

**Feature**

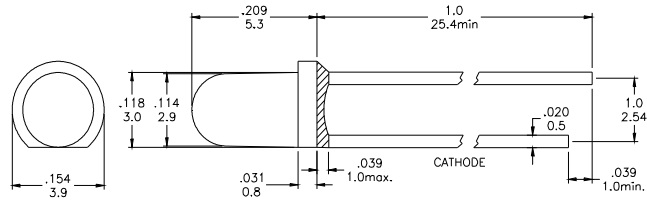
- § Low Power Consumption
- § I.C. compatible

**Applications**

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

**Description**

- § These LEDs are Based on AlInGaP/GaAs Material Technology
- § Water Transparent Lens

**Package Dimension**


$$*Tolerance : \pm \frac{0.01}{0.25} \quad \text{Unit : } \pm \frac{\text{inch}}{\text{mm}}$$

**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 / °C
Topr	Operating Temperature Range	- 40 to + 85	°C
Tstg	Storage Temperature Range	- 40 to + 100	°C

Lead Soldering Temperature [1.6mm (0.063inch) From Body] 260°C For 5 Seconds.

**Electrical / Optical Characteristics and Curves at Ta=25°C**

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
VF	Forward Voltage	IF= 20 mA		2.1	2.4	V
IR	Reverse Current	VR= 5 V			100	μA
$\Delta \theta$	Half Intensity Angle	IF= 20 mA		30		Deg.
IV	Luminous Intensity	IF= 20 mA		1500		mcd.
$\lambda d$	Peak Wavelength	IF= 20 mA		625		nm

**n**



**APEX OPTO  
CORP**

**SUPERBRIGHT LED LAMP**

**AOL-3GRE4**

**Electrical Characteristics at Ta = 25°C**

Symbol	Iv		VF		λ D	
Parameter	Luminous Intensity		Forward Voltage		Dominant Wavelength	
Condition	IF= 20mA		IF= 20mA		IF= 20mA	
Unit	mcd		V		nm	
Binning	Grade	Range	Grade	Range	Grade	Range
	BIN 16	950~1300	C	1.9~2.0	O2	620~625
	BIN 17	1300~1800	D	2.0~2.1	O3	625~630
	BIN 18	1800~2500	E	2.1~2.2		
			F	2.2~2.3		
			G	2.3~2.4		

Intensity: Tolerance of minimum and maximum = ± 15%

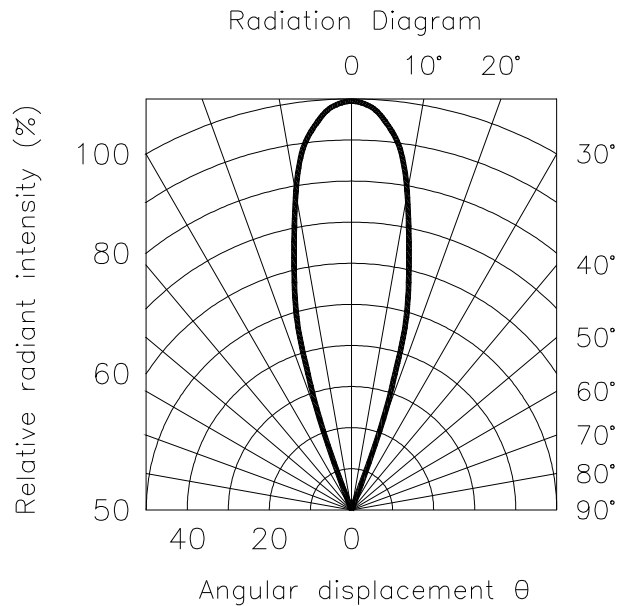
Vf: Tolerance of minimum and maximum = ± 0.05v

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.

**Radiation Diagram**

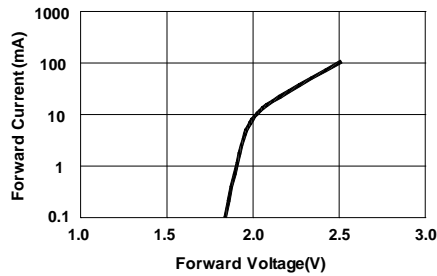
**IF=20 mA    50% Power Angle    Angle =30°**



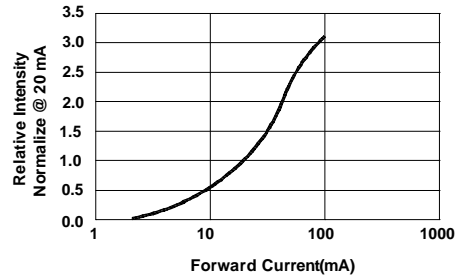


**Typical Electro-optical Characteristic Curves  
(25°C Free Air Temperature Unless Otherwise Specified)**

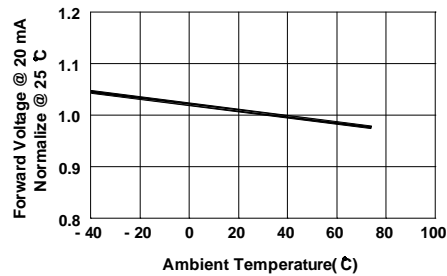
**Fig 1. Forward Current vs. Forward Voltage**



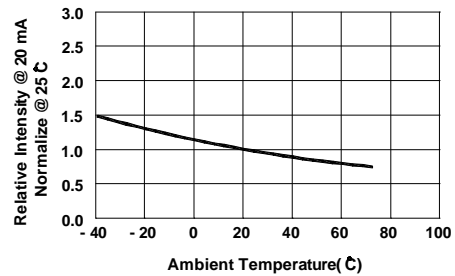
**Fig 2. Relative Intensity vs. Forward Current**



**Fig 3. Forward Voltage vs. Temperature**



**Fig 4. Relative Intensity vs. Temperature**



**Fig 5. Relative Intensity vs. Wavelength**

