

DUAL COLOR INDICATOR LAMP

T-1 3/4 PACKAGE SOLID STATE LAMP

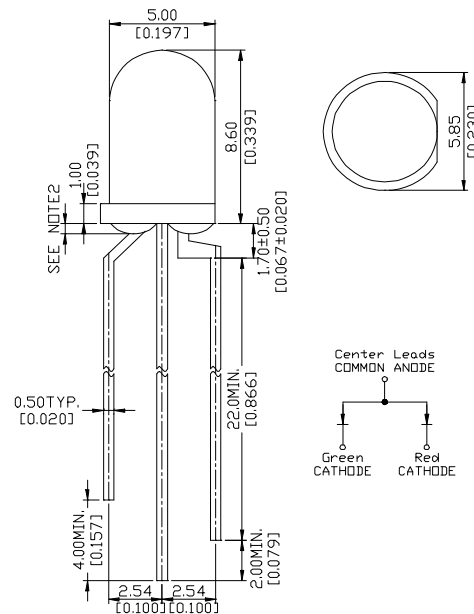
MVL-504B3A

Description

The MVL-504B3A is a water clear narrow viewing angle, dual chips, utilizing Gallium Arsenide Phosphide on Gallium Phosphide yellow light emitting diode and Gallium Phosphide on Gallium Phosphide green light emitting diode. The green and yellow operating independently of each other with a common cathode.

Package Dimensions

Unit: mm (inches)



Features

- Green and yellow chips are matched for uniform light output.
- Long life-solid state reliability.
- Low power consumption / I.C. compatible

Notes :

1. Tolerance is ± 0.25 mm (.010") unless otherwise noted.
2. Protruded resin under flange is 0.8 mm (.031") max.
3. Lead spacing is measured where the leads emerge from the package.

Absolute Maximum Ratings

@ $T_A=25^\circ\text{C}$

| Parameter | Symbol | Maximum Rating | | Unit |
|--|-----------|------------------|------|-------|
| | | GREEN | RED | |
| Power Dissipation | P_{ad} | 100 | 60 | mW |
| Peak Forward Current(1/10 Duty Cycle 0.1ms pulse width) | I_{pf} | 120 | 80 | mA |
| Continuous Forward Current | I_{af} | 30 | 20 | mA |
| Derating Linear From 50°C | | 0.4 | 0.25 | mA/°C |
| Reverse Voltage | V_R | 5 | 5 | V |
| Operating Temperature Range | T_{opr} | -55°C to + 100°C | | |
| Storage Temperature Range | T_{stg} | -55°C to + 100°C | | |
| Lead Soldering Temperature : 1.6 mm from body at 260°C for 3 seconds | | | | |

Optical-Electrical Characteristics

@ T_A=25°C

| Parameter | Test Conditions | Symbol | | Min . | Typ . | Max . | Unit . |
|--------------------------|----------------------|-------------------|--------------|-------|---------|---------|--------|
| Luminous Intensity | I _F =20mA | I _V | GREEN/YELLOW | 30/20 | 90/60 | - | mcd |
| Forward Voltage | I _F =20mA | V _F | GREEN/YELLOW | - | 2.1/2.1 | 2.8/2.8 | V |
| Reverse Current | V _R =5V | I _R | GREEN/YELLOW | - | - | 100/100 | μA |
| Peak Emission Wavelength | I _F =20mA | λ _p | GREEN/YELLOW | - | 565/585 | - | nm |
| Spectral Line Half Width | I _F =20mA | Δλ | GREEN/YELLOW | - | 30/35 | - | nm |
| Viewing Angle | I _F =20mA | 2θ _{1/2} | GREEN/YELLOW | - | 20/20 | - | deg. |

Typical Optical-Electrical Characteristic Curves

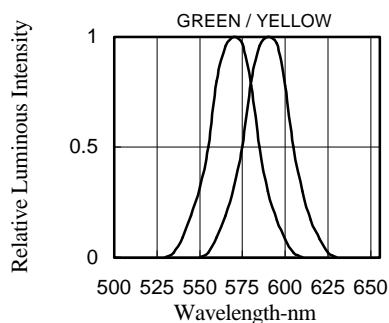


FIG.1 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH

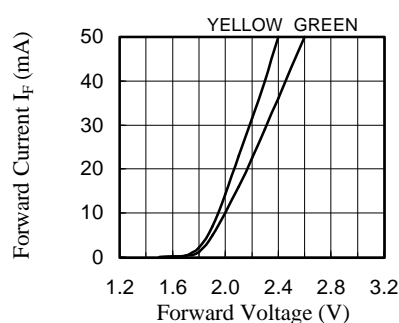


FIG.2 FORWARD CURRENT VS. FORWARD VOLTAGE

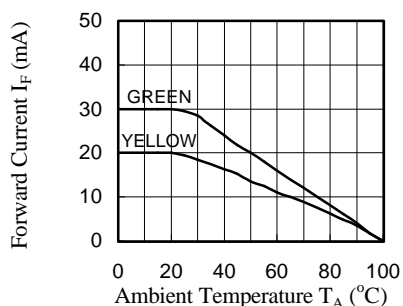


FIG.3 FORWARD CURRENT VS. AMBIENT TEMPERATURE

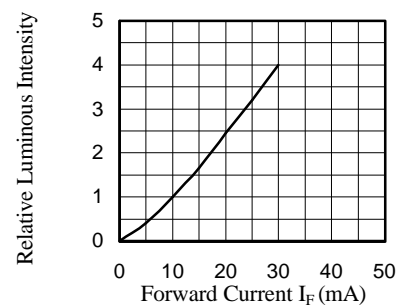


FIG.4 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

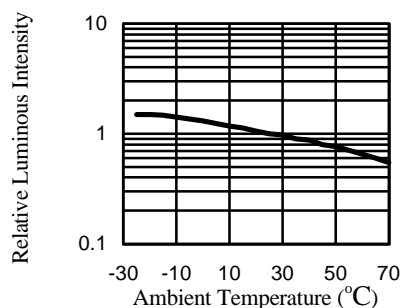


Fig 5. RELATIVE LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

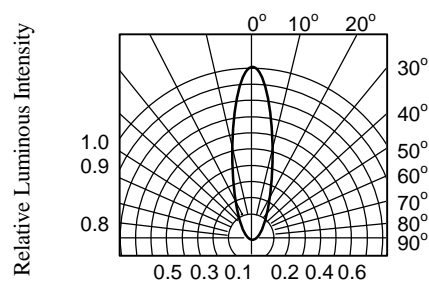


FIG.5 RADIATION DIAGRAM