

AA9219/2EC HIGH EFFICIENCY RED

AA9219/2GC GREEN

AA9219/2YC YELLOW

AA9219/2SRC SUPER BRIGHT RED

AA9219/2SGC SUPER BRIGHT GREEN

### Features

- LOW POWER CONSUMPTION.
- AVAILABLE ON TAPE AND REEL.
- IDEAL FOR BACKLIGHTING.

### Description

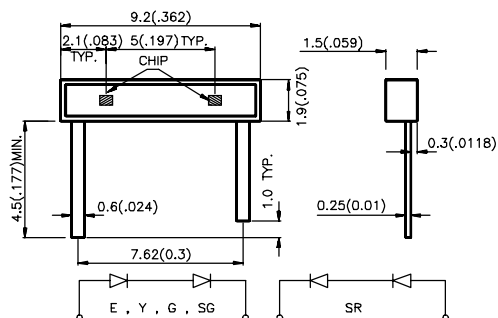
The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode

The Green and Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

The Yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.

The Super Bright Red source color devices are made with Gallium Aluminum Arsenide Red Light Emitting Diode.

### Package Dimensions



#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25(0.01)$  unless otherwise noted.
3. Lead spacing is measured where the lead emerge package.
4. Specifications are subjected to change without notice.

## Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 10 mA *20mA		Viewing Angle
			Min.	Typ.	2θ1/2
AA9219/2EC	HIGH EFFICIENCY RED (GaAsP/GaP)	WATER CLEAR	15	25	100°
AA9219/2GC	GREEN (GaP)	WATER CLEAR	10	20	100°
AA9219/2YC	YELLOW (GaAsP/GaP)	WATER CLEAR	8	15	100°
AA9219/2SRC	SUPER BRIGHT RED (GaAlAs)	WATER CLEAR	*90	*100	100°
AA9219/2SGC	SUPER BRIGHT GREEN (GaP)	WATER CLEAR	*40	*60	100°

### Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. \* Luminous intensity with asterisk is measured at 20mA.

## Electrical / Optical Characteristics at T<sub>A</sub>=25°C

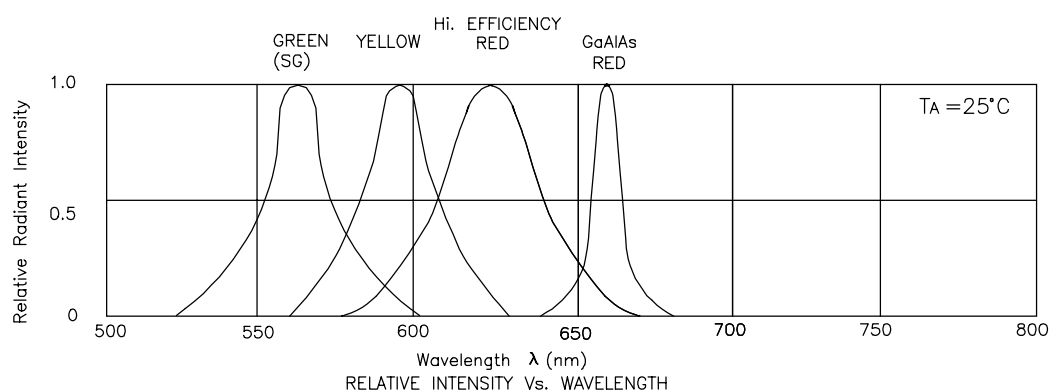
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ <sub>peak</sub>	Peak Wavelength	High Efficiency Red Green Yellow Super Bright Red Super Bright Green	625 565 590 660 565		nm	IF=20mA
Δλ <sub>1/2</sub>	Spectral Line Halfwidth	High Efficiency Red Green Yellow Super Bright Red Super Bright Green	45 30 35 20 30		nm	IF=20mA
C	Capacitance	High Efficiency Red Green Yellow Super Bright Red Super Bright Green	12 45 10 95 45		pF	VF=0V;f=1MHz
V <sub>F</sub>	Forward Voltage	High Efficiency Red Green Yellow Super Bright Red Super Bright Green	2.0 2.2 2.1 1.85 2.2	2.5 2.5 2.5 2.5 2.5	V	IF=20mA
I <sub>R</sub>	Reverse Current	All		10	μA	VR = 5V

## Absolute Maximum Ratings at $T_A=25^\circ\text{C}$

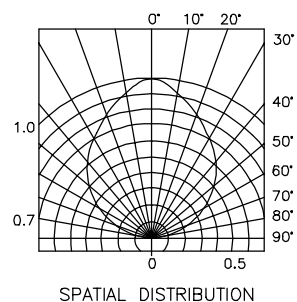
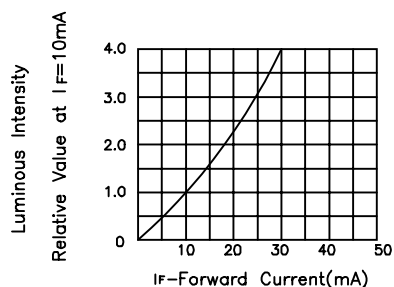
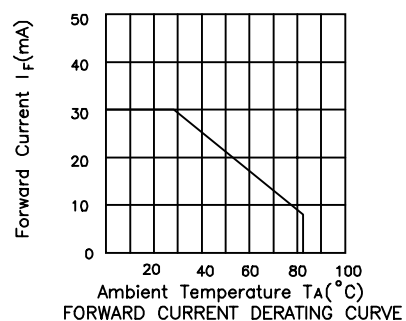
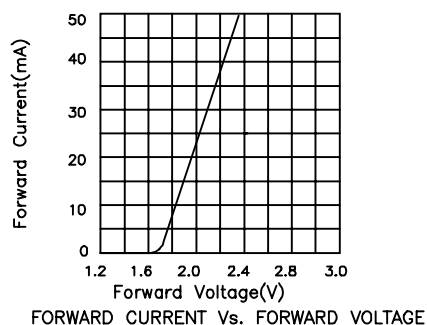
Parameter	High Efficiency Red	Green	Yellow	Super Bright Red	Super Bright Green	Units
Power dissipation	105	105	105	100	105	mW
DC Forward Current	30	25	30	30	25	mA
Peak Forward Current [1]	150	150	150	150	150	mA
Reverse Voltage	5	5	5	5	5	V
Operating/Storage Temperature	$-40^\circ\text{C}$ To $+85^\circ\text{C}$					
Lead Soldering Temperature [2]	$260^\circ\text{C}$ For 5 Seconds					

Notes:

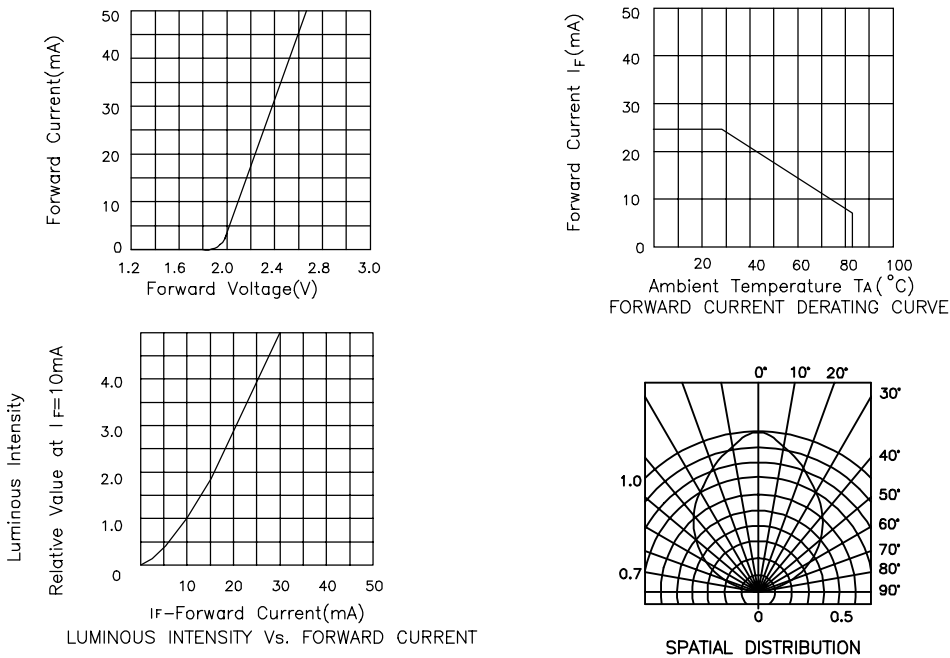
- 1/10 Duty Cycle, 0.1ms Pulse Width.
- 4mm below package base.



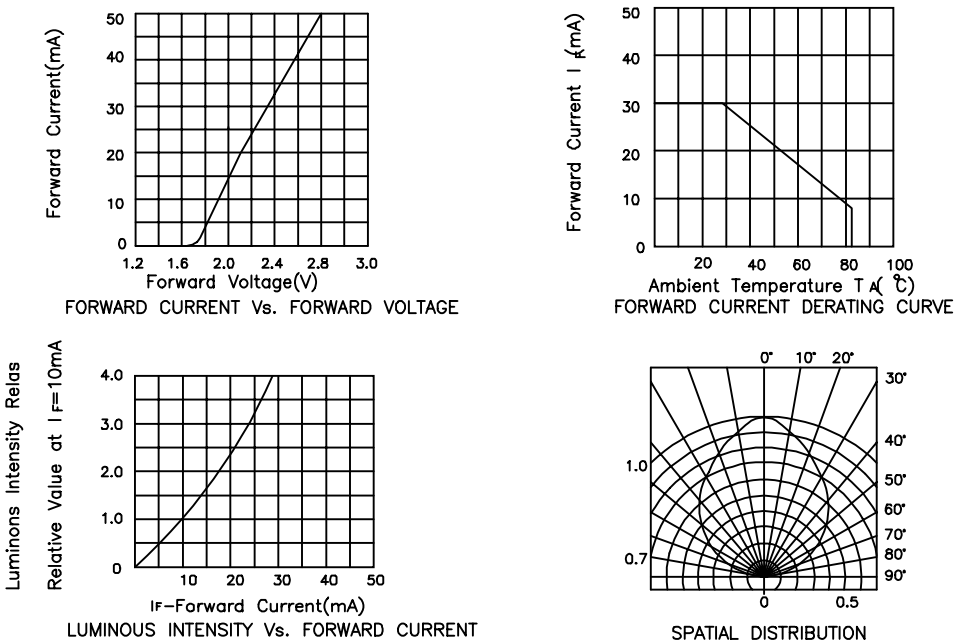
## High Efficiency Red AA9219/2EC



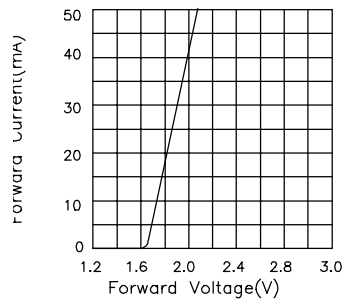
Green AA9219/2GC



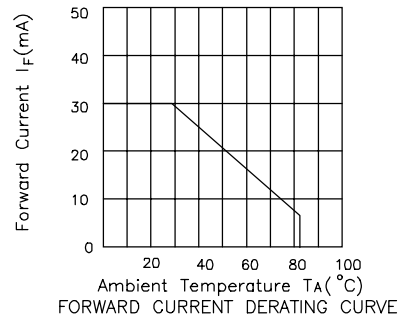
Yellow AA9219/2YC



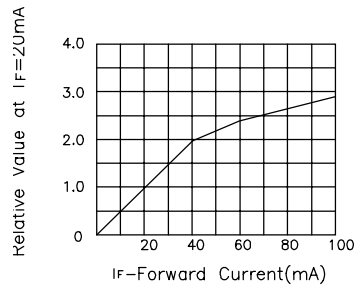
## Super Bright Red AA9219/2SRC



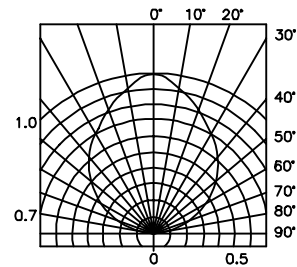
FORWARD CURRENT VS. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

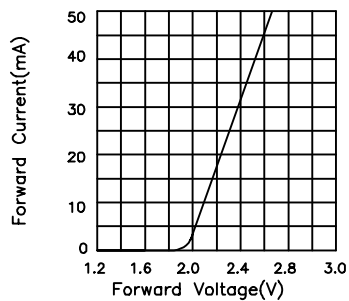


LUMINOUS INTENSITY VS. FORWARD CURRENT

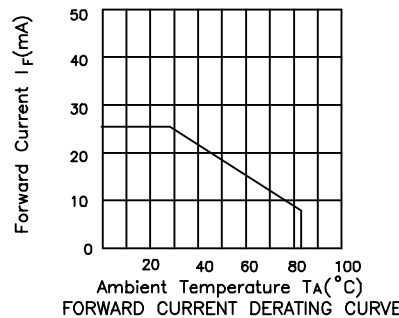


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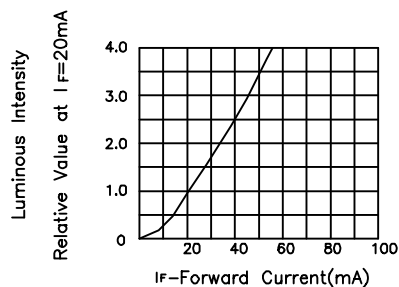
## Super Bright Green AA9219/2SGC



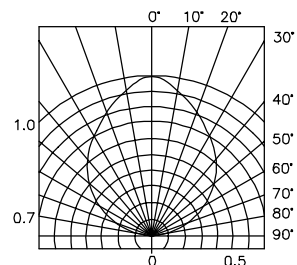
FORWARD CURRENT VS. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



LUMINOUS INTENSITY VS. FORWARD CURRENT



SPATIAL DISTRIBUTION