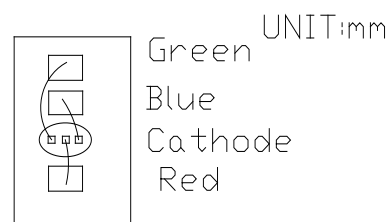
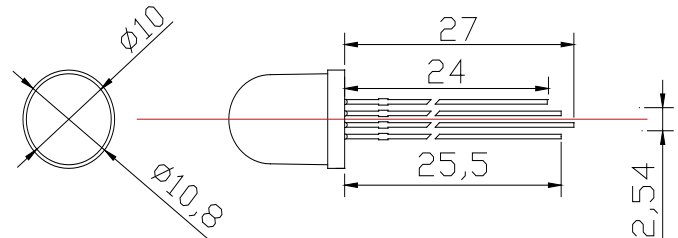




ARL-10203RGBC/4L

Package Dimensions



Features

- UNIFORM LIGHT OUTPUT
- LOW POWER CONSUMPTION
- I.C. COMPATIBLE
- LONG LIFE - SOLID STATE RELIABILITY
- Common Cathode

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.

Description

- The Red source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode
- The Green source color devices are made with InGaN on sic Light Emitting Diode
- The Blue source color devices are made with InGaAlN on sic Light Emitting Diode.

Usage Notes

The ultra bright LED is an electrostatic insensitive device, so static electricity and surge will damage the LED. It is required to wear a wrist-band when handling the LED. All device, equipment, machinery, desk and ground must be properly grounded

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

Absolute Maximum Rating (T_a = 25°C)

Parameter	Symbol	Absolute Maximum Rating	Units
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	I _{FPM}	R : 60 G: 100 B: 100	mA
Forward Current	I _{FM}	20	mA
Reverse Voltage	V _R	5	V
Power Dissipation	P _D	R : 60 G: 130 B: 130	mW
Operating Temperature	Topr	-40 ~ +80	°C
Storage Temperature	Tstg	-40 ~ +100	°C
Soldering Temperature	Tsol	Reflow Soldering : 260°C for 10 sec. Hand Soldering : 350 °C for 3 sec	°C

Electrical / Optical Characteristics at TA=25°C

Parameter	Symbol	Device	Min	Typ.	Max.	Units	Test Conditions
Luminous Intensity	I _v	Red Green Blue	1000 1500 1000	--- --- ---	1850 2700 1500	mcd	IF=20mA
Viewing Angle	2θ _{1/2}	Red Green Blue	---	40	---	Deg	
Peak Emission Wavelength	λ _p	Red Green Blue	635 520 460	640 525 465	650 530 470	nm	IF=20mA
Spectral Line Half-Width	λ	Red Green Blue	15 15 20	20 20 30	25 25 35	nm	IF=20mA
Forward Voltage	V _F	Red Green Blue	1.9 1.9 2.9	--- --- ---	2.5 3.5 3.5	V	IF=20mA
Reverse Current	I _R	Red Green Blue	---	---	10	μA	VR=5V

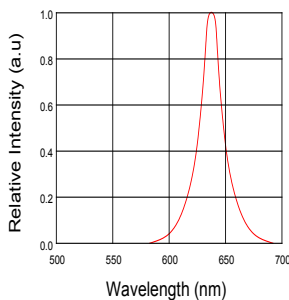
Device Selection Guide

Part No.	Chip		Lens Color
	Material	Emitted Color	
ARL-5013PGC-B	AlGaInP	Red	White clear
	InGaN	Green	
	InGaN	Blue	

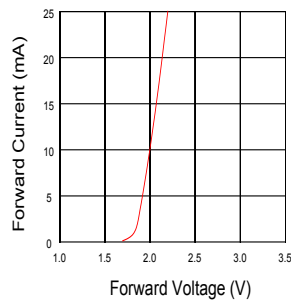
Typical Electro-Optical Characteristics Curves

- Red

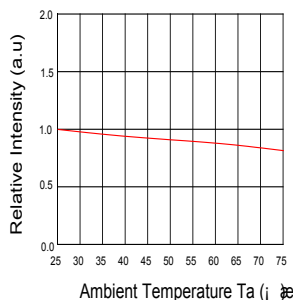
Relative Intensity VS. Wavelength



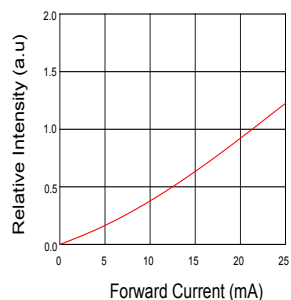
Forward Current VS. Forward Voltage



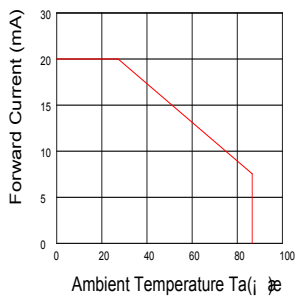
Relative Intensity VS. Ambient Temp



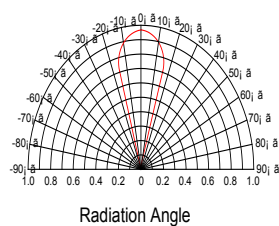
Forward Current VS. Relative Intensity



Forward Current VS.Ambient Temp.

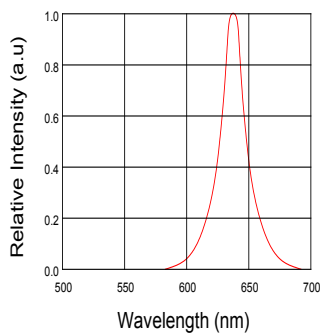


Radiation Characteristics

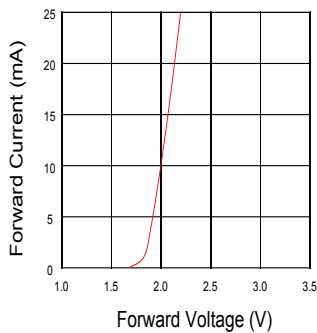


● Green

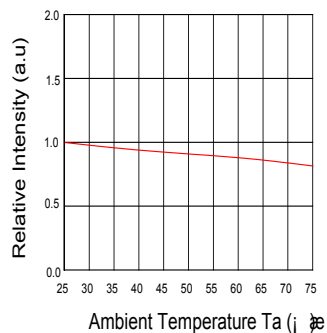
Relative Intensity VS. Wavelength



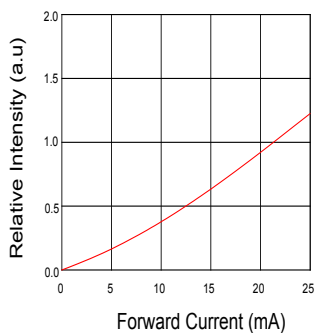
Forward Current VS.Forward Voltage



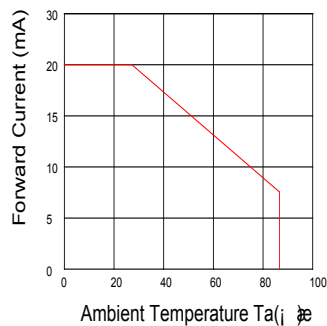
Relative Intensity VS. Ambient Temp



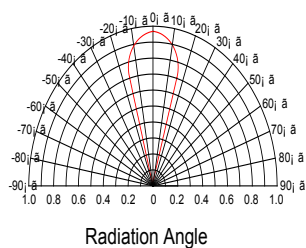
Forward Current VS.Relative Intensity



Forward Current VS.Ambient Temp.

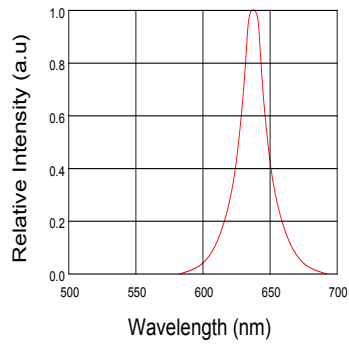


Radiation Characteristics

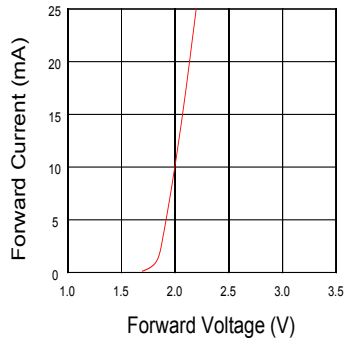


- Blue

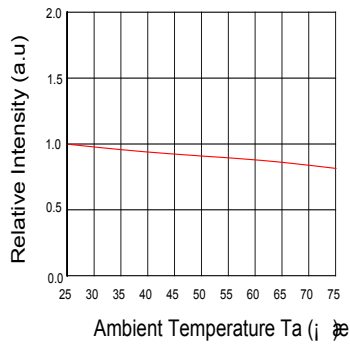
Relative Intensity VS. Wavelength



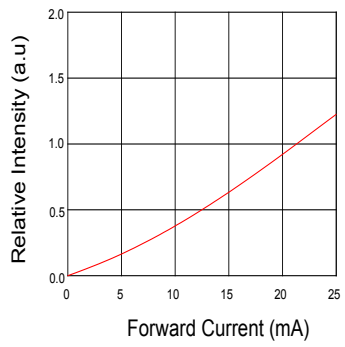
Forward Current VS. Forward Voltage



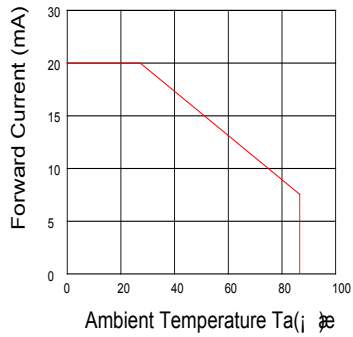
Relative Intensity VS. Ambient Temp



Forward Current VS. Relative Intensity



Forward Current VS. Ambient Temp.



Radiation Characteristics

