

MVL-401G
MVL-401Y
MVL-401HR

04/30/2002

Description

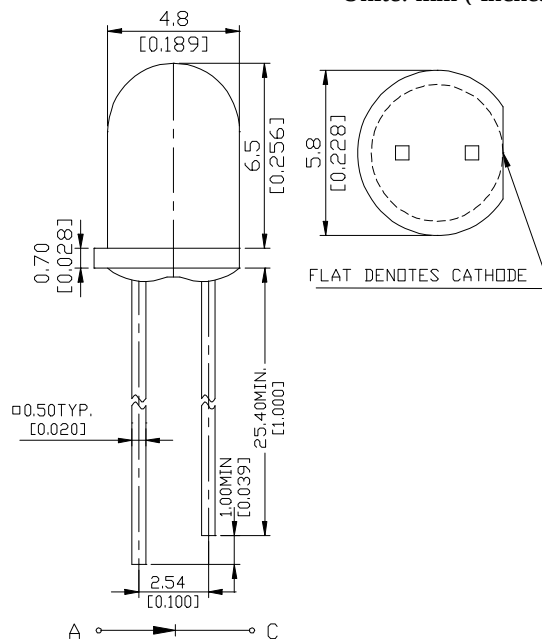
The MVL-401xx series package are T-1 3/4 (φ4mm) standard color diffused plastic lens package. The Hi-EFF red (HR) and yellow LED chips are made with Gallium Arsenide Phosphide on Gallium Phosphide diode. The green LED chip is made with Gallium Phosphide on Gallium Phosphide diode. Phosphide diode.

Applications

- Popular T-1 3/4 (φ4mm) diameter package
- I.C. compatible / Low current requirement
- Low power consumption
- General purpose leads
- Reliable and rugged

Package Dimensions

Unit: 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)	Ipf	120	80	120	A
Continuous Forward Current	Iaf	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	Topr	-55°C to + 100°C			
Storage Temperature Range	Tstg	-55°C to + 100°C			
Lead Soldering Temperature (1.6mm from body) for 3 seconds at 260°C					

Optical -Electrical Characteristics**Part No. : MVL-401G**@T_A=25°C

Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	I _F =10mA	I _V	4.0	15	-	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}	-	60	-	deg

Part No. : MVL-401Y@T_A=25°C

Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	I _F =10mA	I _V	3.0	13	-	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}	-	60	-	deg

Part No. : MVL-401HR@T_A=25°C

Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	I _F =10mA	I _V	4.0	14	-	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}	-	60	-	deg

Typical Optical-Electrical Characteristic Curves

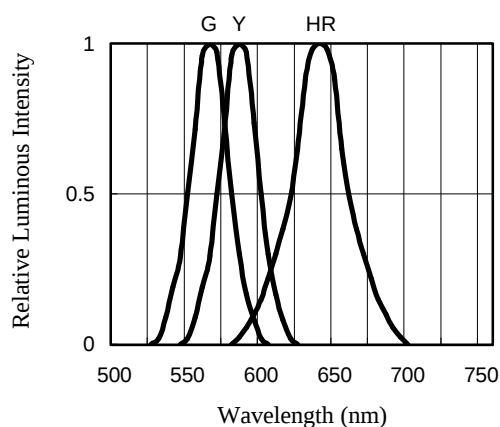


Fig 1. RELATIVE LUMINOUS INTENSITY
VS. WAVELENGTH

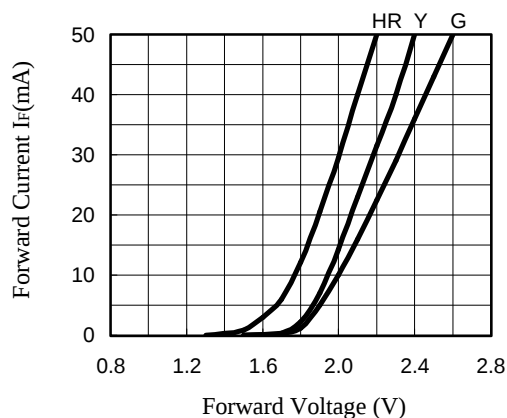


Fig 2. FORWARD CURRENT
VS. FORWARD VOLTAGE

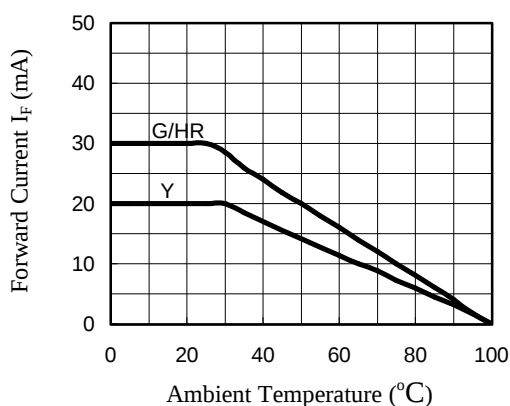


Fig 3. FORWARD CURRENT
VS. AMBIENT TEMPERATURE

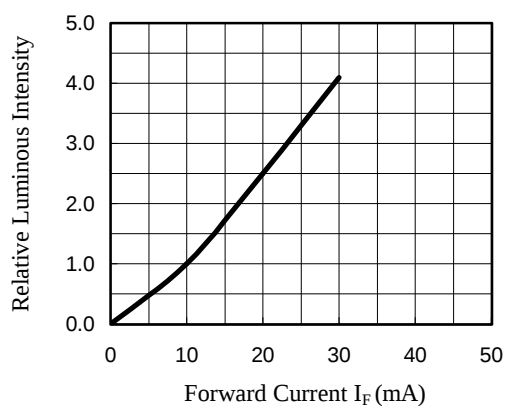


Fig 4. RELATIVE LUMINOUS INTENSITY
VS. FORWARD CURRENT

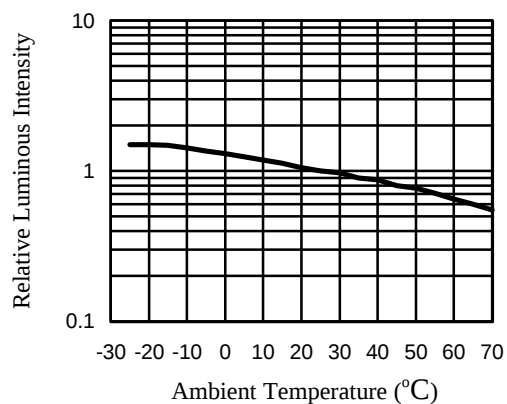


Fig 5. RELATIVE LUMINOUS INTENSITY
VS. AMBIENT TEMPERATURE

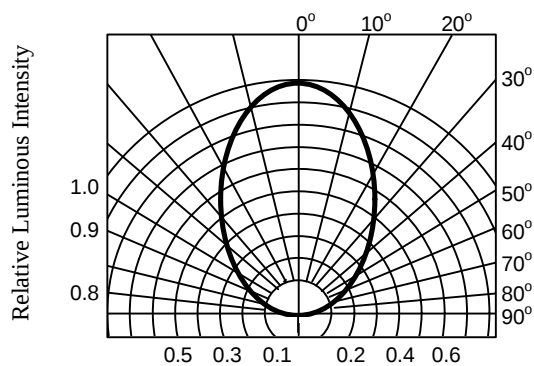


Fig 6. RADIATION DIAGRAM