

MVL-381G
MVL-381Y
MVL-381HR

04/30/2002

Description

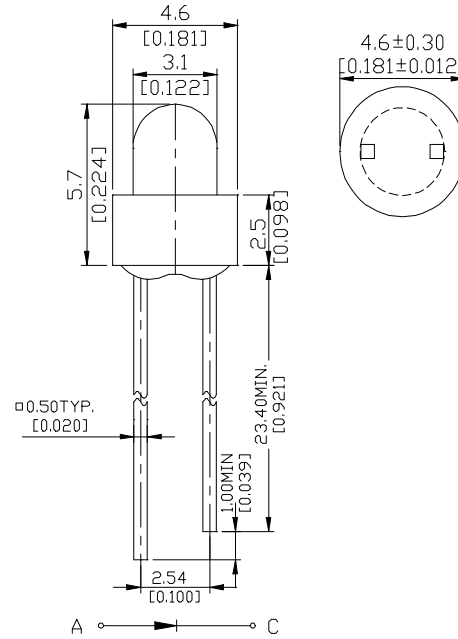
The MVL-381xx series package are T-1 ($\phi 3\text{mm}$) standard color diffused plastic lens package. The Hi-EFF red (HR) and yellow LED chips are made with Gallium Arsenide Phosphide on Gallium Phosphide diode. The green LED chip is made with Gallium Phosphide on Gallium Phosphide diode.

Applications

- Popular T-1 ($\phi 3\text{mm}$) diameter package
- Selected minimum intensities
- General purpose leads
- Reliable and rugged

Package Dimensions

Unite: 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.

Absolute Maximum Ratings

Parameter	Symbol	Maximum Rating			Unit
		GREEN	YELLOW	HR	
Power Dissipation	Pad	100	60	100	mW
Peak Forward Current (1/10 Duty Cycle 0.1ms pulse width)	I _{pf}	120	80	120	A
Continuous Forward Current	I _{af}	30	20	30	mA/°C
Derating Linear From 25°C		0.4	0.25	0.4	mA
Reverse Voltage	V _R	5	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 (1.6mm from body) for 3 seconds at 260°C					

Optical -Electrical Characteristics

Part No. : MVL-381G

@T_A=25°C

Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	I _F =10mA	I _V	4.0	12	-	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}	-	30	-	deg

Part No. : MVL-381Y

@T_A=25°C

Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	I _F =10mA	I _V	4.0	12	-	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}	-	30	-	deg

Part No. : MVL-381HR

@T_A=25°C

Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	I _F =10mA	I _V	3.0	7.0	-	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}	-	30	-	deg

Typical Optical-Electrical Characteristic Curves

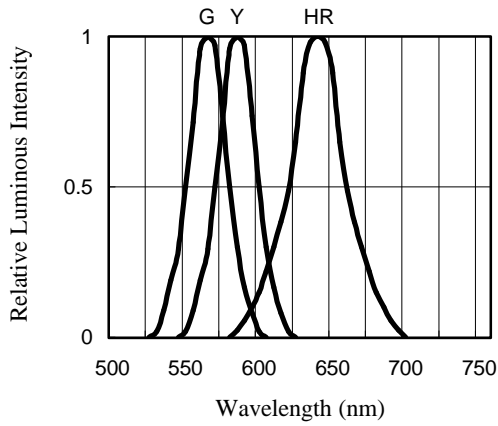


Fig 1. RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH

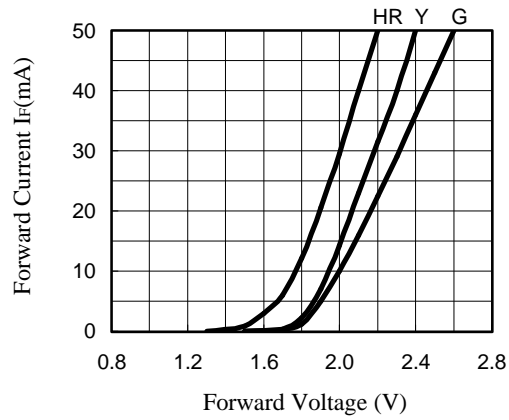


Fig 2. FORWARD CURRENT VS. FORWARD VOLTAGE

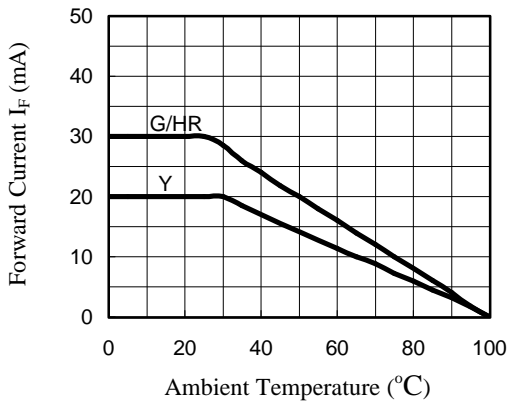


Fig 3. FORWARD CURRENT VS. AMBIENT TEMPERATURE

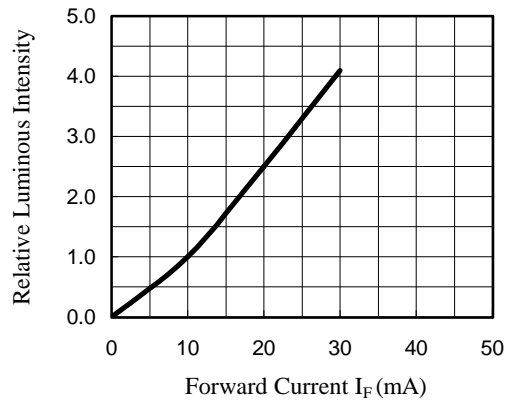


Fig 4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

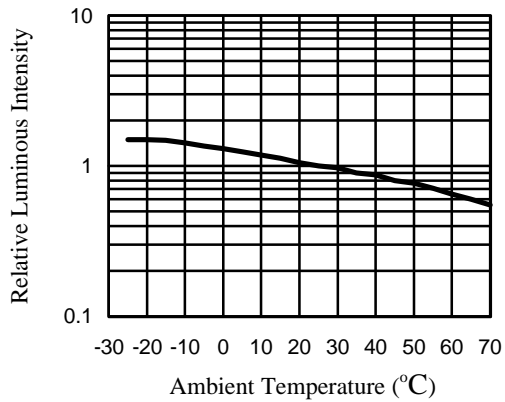


Fig 5. RELATIVE LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

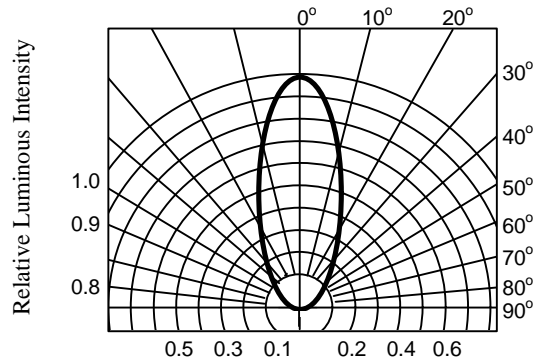


Fig 6. RADIATION DIAGRAM