

T-1 3/4 ($\phi 5\text{mm}$) BI-COLOR SOLID STATE LAMP

MVL-502B1C

Description

The MVL-502B1C is a white diffused, wide viewing angle, dual chips, utilizing Gallium Phosphide on Gallium Phosphide green light emitting diode and Gallium Arsenide Phosphide on Gallium Phosphide orange light emitting diode.

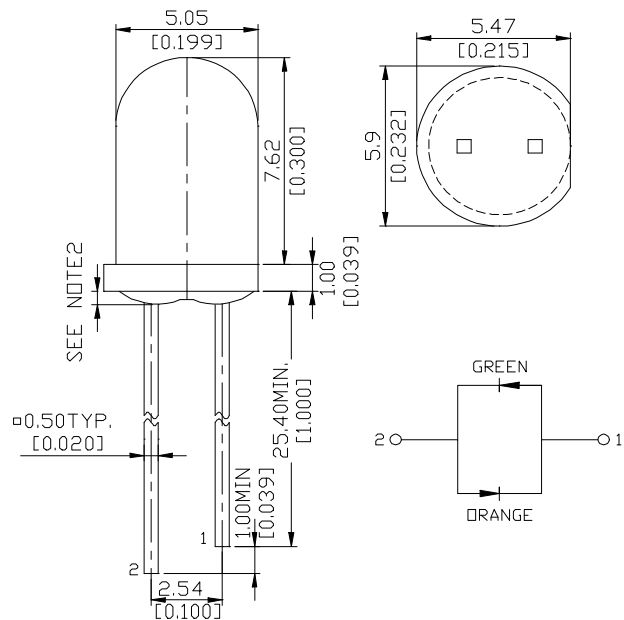
The dual chips operating independently of each other.

Features

- Dual chips : green and orange
- Standard T-1 3/4 ($\phi 5\text{mm}$) package
- Low power consumption
- High efficiency
- Reliable

Package Dimensions

Unit: mm (inches)



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	ORANGE	
Power Dissipation	P_{ad}	100	100	mW
Peak Forward Current(1/10 Duty Cycle 0.1ms pulse width)	I_{pf}	120	120	mA
Continuous Forward Current	I_{af}	30	30	mA
Derating Linear From 50°C		0.4	0.5	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 Temperatureing (1.6 mm from body) for 3 seconds at 260°C				

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Optical-Electrical Characteristics

@ T_A=25°C

Parameter	Test Conditions	Symbol		Min .	Typ .	Max .	Unit .
Luminous Intensity	I _F =20mA	I _V	GREEN/ORANGE	-	15/20	-	mcd
Forward Voltage	I _F =20mA	V _F	GREEN/ORANGE	-	2.1/2.0	2.8/2.8	V
Reverse Current	V _R =5V	I _R	GREEN/ORANGE	-	-	100/100	μA
Peak Emission Wavelength	I _F =20mA	λ _p	GREEN/ORANGE	-	568/640	-	nm
Spectral Line Half Width	I _F =20mA	Δλ	GREEN/ORANGE	-	60/60	-	nm
Viewing Angle	I _F =20mA	2θ _{1/2}	GREEN/ORANGE	-	100	-	deg.

Typical Optical-Electrical Characteristic Curves

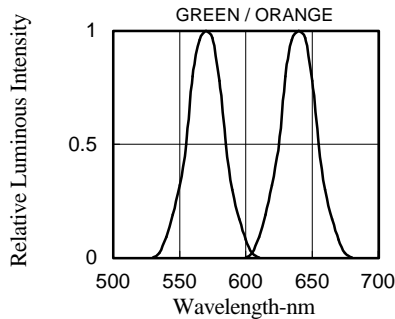


FIG.1 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH

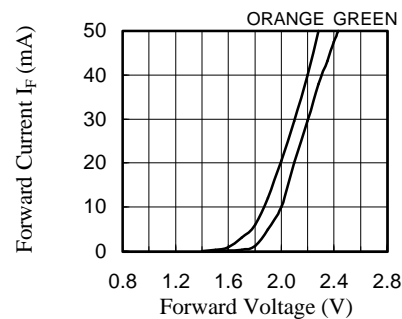


FIG.2 FORWARD CURRENT VS. FORWARD VOLTAGE

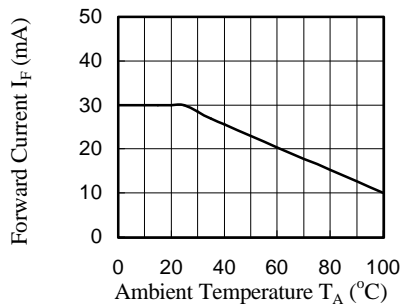


FIG.3 FORWARD CURRENT VS. AMBIENT TEMPERATURE

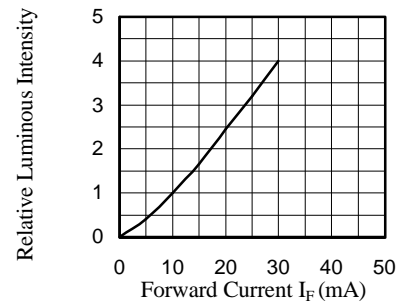


FIG.4 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

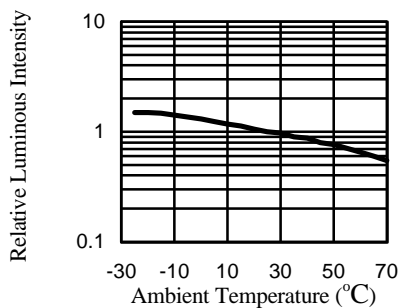


Fig 5. RELATIVE LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

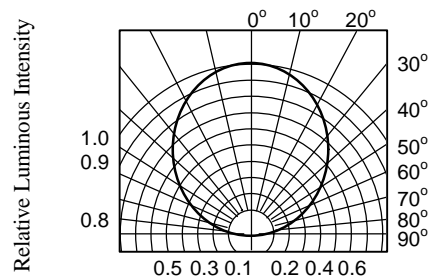


FIG.5 RADIATION DIAGRAM