

## 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

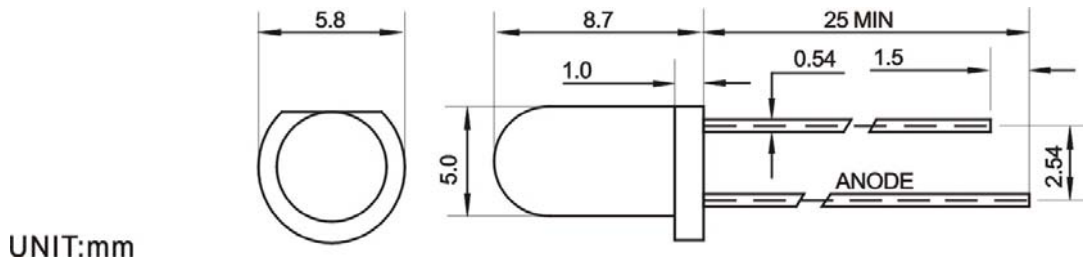
## Applications

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

## Device Selection Guide

LED Part No.	Chip		Lens Color
	Material	Emitted Color	
ARL-5513URC-2.5cd	AlGaInP	Red	Water clear

## 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.

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

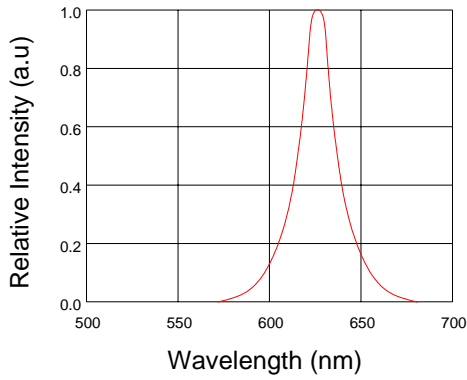
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	$I_v$	2000	---	4000	mcd	$I_F=20\text{mA}$ (Note1)
Viewing Angle	$2\theta_{1/2}$	50	---	60	Deg	(Note 2)
Peak Emission Wavelength	$\lambda_p$	620	630	635	nm	$I_F=20\text{mA}$
Spectral Line Half-Width	$\lambda$	15	20	25	nm	$I_F=20\text{mA}$
Forward Voltage	$V_F$	1.9	---	2.5	V	$I_F=20\text{mA}$
Reverse Current	$I_R$	---	---	10	$\mu\text{A}$	$V_R=5\text{V}$

### Note:

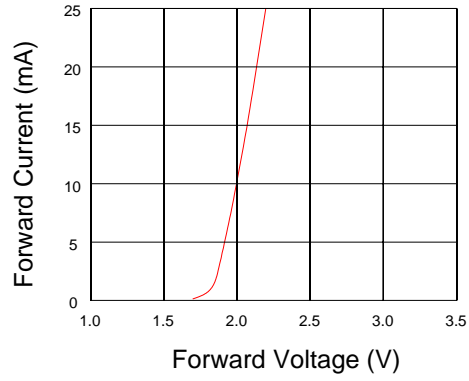
1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2.  $\theta_{1/2}$  is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

# Typical Electro-Optical Characteristics Curves

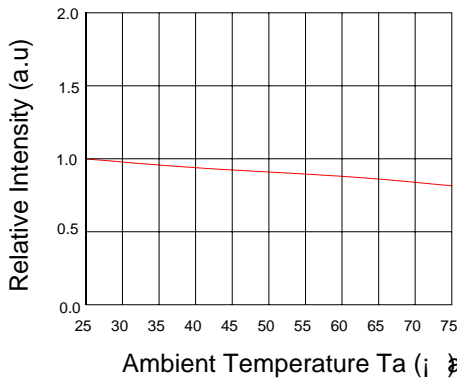
Relative Intensity VS. Wavelength



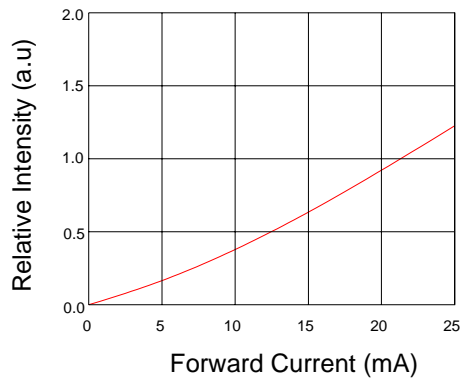
Forward Current VS. Forward Voltage



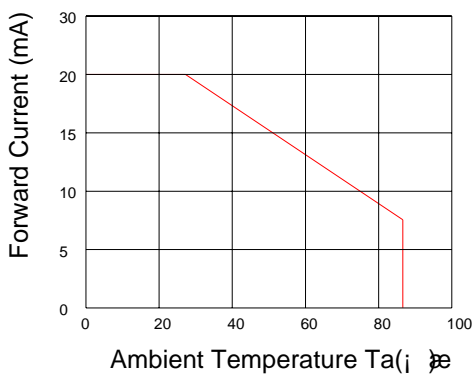
Relative Intensity VS. Ambient Temp



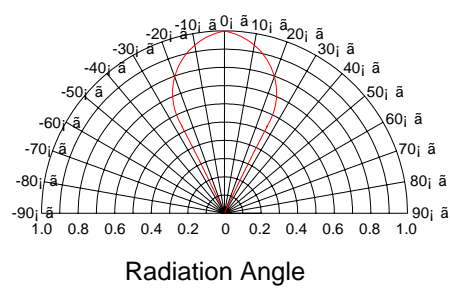
Forward Current VS. Relative Intensity



Forward Current VS. Ambient Temp.



Radiation Characteristics



## Notes

When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. Factory assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.