VCC OPTOELECTRONICS
lighting:theway
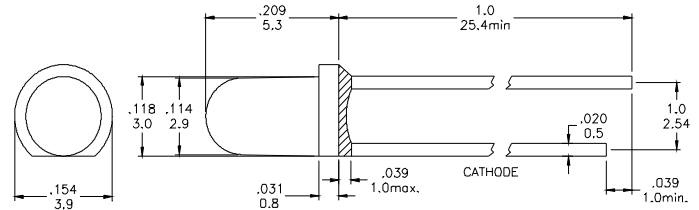
Feature
§ Low Power Consumption
§ I.C. compatible

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

Description
§ These LEDs are Based on AlInGaP/GaAsMaterial Technology
§ Emitted Color: RED
§ Water Transparent Lens

Package Dimension

＊Tolerance：± $\frac{0.01}{0.25}$ Unit：± $\frac{Inch}{mm}$

Absolute Maximum Ratings at Ta＝25℃

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℃	0.4	mA/℃
Topr	Operating Temperature Range	−40 to ＋85	℃
Tstg	Storage Temperature Range	−40 to ＋100	℃
Lead Soldering Temperature [1.6mm（0.063inch）From Body] 260℃ For 5 Seconds.			

Electrical / Optical Characteristics and Curves at Ta＝25℃

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	μ A
△θ	Half Intensity Angle	IF＝ 20 mA		30		Deg.
IV	Luminous Intensity	IF＝ 20 mA		2000		mcd.
λd	Peak Wavelength	IF＝ 20 mA		625		nm

Electrical Characteristics at Ta＝25℃

Symbol	Iv		V_F		λD	
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 17	1300~1800	C	1.9~2.0	O2	620~625
	BIN 18	1800~2500	D	2.0~2.1	O3	625~630
			E	2.1~2.2		
			F	2.2~2.3		
			G	2.3~2.4		

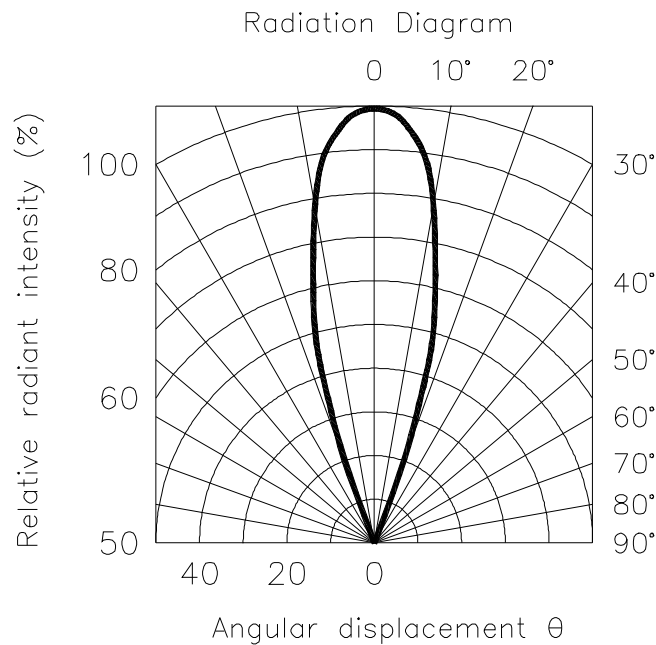Intensity: Tolerance of minimum and maximum = ± 15%
Vf: Tolerance of minimum and maximum = ± 0.05v
NOTE:
1. Static electricity and surge damages the LED. It is recommend to use a anti-static wrist band or anti-electrostatic glove when handing the LEDs. All devices, equipment and machinery must be properly grounded.
2. Specific binning requirements –please contact our home office

Radiation Diagram

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

Radiation Diagram

RED

Typical Electro-optical Characteristic Curves
(25°C Free Air Temperature Unless Otherwise Specified)
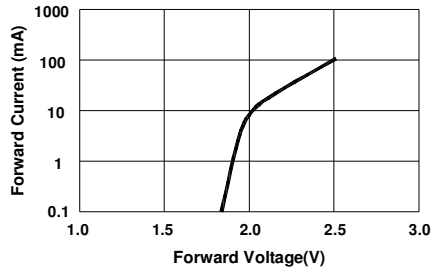
Fig 1. Forward Current vs. Forward Voltage

Forward Current (mA) vs. Forward Voltage(V)
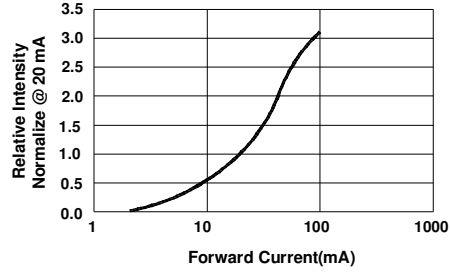
Fig 2. Relative Intensity vs. Forward Current

Relative Intensity Normalize @ 20 mA vs. Forward Current(mA)

Fig 3. Forward Voltage vs. Temperature

Forward Voltage @ 20 mA Normalize @ 25 °C vs. Ambient Temperature(°C)

Fig 4. Relative Intensity vs. Temperature
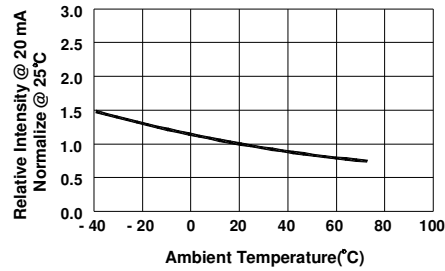
Relative Intensity @ 20 mA Normalize @ 25°C vs. Ambient Temperature(°C)

Fig 5. Relative Intensity vs. Wavelength

Relative Intensity @ 20 mA vs. Wavelength(nm)

www.vcclite.com

190 bosstick blvd, ste 101
san marcos, ca 92069
phone 760.560.1300
fax 760.560.1301

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