

## Feature

Low Power Consumption  
High Intensity  
I.C. compatible

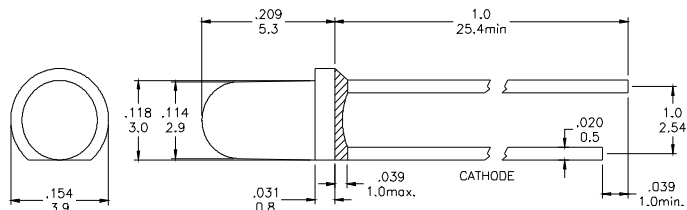
## Applications

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

## Description

These High Intensity LEDs are Based on  
AlInGaP/GaAs Material Technology  
Water Transparent Lens

## Package Dimension



Tolerance±	0.01	Unit±	inch
	0.25		mm

## Absolute Maximum Ratings at Ta=25°C

Symbol	Parameter	Max.	Unit
PD	Power Dissipation	100	mW
VR	Reverse Voltage	5	V
IAF	Average Forward Current	40	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 + 80	°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		2.2	2.5	V
IR	Reverse Current	VR= 5 V			50	μA
△θ	Half Intensity Angle	IF= 20 mA		45		Deg.
IV	Luminous Intensity	IF= 20 mA		2000		mcd.
λd	Dominant Wavelength	IF= 20 mA		590		nm

## Electrical Characteristics at Ta=25°C

Symbol	I <sub>v</sub>		V <sub>F</sub>		λ D	
Parameter	Luminous Intensity		Forward Voltage		Dominant Wavelength	
Condition	I <sub>F</sub> = 20mA		I <sub>F</sub> = 20mA		I <sub>F</sub> = 20mA	
Unit	mcd		V		nm	
Binning	Grade	Range	Grade	Range	Grade	Range
	BIN17	1300~1800	C	1.9~2.1	Y4	589~591
	BIN18	1800~2500	D	2.0~2.2	Y5	591~593
	BIN19	2500~3500	E	2.1~2.3	Y6	593~595
			F	2.2~2.4		

Intensity: Tolerance of minimum and maximum = ± 15%

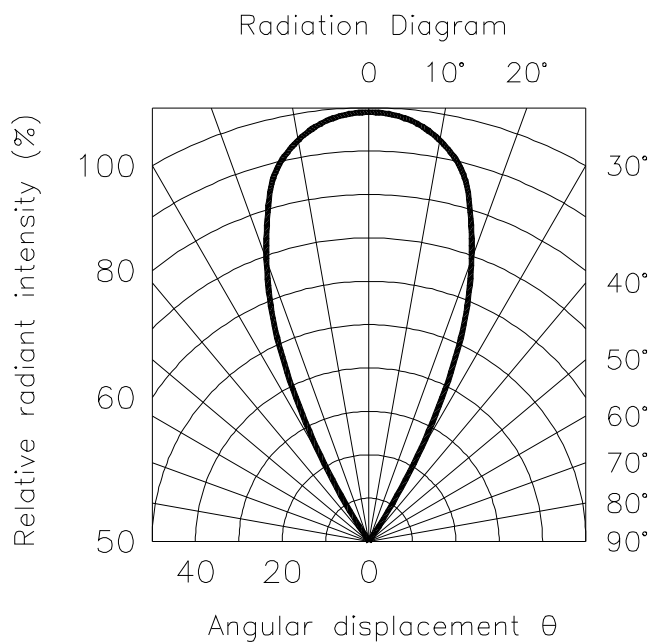
V<sub>F</sub>: Tolerance of minimum and maximum = ± 0.05v

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

**I<sub>F</sub>=20 mA    50% Power Angle    Angle =45°**



## T:Super Bright Yellow (AlGaInP/GaAs)

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

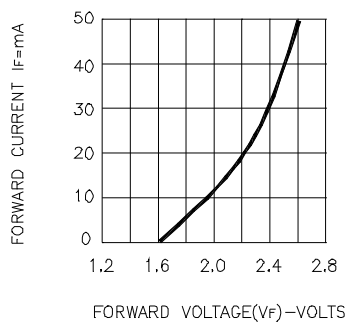


Fig.1 FORWARD CURRENT VS FORWARD VOLTAGE

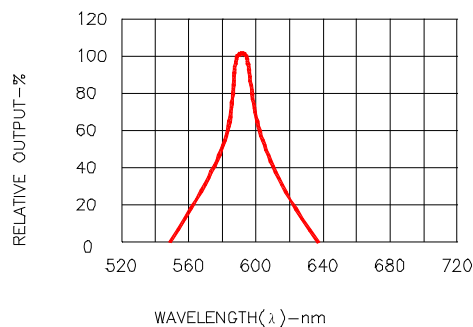


Fig.2 SPECTRAL RESPONSE

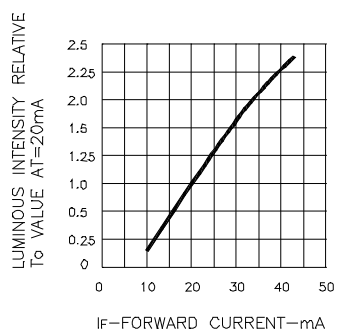


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

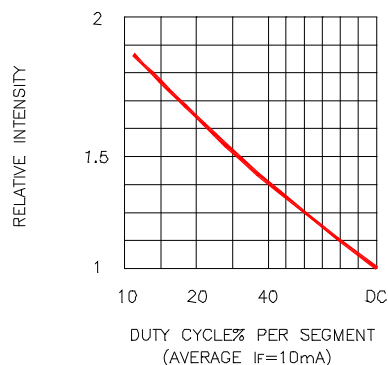


Fig.4 LUMINOUS INTENSITY VS. DUTY CYCLE

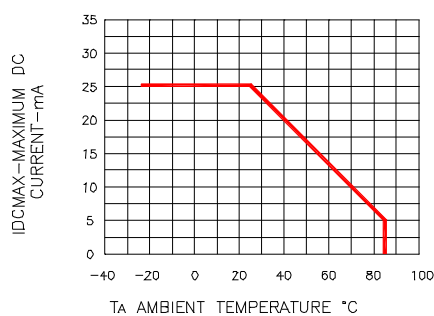


Fig.5 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

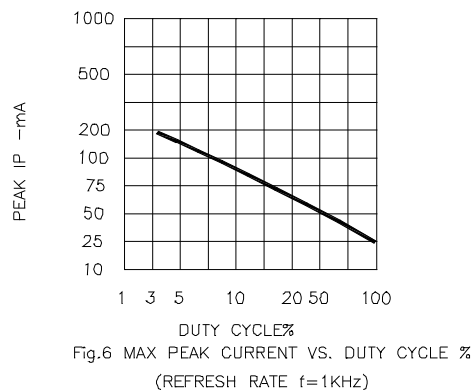


Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE %  
(REFRESH RATE f=1KHz)