



**APEX OPTO
CORP**

SUPER BRIGHT LED LAMP

AOL-5HSBT4

Feature

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

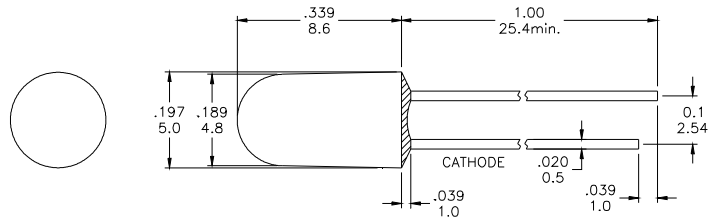
Applications

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

Description

- § These High Intensity LEDs are Based on InGaN/Sapphire Material Technology
- § Water Transparent Lens

Package Dimension



*Tolerance : $\pm \frac{0.01}{0.25}$ 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)	120	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	2.6	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		5000	---	mcd.
λd	Peak Wavelength	IF= 20 mA		465		nm

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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
	BIN20	3500~4900	P0	2.8~3.0	B6	465~470
	BIN21	4900~6900	P1	3.0~3.2	B7	470~475
			P2	3.2~3.4		
			P3	3.4~3.6		
			P4	3.6~3.8		
			P5	3.8~4.0		

Intensity: Tolerance of minimum and maximum = ± 15%

Vf: Tolerance of minimum and maximum = ± 0.05v

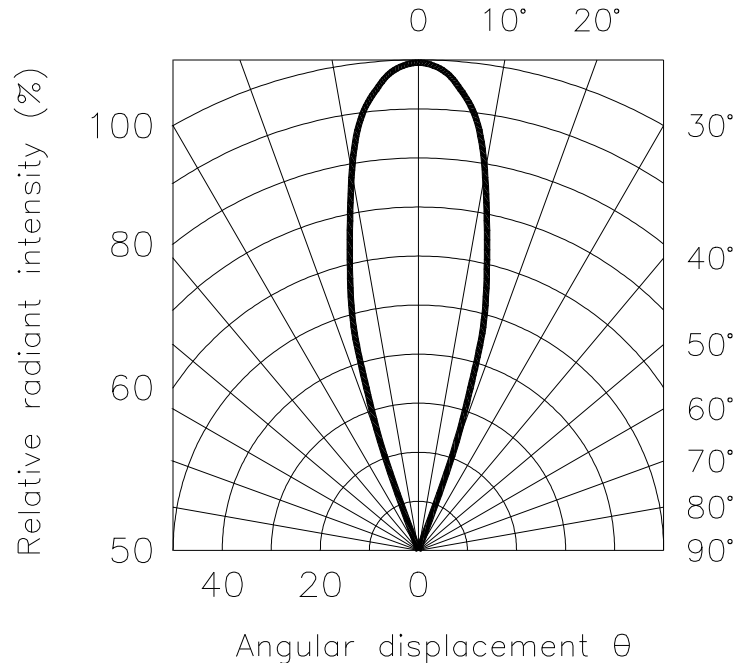
NOTE:

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°

Radiation Diagram

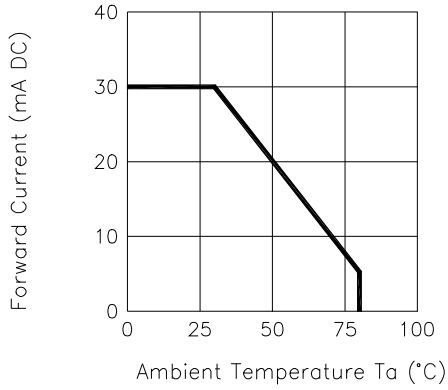




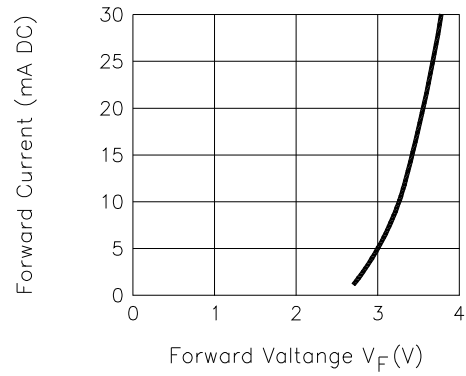
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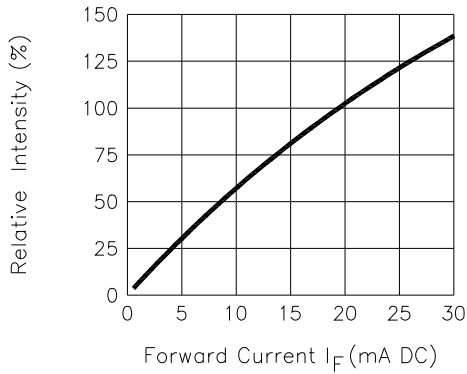
Forward Current
Vs. Ambient Temperature



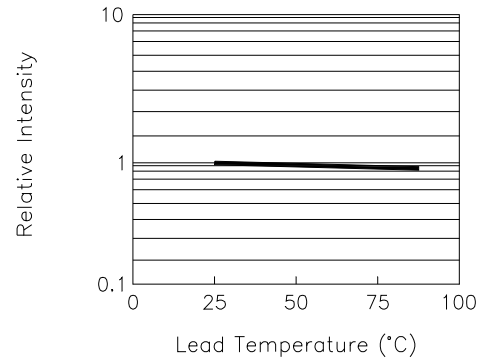
Forward Current
Vs. Forward Voltage



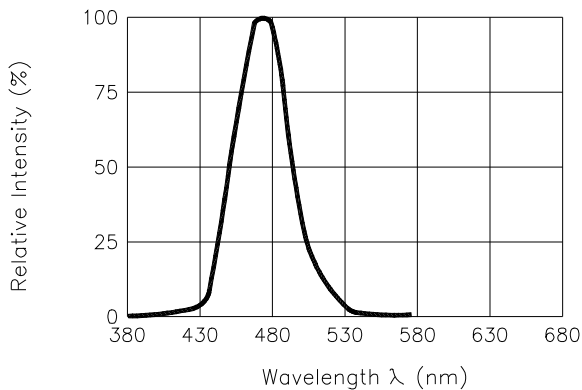
Relative Intensity
Vs. Forward Current



Relative Intensity
Vs. Lead Temperature
(Pulsed 20 mA; 300us pulse,
10ms period)



Relative Intensity Vs. Wavelength



Peak Forward Voltage
Vs. Forward Current
(100us test pulse,
1% duty cycle)

