MVL-403G
MVL-403Y
MVL-403HR 04/30/2002

Description

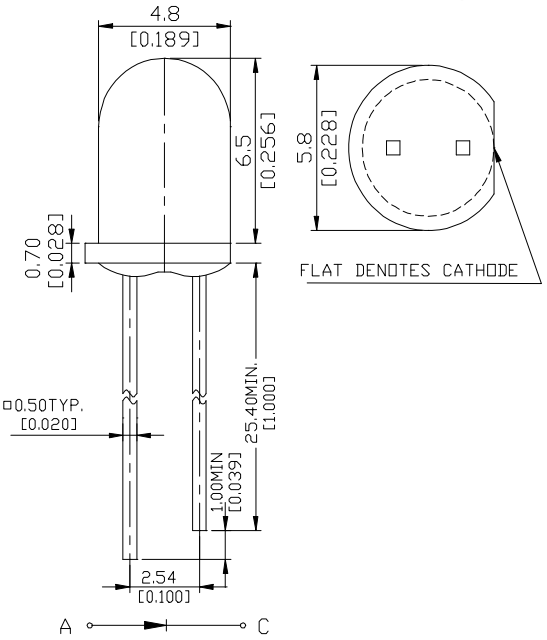
The MVL-403xx series package are T-1 3/4 (ϕ4mm) standard color transparent plastic lens package. The Hi-EFF red (HR) and yellow LED chips are made with Gallium Arsenide Phosphide on Gallium Phosphide diode. The green LED chip is made with Gallium Phosphide on Gallium Phosphide diode. Phosphide diode.

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

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 Tatings

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/^{o}C
Derating Linear From 25^{o}C		0.4	0.25	0.4	mA
Reverse Voltage	V_R	5	5	5	V
Operating Temperature Range	Topr	-55^{o}C to + 100^{o}C			
Storage Temperature Range	Tstg	-55^{o}C to + 100^{o}C			
Lead Soldering Temperature (1.6mm from body) for 3 seconds at 260^{o}C					

Optical -Electrical Characteristics

Part No. : MVL-403G @T_A=25°C

Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	I_F=10mA	I_V	10	34	-	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	λp	-	565	-	nm
Spectral Line Half Width	I_F=20mA	Δλ	-	30	-	nm
Viewing Angle	I_F=20mA	$2\theta_{1/2}$	-	45	-	deg

Part No. : MVL-403Y @T_A=25°C

Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	I_F=10mA	I_V	9.0	29	-	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	λp	-	585	-	nm
Spectral Line Half Width	I_F=20mA	Δλ	-	35	-	nm
Viewing Angle	I_F=20mA	$2\theta_{1/2}$	-	45	-	deg

Part No. : MVL-403HR @T_A=25°C

Parameter	Test Conditions	Symbol	Min .	Typ .	Max .	Unit .
Luminous Intensity	I_F=10mA	I_V	10.0	32	-	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	λp	-	640	-	nm
Spectral Line Half Width	I_F=20mA	Δλ	-	40	-	nm
Viewing Angle	I_F=20mA	$2\theta_{1/2}$	-	45	-	deg

Typical Optical-Electrical Characteristic Curves

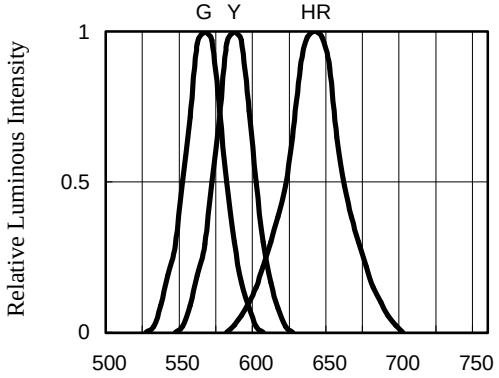


Fig 1. RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH

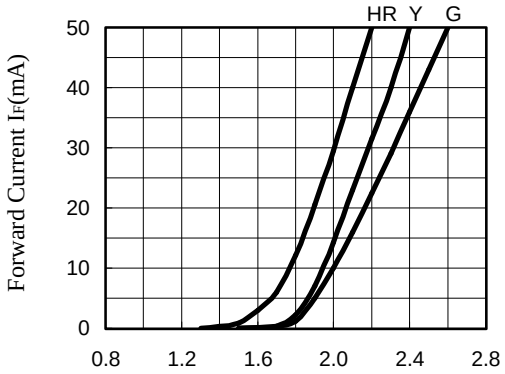


Fig 2. FORWARD CURRENT VS. FORWARD VOLTAGE

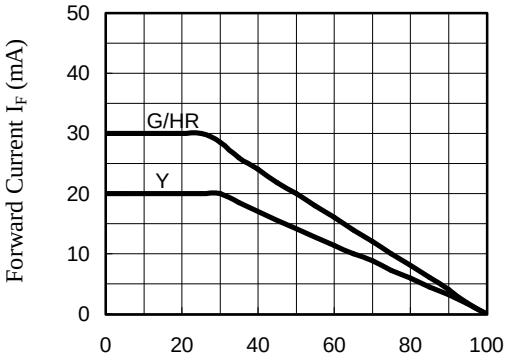


Fig 3. FORWARD CURRENT VS. AMBIENT TEMPERATURE

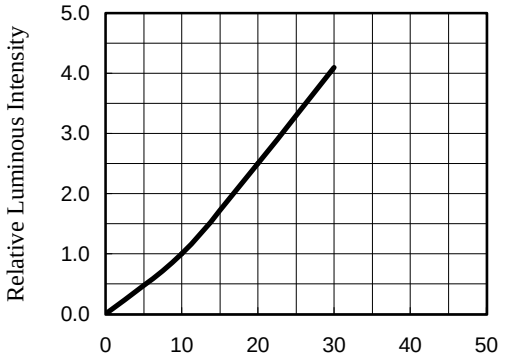


Fig 4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

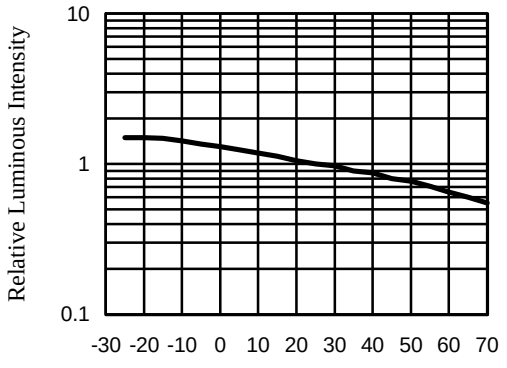


Fig 5. RELATIVE LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

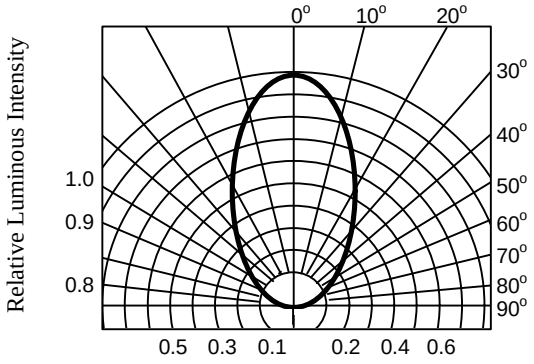


Fig 6. RADIATION DIAGRAM