



Excellent Integrated System Limited

Stocking Distributor

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[Visual Communications Company, LLC](#)
[VAOL-3HCE4](#)

For any questions, you can email us directly:

sales@integrated-circuit.com

STANDARD LAMP

VAOL-3HCE4

Feature

- Low Power Consumption
- I.C. compatible

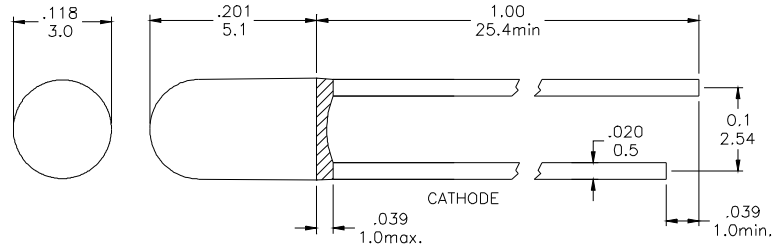
Applications

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

Description

- These LEDs are Based on GaAsP/GaP Material Technology
- Emitted color: Yellow
- Water Transparent Lens

Package Dimension



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

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		1.8	2.0	V
IR	Reverse Current	VR = 5 V			50	μA
$\Delta \theta$	Half Intensity Angle	IF = 20 mA		30		Deg.
IV	Luminous Intensity	IF = 20 mA		150		med.
λd	Dominant Wavelength	IF = 20 mA		590		nm



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
	--	--	A	1.7~1.8	Y3	587~589
	--	--	B	1.8~1.9	Y4	589~591
			C	1.9~2.0	Y5	591~593

Intensit : Tolerance of minimum and maximum = ± 15%

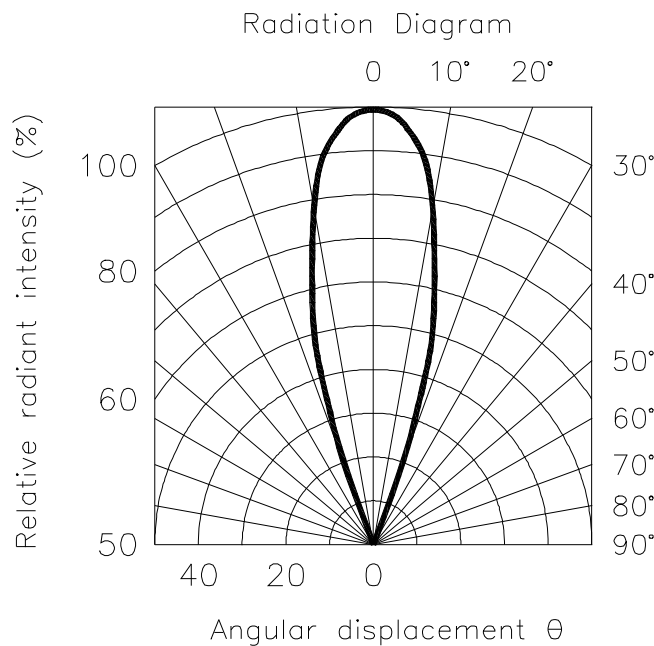
Vf: Tolerance of minimum and maximum = ± 0.05v

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

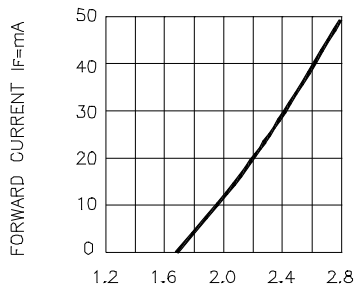
Radiation Diagram

IF=20 mA 50% Power Angle Angle =30°

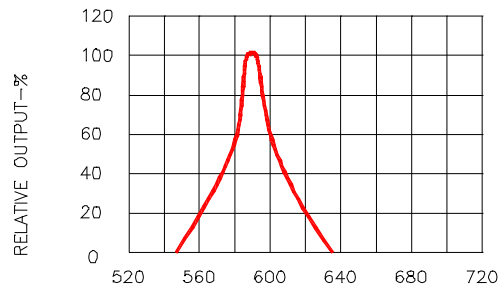


YELLOW

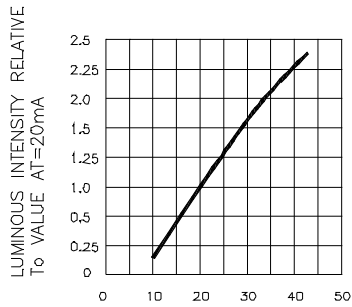
Typical Electro-optical Characteristic Curves (25°C Free Air Temperature Unless Otherwise Specified)



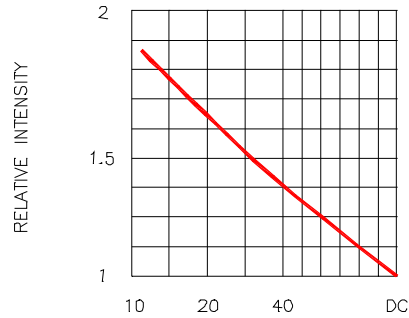
FORWARD VOLTAGE(V_F)-VOLTS
 Fig.1 FORWARD CURRENT VS FORWARD VOLTAGE



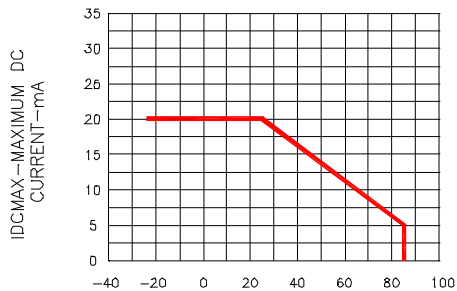
WAVELENGTH(λ)-nm
 Fig.2 SPECTRAL RESPONSE



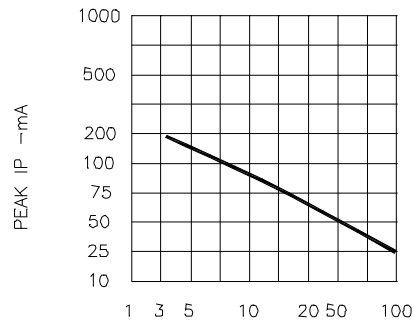
I_F-FORWARD CURRENT-mA
 Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



DUTY CYCLE% PER SEGMENT (AVERAGE I_F=10mA)
 Fig.4 LUMINOUS INTENSITY VS. DUTY CYCLE



T_A AMBIENT TEMPERATURE °C
 Fig.5 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=1KHz)