

VAOL-5701DE4

T-1 3/4 (5mm) through-hole LED with high intensity light output



Green T-1 3/4 (5mm) LED with water transparent lens

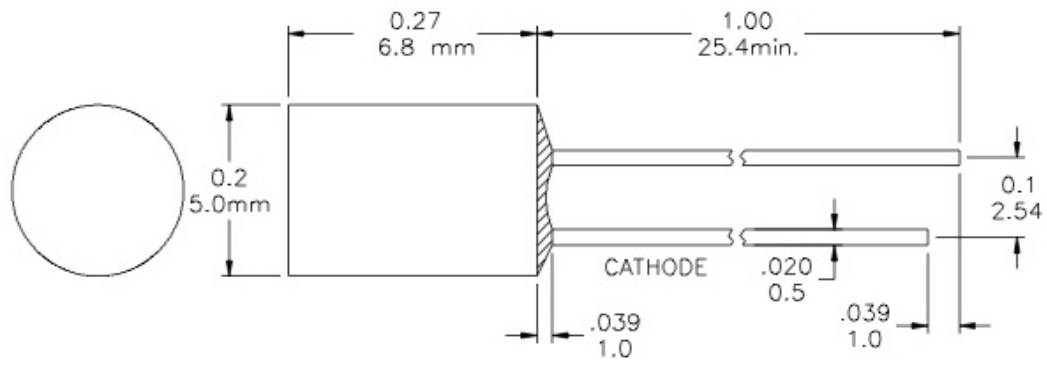
Application

- Automotive
- Front Panel Indicator
- Residential and Landscape Lighting
- Railway
- Commercial Outdoor Sign Board
- Indoor and Outdoor Indicating
- Electronic Devices
- Storage Servers
- Dot-Matrix Module

Key Features

- Color: Green
- LED Size 5mm T-1 3/4
- Low power consumption
- I.C. compatible
- GaAsP/GaP material technology
- Water Transparent Lens
- Viewing Angle: 100°
- MSL rating: 2
- RoHS and REACH Compliant

Product Dimensions



Notes:

1. All dimensions are in inches [millimeters]
2. Tolerance is ± 0.01 " [0.25mm] unless otherwise noted
3. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.

Product Specifications

Absolute Maximum Ratings (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 | -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 | | 2.0 | 2.4 | V |
| IR | Reverse Current | VR=5 V | | | 100 | µA |
| Δθ | Half Intensity Angle | IF= 20 mA | | 100 | | Deg. |
| IV | Luminous Intensity | IF= 20 mA | | 100 | | mcd. |
| λd | Dominant Wavelength | IF= 20 mA | | 570 | | nm |

Product Specifications

Electrical Characteristics at (Ta=25°C)

| Symbol | I _v | | 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 9 | 90~125 | C | 1.9~2.0 | G9 | 569~571 |
| | | | D | 2.0~2.1 | G10 | 571~573 |
| | | | E | 2.1~2.2 | G11 | 573~575 |
| | | | F | 2.2~2.3 | | |
| | | | G | 2.3~2.4 | | |

Intensity: Tolerance of minimum and maximum = ± 15%

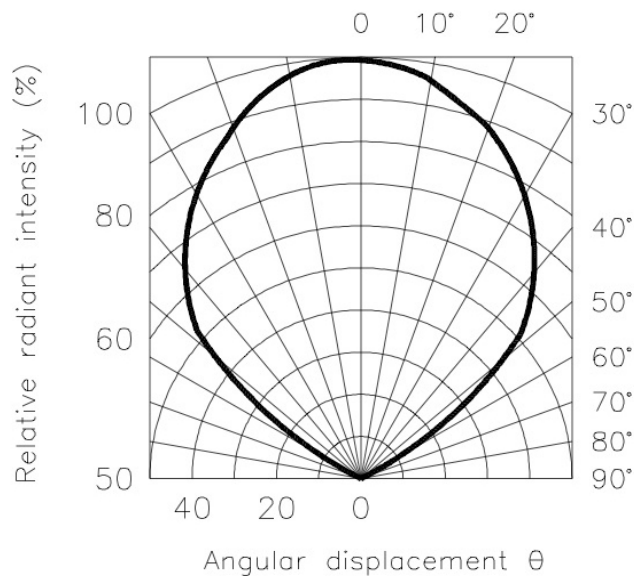
V_f: Tolerance of minimum and maximum = ± 0.05v

Notes:

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 – Contact VCC

Radiation Diagram

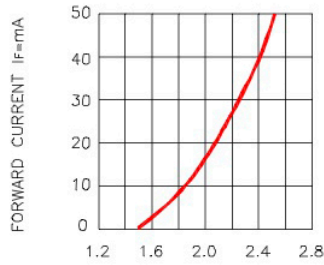
IF=20 mA 50% Power Angle Angle =100°



Product Specifications

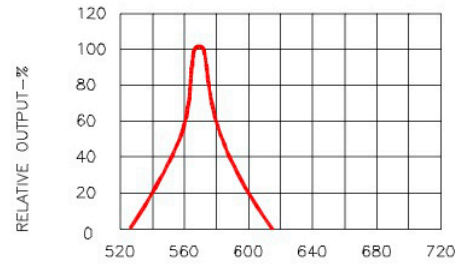
Typical Electro-optical Characteristics Curves (25°C Free Air Temperature Unless Otherwise Specified)

Green



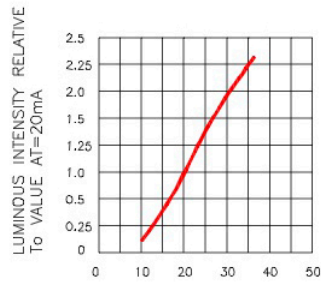
FORWARD VOLTAGE(Vf)—VOLTS

Fig.1 FORWARD CURRENT VS FORWARD VOLTAGE



WAVELENGTH(λ)—nm

Fig.2 SPECTRAL RESPONSE



If—FORWARD CURRENT—mA

Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

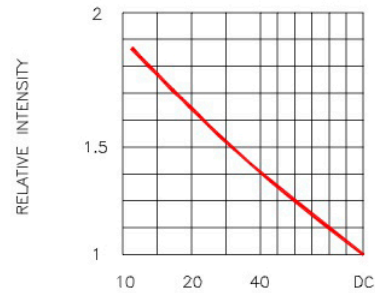
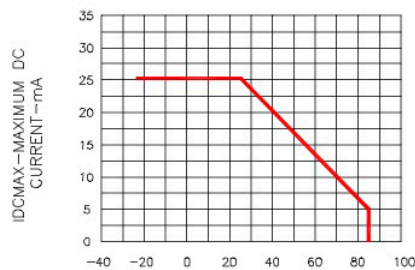


Fig.4 LUMINOUS INTENSITY VS.DUTY CYCLE



Ta AMBIENT TEMPERATURE °C

Fig.5 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE

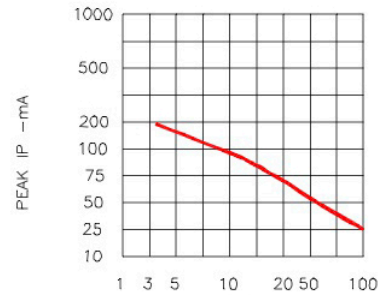


Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE f=1KHz)

Compliances and Approvals

