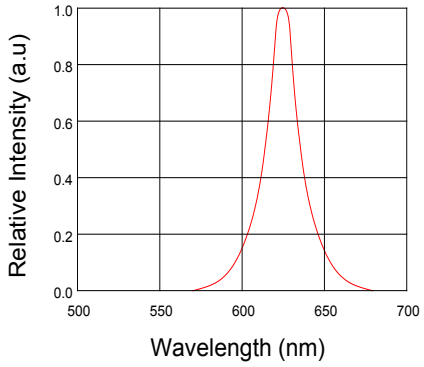
Parameter	Symbol	Min	Typ.	Max.	Units	Test Conditions
Luminous Intensity	Iv	100	200	250	mcd	IF=20mA (Note 1)
Viewing Angle	2θ1/2	---	60	---	Deg	(Note 2)
Peak Emission Wavelength	λp	620	630	635	nm	IF=20mA
Spectral Line Half-Width	λ	15	20	25	nm	IF=20mA
Blinking Frequency	Fled	1.8	---	2.4	Hz	IF=20mA
Forward Voltage	V_F	3.0	---	5.0	V	IF=20mA
Reverse Current	I_R	---	---	10	μA	VR=5V

Notes: *1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.*

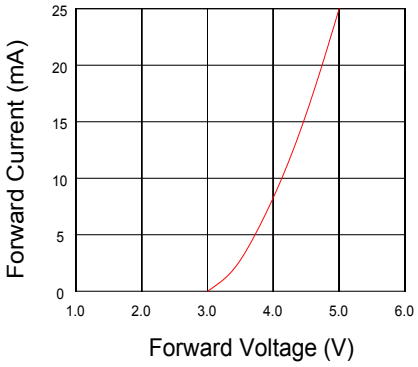
2. $\theta_{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

Typical Electro-Optical Characteristics Curves

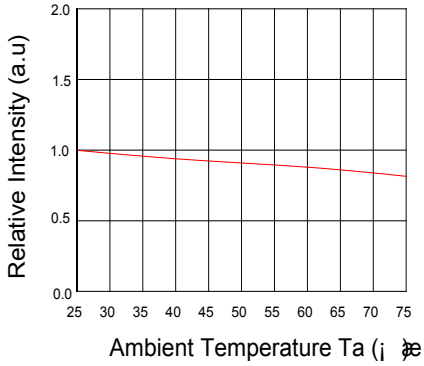
Relative Intensity VS. Wavelength



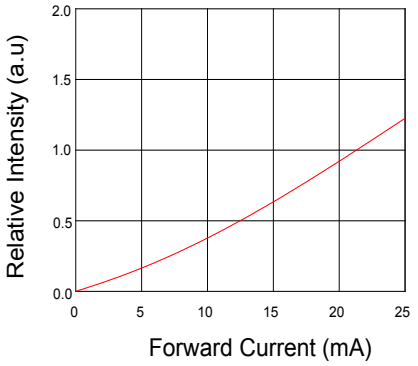
Forward Current VS.Forward Voltage



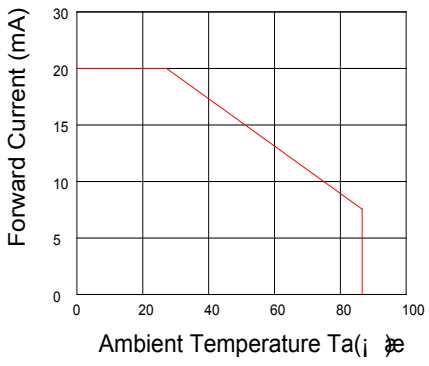
Relative Intensity VS. Ambient Temp



Forward Current VS.Relative Intensity



Forward Current VS.Ambient Temp.



Radiation Characteristics