SUPERBRIGHT LED LAMP

VAOL-5GBE4

Feature

§ Low Power Consumption
§ I.C. compatible

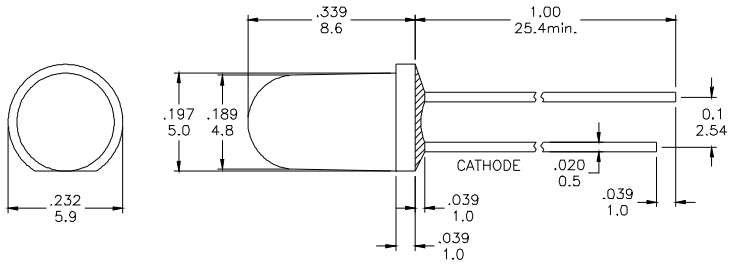
Applications

§ Front Panel Indicator
§ Dot-Matrix Module
§ LED Bulb

Description

§ These LEDs are Based on GaAsP/GaP Material Technology
§ Water Clear Lens

Package Dimension



∗Tolerance：± 0.01 / 0.25　　Unit：± inch / mm

Absolute Maximum Ratings at Ta＝25℃

Symbol	Parameter	Max.	Unit
PD	Power Dissipation	100	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	－20 to ＋ 80	℃
Tstg	Storage Temperature Range	－20 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		2.0	2.5	V
IR	Reverse Current	VR＝ 5 V			50	μA
△θ	Half Intensity Angle	IF＝ 20 mA		30		Deg.
IV	Luminous Intensity	IF＝ 20 mA		200		mcd.
λd	Peak Wavelength	IF＝ 20 mA		620		nm

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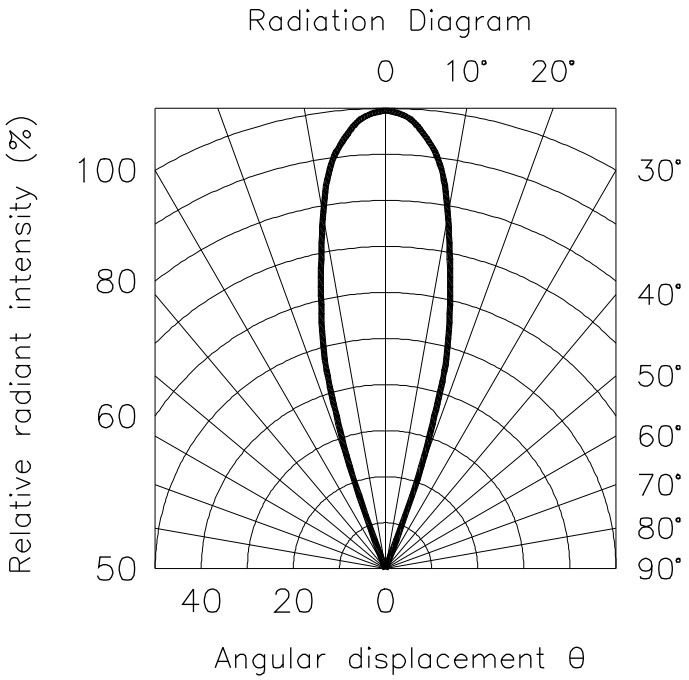
Electrical Characteristics at Ta＝25℃

Symbol	Iv		V_F		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 10	125~175	C	1.9~2.0	O2	620~625
	BIN 11	175~245	D	2.0~2.1	O3	625~630
	BIN 12	245~345	E	2.1~2.2		
			F	2.2~2.3		
			G	2.3~2.4		
			H	2.4~2.5		

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 Y=30˚



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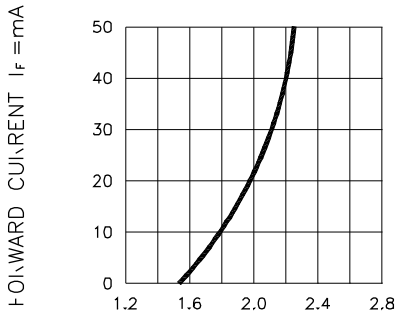
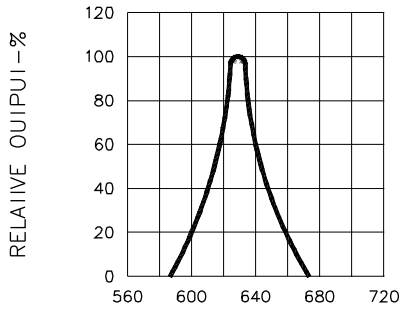
Typical Electro-optical Characteristic Curves
(25°C Free Air Temperature Unless Otherwise Specified)



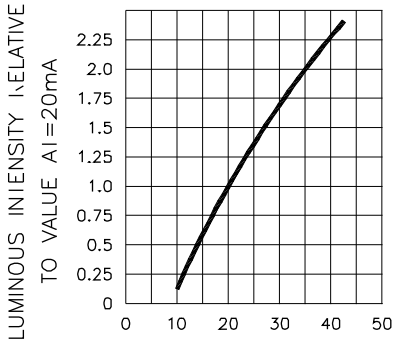
FORWARD VOLTAGE (V_F)–VOLTS

F'g.1 FORWARD CURRENT VS. FORWARD VOLTAGE



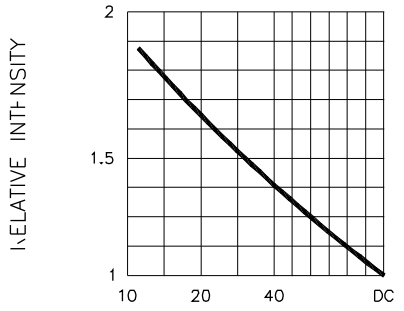
WAVELENGTH (λ)–nm

F'g.2 SPECTRAL RESPONSE



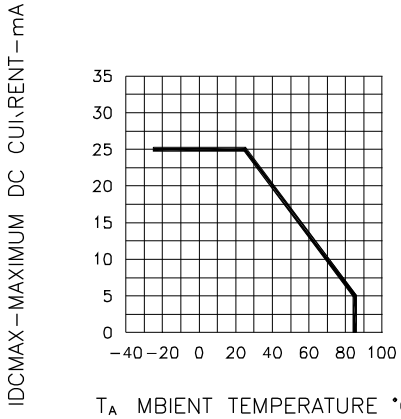
I_F –FORWARD CURRENT–mA

Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



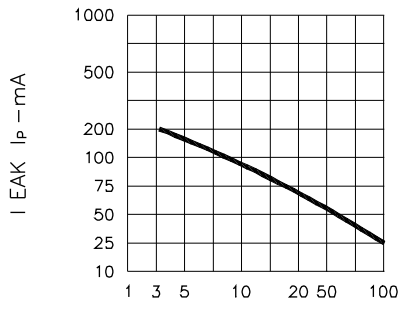
DUTY CYCLE % PER SEGMENT
(AVERAGE I_F=10mA)

Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE



T_A MBIENT TEMPERATURE °C

Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE



DUTY CYCLE %

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

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VCC:
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