

MVL-511G
MVL-511Y
MVL-511HR
MVL-511DR
MVL-511UR

04/30/2002

Description

The MVL-511xx series package are T-1 3/4 (ø5mm) standard color diffused plastic lens package. The Hi-EFF red (HR) and yellow LED chips are made with Gallium Arsenide Phosphide on Gallium Phosphide diode. The green LED chip is made with Gallium Phosphide on Gallium Phosphide diode. The red (DR) chip is made with Aluminum Gallium Arsenide on Gallium Arsenide diode. The red (UR) chip is made with Aluminum Gallium Arsenide on Aluminum Gallium Arsenide diode.

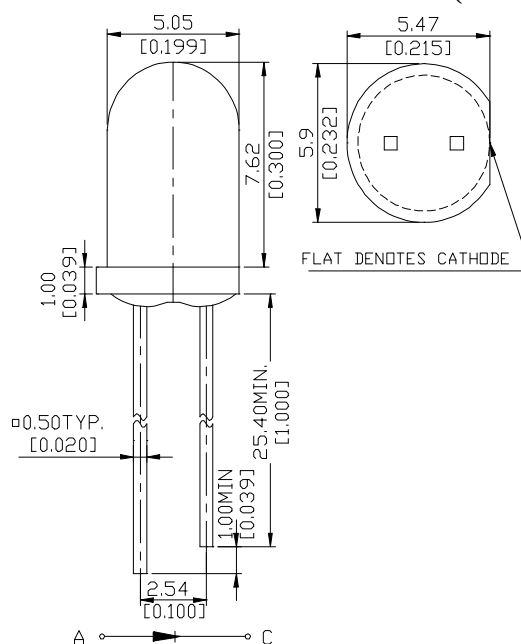
Applications

- Popular T-1 3/4 (ø5mm) diameter package
- I.C. compatible / Low current requirement
- Low power consumption
- General purpose leads
- Reliable and rugged

Absolute Maximum Tatings

Package Dimensions

Unité: mm (inches)



NOTES :

1. Tolerance is ± 0.25 mm (.010") unless otherwise noted.
2. Protruded resin under flange is 1.5 mm (.059") max.
3. Lead spacing is measured where the leads emerge from the package.

[illegible]

Optical -Electrical Characteristics

Part No. : MVL-511G

@T_A=25°C

Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	I _F =10mA	I _V	6.0	20	-	mcd
Forward Voltage	I _F =20mA	V _F	-	2.1	2.8	V
Reverse Current	V _R =5V	I _R	-	-	100	μA
Wavelength	I _F =20mA	λ _p	-	565	-	nm
Spectral Line Half Width	I _F =20mA	Δλ	-	30	-	nm
Viewing Angle	I _F =20mA	2θ _{1/2}	-	50	-	deg

Part No. : MVL-511Y

@T_A=25°C

Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	I _F =10mA	I _V	5.0	18	-	mcd
Forward Voltage	I _F =20mA	V _F	-	2.1	2.8	V
Reverse Current	V _R =5V	I _R	-	-	100	μA
Wavelength	I _F =20mA	λ _p	-	585	-	nm
Spectral Line Half Width	I _F =20mA	Δλ	-	35	-	nm
Viewing Angle	I _F =20mA	2θ _{1/2}	-	50	-	deg

Part No. : MVL-511HR

@T_A=25°C

Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	I _F =10mA	I _V	6.0	20	-	mcd
Forward Voltage	I _F =20mA	V _F	-	2.0	2.8	V
Reverse Current	V _R =5V	I _R	-	-	100	μA
Wavelength	I _F =20mA	λ _p	-	640	-	nm
Spectral Line Half Width	I _F =20mA	Δλ	-	40	-	nm
Viewing Angle	I _F =20mA	2θ _{1/2}	-	50	-	deg

Part No. : MVL-511DR

@T_A=25°C

Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	I _F =20mA	I _V	40	140	-	mcd
Forward Voltage	I _F =20mA	V _F	-	1.8	2.4	V
Reverse Current	V _R =5V	I _R	-	-	100	μA
Wavelength	I _F =20mA	λ _p	-	660	-	nm
Spectral Line Half Width	I _F =20mA	Δλ	-	20	-	nm
Viewing Angle	I _F =20mA	2θ _{1/2}	-	50	-	deg

Part No. : MVL-511UR

@T_A=25°C

Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	I _F =20mA	I _V	130	500	-	mcd
Forward Voltage	I _F =20mA	V _F	-	1.8	2.4	V
Reverse Current	V _R =5V	I _R	-	-	100	μA
Wavelength	I _F =20mA	λ _p	-	660	-	nm
Spectral Line Half Width	I _F =20mA	Δλ	-	20	-	nm
Viewing Angle	I _F =20mA	2θ _{1/2}	-	50	-	deg

Typical Optical-Electrical Characteristic Curves

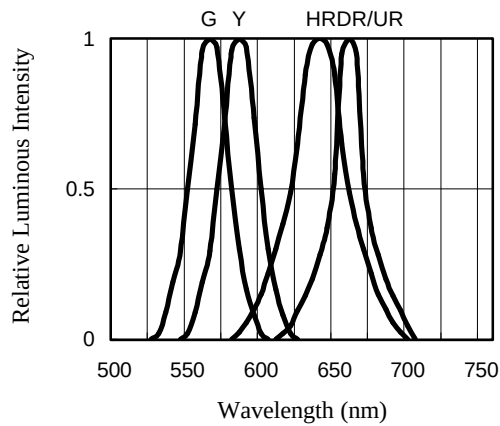


Fig 1. RELATIVE LUMINOUS INTENSITY
VS. WAVELENGTH

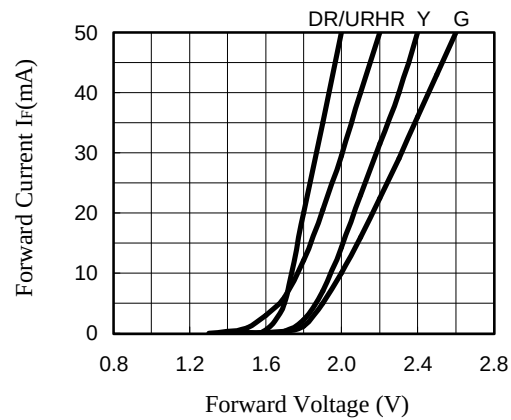


Fig 2. FORWARD CURRENT
VS. FORWARD VOLTAGE

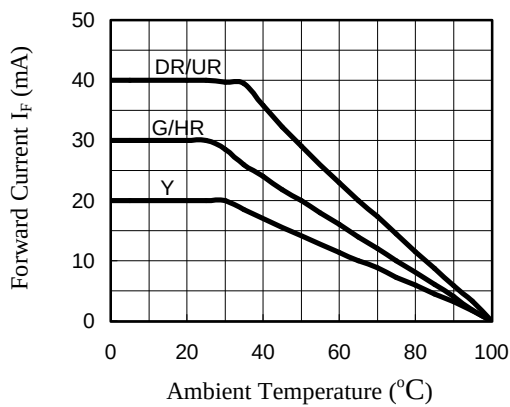


Fig 3. FORWARD CURRENT
VS. AMBIENT TEMPERATURE

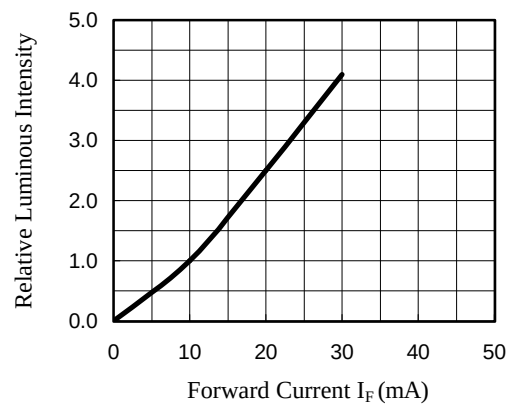


Fig 4. RELATIVE LUMINOUS INTENSITY
VS. FORWARD CURRENT

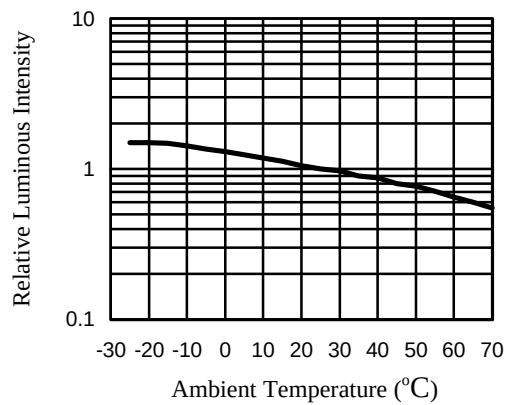


Fig 5. RELATIVE LUMINOUS INTENSITY
VS. AMBIENT TEMPERATURE

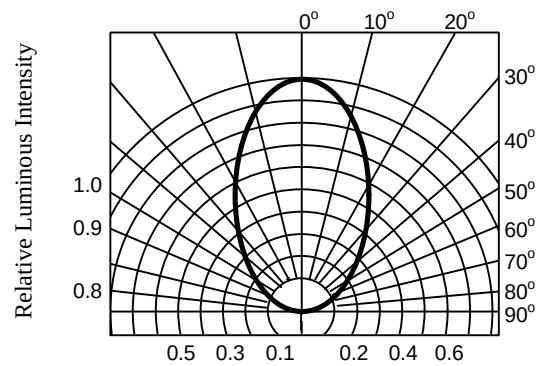


Fig 6. RADIATION DIAGRAM