

ARL-5613RGBW/4C

Features

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

Applications

Status indicators
 Commercial use
 Advertising Signs
 Back lighting



Descriptions

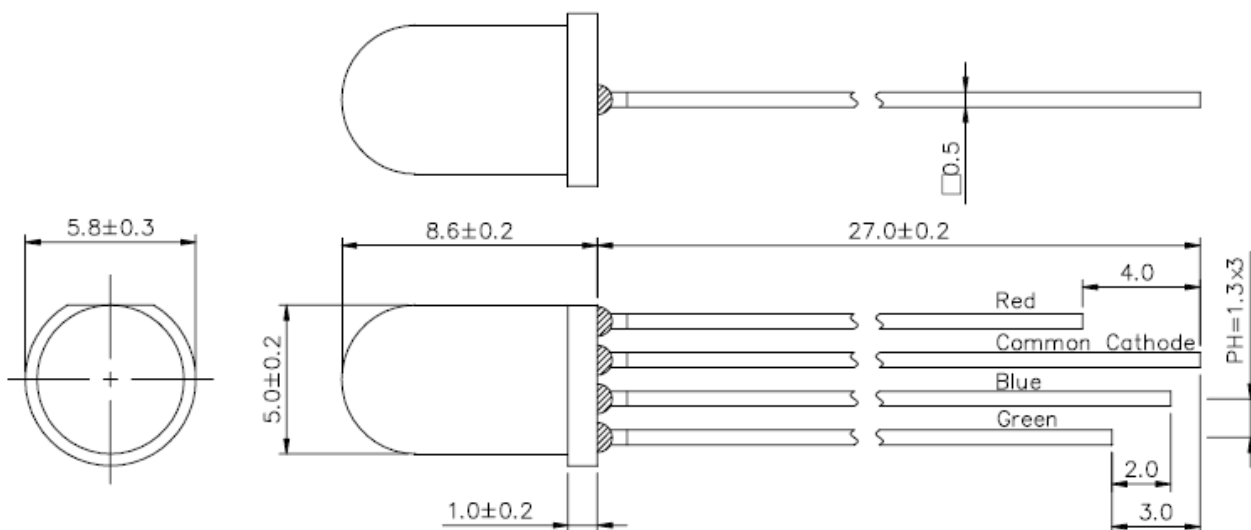
The Red source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode
 The Green source color devices are made with InGaN on sic Light Emitting Diode
 The Blue source color devices are made with InGaAlN on sic Light Emitting Diode.

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

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.

Device Selection Guide

LED Part No.	Chip		Lens Color
	Material	Emitted Color	
ARL-5613RGBW/4C	AlGaInP	Red	White Diffused
	InGaN	Green	
	InGaN	Blue	

Absolute Maximum Rating (Ta=25°C)

Parameter	Symbol	Absolute Maximum Rating	Unit
Forward Pulse Current	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

Electro-Optical Characteristics (Ta=25 °C)

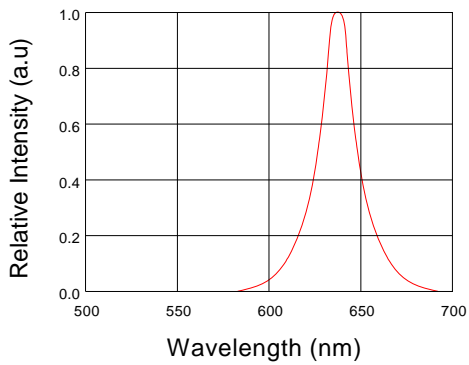
Parameter	Symbol	Device	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	I _v	Red	800	---	1200	mcd	IF=20mA
		Green	1200	---	1500		
		Blue	700	---	1000		
Viewing Angle	2θ1/2	Red	50	---	65	Deg	(Note 1)
		Green					
		Blue					
Peak Emission Wavelength	λ _p	Red	625	630	640	nm	IF=20mA
		Green	520	525	530		
		Blue	460	465	470		
Spectral Line Half-Width	Δλ	Red	15	20	25	nm	IF=20mA
		Green	15	20	25		
		Blue	25	30	35		

Forward Voltage	V_F	Red	1.9	---	2.4	V	IF=20mA
		Green	2.9	---	3.3		
		Blue	2.9	---	3.3		
Reverse Current	I_R	Red	---	---	10	μA	VR=5V
		Green	---	---			
		Blue	---	---			

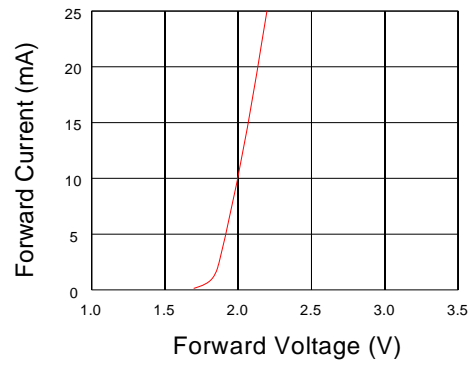
Typical Electro-Optical Characteristics Curves

RED

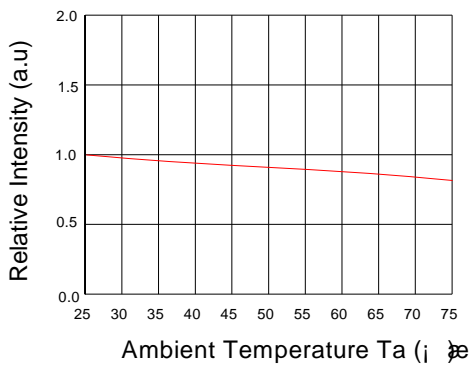
Relative Intensity VS. Wavelength



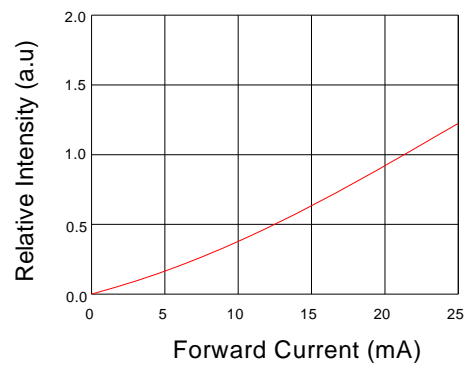
Forward Current VS. Forward Voltage



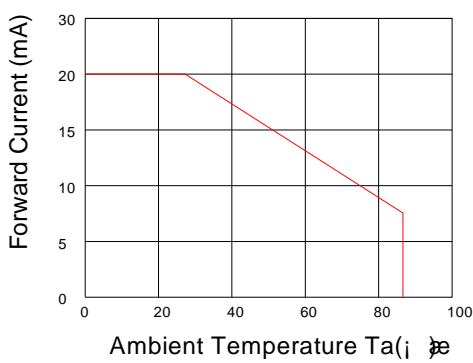
Relative Intensity VS. Ambient Temp



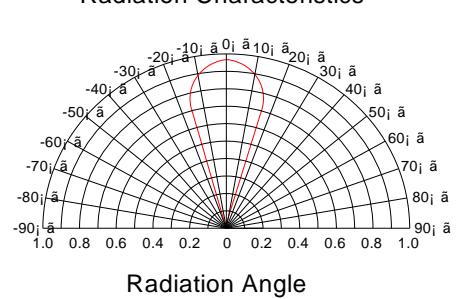
Forward Current VS. Relative Intensity



Forward Current VS. Ambient Temp.

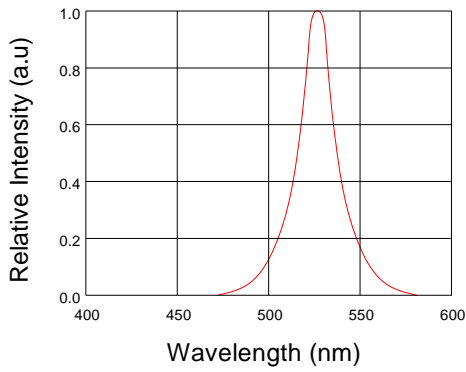


Radiation Characteristics

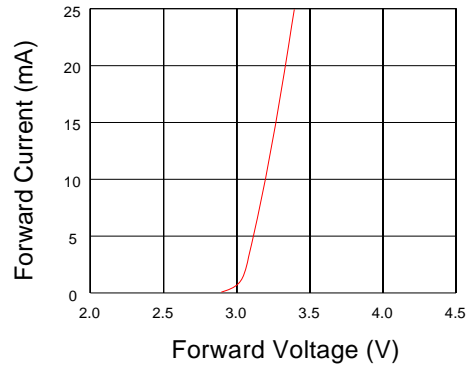


Green

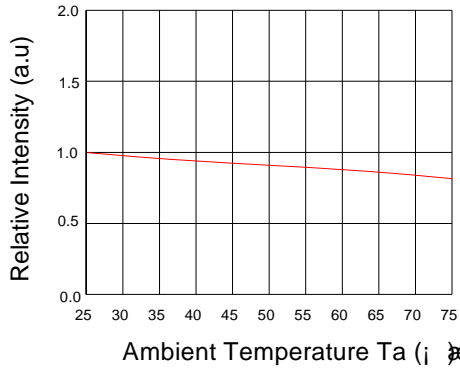
Relative Intensity VS. Wavelength



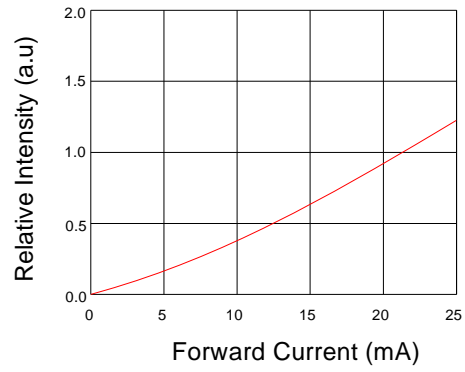
Forward Current VS. Forward Voltage



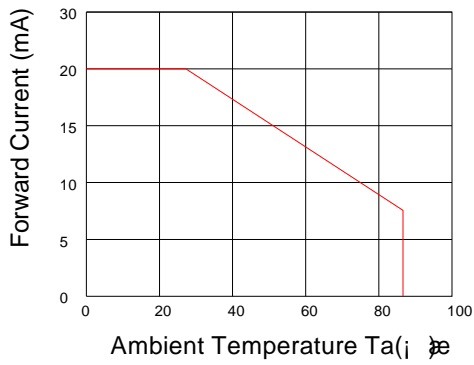
Relative Intensity VS. Ambient Temp



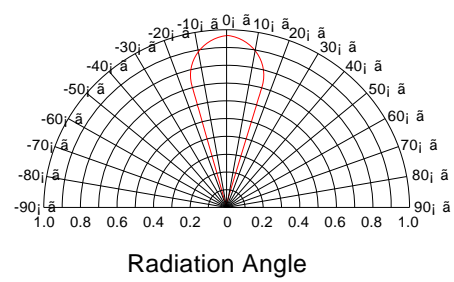
Forward Current VS. Relative Intensity



Forward Current VS. Ambient Temp.

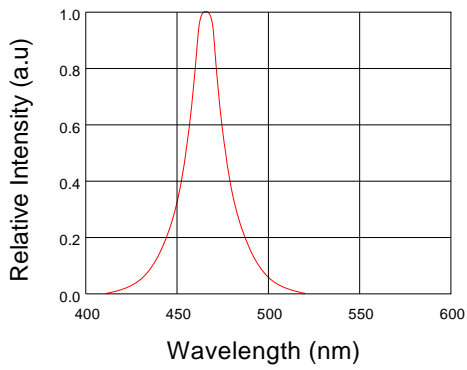


Radiation Characteristics

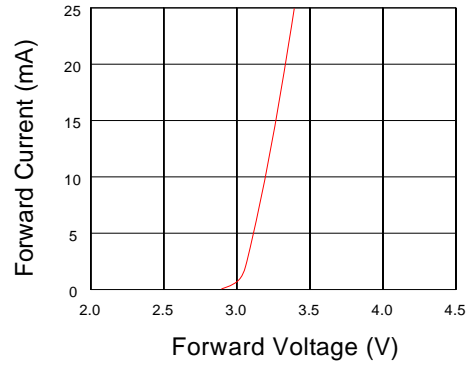


Blue

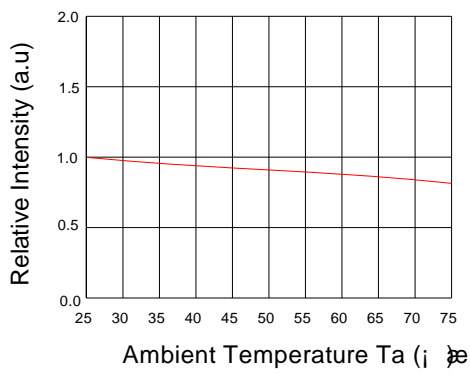
Relative Intensity VS. Wavelength



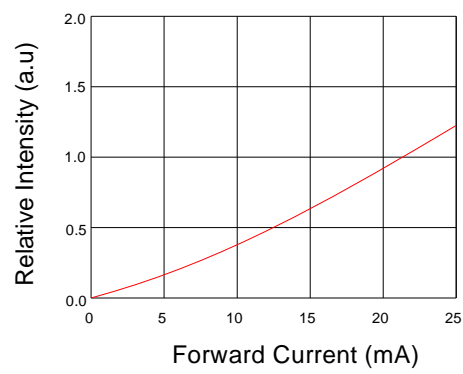
Forward Current VS. Forward Voltage



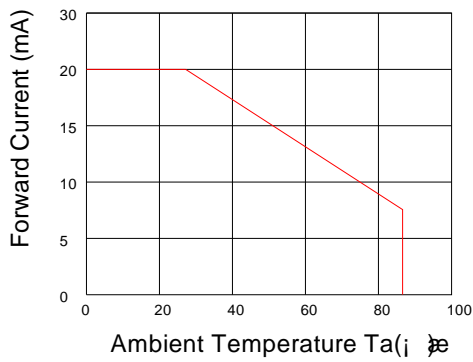
Relative Intensity VS. Ambient Temp



Forward Current VS. Relative Intensity



Forward Current VS. Ambient Temp.



Radiation Characteristics

