



VAOL-3GAE4

#### **Feature**

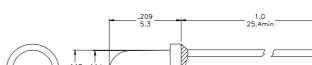
- Low Power Consumption
- I.C. compatible

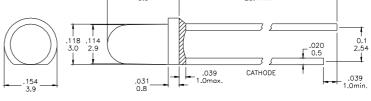
## **Applications**

- Commercial Outdoor Sign Board
- Front Panel Indicator
- Dot-Matrix Module
- LED Bulb

## **Description**

- These LEDs are Based on GaAlAs/GaAs
- Material Technology
- Emitted color:Red
- Water Transparent Lens





inch \* Tolerance: Unit: mm

**Package Dimension** 

## Absolute Maximum Ratings at Ta=25°C

Symbol	Parameter Max.		Unit		
PD	Power Dissipation	120	mW		
VR	Reverse Voltage	5	V		
IAF	Average Forward Current	30	mA		
IPF	Peak Forward Current (Duty=0.1, 1kHz)	100	mA		
_	Derating Linear Form 25°C	0.4	mA / °℃		
Topr	Operating Temperature Range	-40 to +85	$^{\circ}\!\mathbb{C}$		
Tstg	Storage Temperature Range	-40 to + 100	$^{\circ}\mathbb{C}$		
Lead Soldering Temperature [1.6mm (0.063inch) From Body] 260°C For 5 Seconds.					

# Electrical / Optical Characteristics and Curves at Ta=25℃

Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Unit
VF	Forward Voltage	IF= 20 mA		1.8	2.0	V
IR	Reverse Current	VR = 5 V			50	$\mu$ A
$\triangle \theta$	Half Intensity Angle	IF= 20 mA		30		Deg.
IV	Luminous Intensity	IF= 20 mA		150		med.
λd	Dominant Wavelength	IF= 20 mA		640		nm





## Electrical Characteristics at Ta=25°C

Symbol		Iv		VF		λD
Parameter	Lum	inous Intensity	Forward Voltage		Dominant Wavelength	
Condition	ndition IF=20mA		IF=20mA		IF=20mA	
Unit	med		V		nm	
	Grade	Range	Grade	Range	Grade	Range
			A	1.7~1.8	R1	635~640
Binning			В	1.8~1.9	R2	640~646
Diminig			С	1.9~2.0		

Intensity: Tolerance of minimum and maximum =  $\pm 15\%$ 

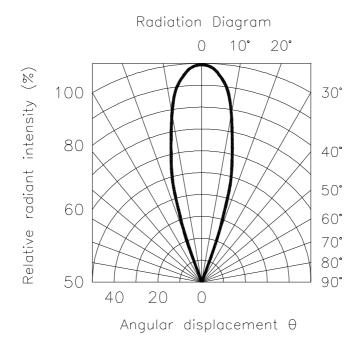
Vf: Tolerance of minimum and maximum =  $\pm 0.05v$ 

NOTE:

- 1. Static electricity and surge damages the LED. It is recommend to use a anti-static wrist band or anti-electrostatic glove when handing the LEDs. All devices, equipment and machinery must be properly grounded.
- 2. Specific binning requirements- please contact our home office

## **Radiation Diagram**

IF=20 mA 50% Power Angle Angle = $30^{\circ}$ 









# Red

# Typical Electro-optical Characteristic Curves (25°C Free Air Temperature Unless Otherwise Specified)

Fig 1. Forward Current vs. Forward Voltage

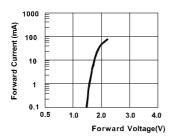


Fig 2. Relative Intensity vs. Forward Current

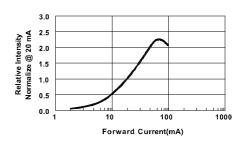


Fig 3. Forward Voltage vs. Temperature

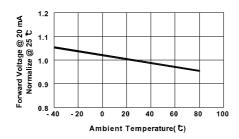


Fig 4. Relative Intensity vs. Temperature

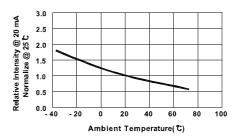


Fig 5. Relative Intensity vs. Wavelength

