

Feature

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

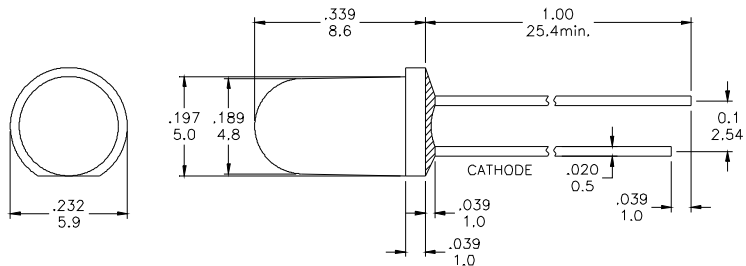
Applications

- § 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
- § Yellow Diffusion 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 | 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°C | 0.4 | mA/°C |
| Topr | Operating Temperature Range | -20 to + 80 | °C |
| Tstg | Storage Temperature Range | -20 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 | | 2.0 | 2.4 | V |
| IR | Reverse Current | VR= 5 V | | | 100 | μ A |
| $\Delta \theta$ | Half Intensity Angle | IF= 20 mA | | 60 | | Deg. |
| IV | Luminous Intensity | IF= 20 mA | | 80 | | mcd. |
| 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 |
| | -- | -80 | C | 1.9~2.0 | Y4 | 589~591 |
| | -- | -- | D | 2.0~2.1 | Y5 | 591~593 |
| | -- | -- | E | 2.1~2.2 | Y6 | 593~595 |
| | | | F | 2.2~2.3 | | |
| | | | G | 2.3~2.4 | | |
| | | | | | | |

Intensity: Tolerance of minimum and maximum = ± 15%

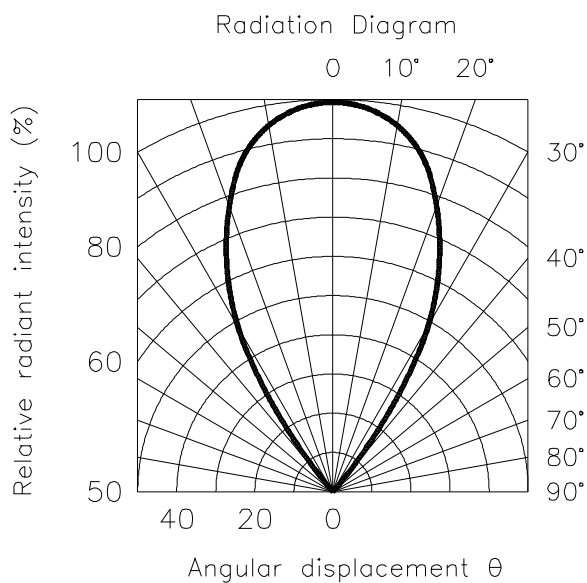
Vf: Tolerance of minimum and maximum = ± 0.025v

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

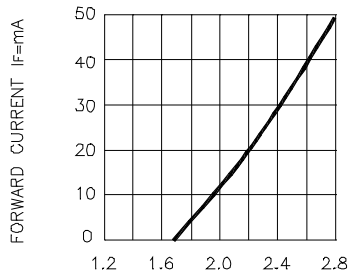
Radiation Diagram

IF=20 mA 50% Power Angle Angle Y=60°



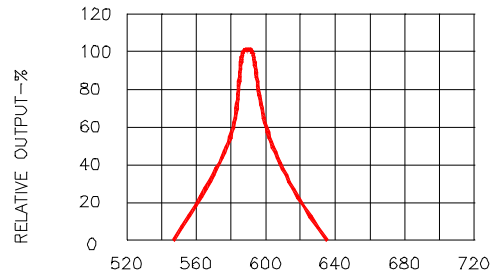
YELLOW

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



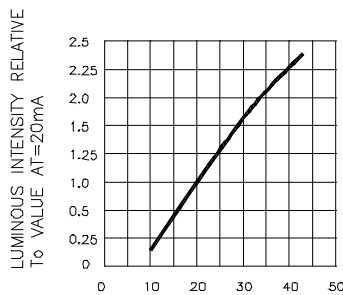
FORWARD VOLTAGE(V_f)—VOLTS

Fig.1 FORWARD CURRENT VS FORWARD VOLTAGE



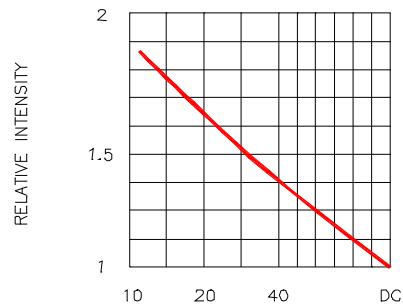
WAVELENGTH(λ)—nm

Fig.2 SPECTRAL RESPONSE



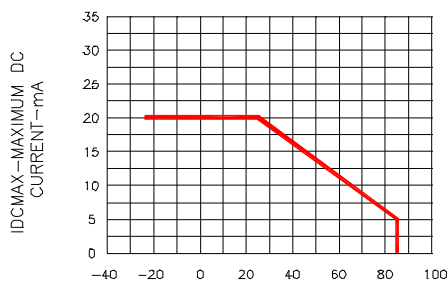
I_f—FORWARD CURRENT—mA

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



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