T-1 3/4 (5mm) Low Profile LED Lamps

LTL-5224 High Efficiency Red
LTL-5234 Green
LTL-5254 Yellow

Features

- High intensity light source with two lenses effects.
- Red , Green and Yellow colors available.
- Low profile.
- Low power consumption.
- Long life solid state reliability.
- General purpose leads.
- I.C. compatible/low current requirements.
- Reliable and rugged.

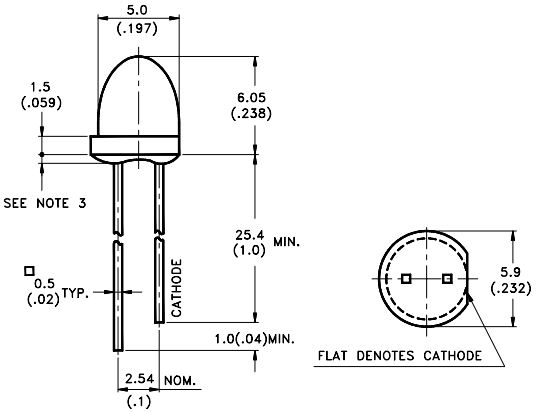
Description

The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

The Green source color devices are made with Gallium Phosphide on Gallium Phosphide Green Light Emitting Diode.

The Yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25mm (.010") unless otherwise noted.
3. Protruded resin under flange is 1.0mm (.04") max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.

Devices

Part No. LTL-	Lens	Source Color
5224	Red Transparent	Hi. Eff. Red
5234	Green Transparent	Green
5254	Yellow Transparent	Yellow

Absolute Maximum Ratings at Ta=25℃

Parameter	Hi. Eff. Red	Green	Yellow	Unit
Power Dissipation	100	100	60	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	120	120	80	mA
Continuous Forward Current	30	30	20	mA
Derating Linear From 50℃	0.4	0.4	0.25	mA/℃
Reverse Voltage	5	5	5	V
Operating Temperature Range	-55℃ to +100℃			
Storage Temperature Range	-55℃ to +100℃			
Lead Soldering Temperature [1.6mm (.063 in.) from body]	260℃ for 5 Seconds			

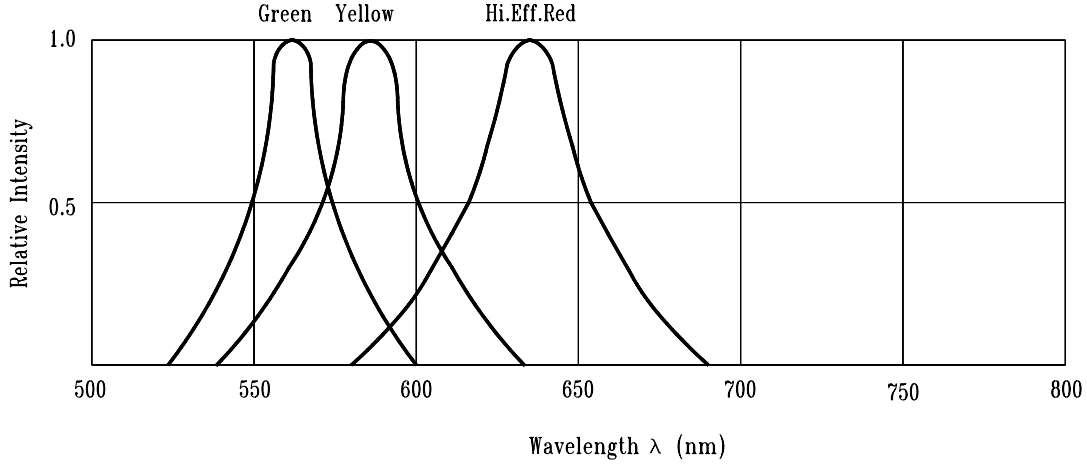


Fig.1 Relative Intensity vs. Wavelength

Electrical/Optical Characteristics at Ta=25℃

Parameter	Symbol	Part No. LTL-	Min.	Typ.	Max.	Unit.	Test Condition.
Luminous Intensity	Iv	5224 5234 5254	8.7 12.6 3.7	29 40 12.6		mcd	IF=10 mA Note 1,4
Viewing Angle	2θ1/2	52x4		44		deg	Note 2 (Fig.6)
Peak Emission Wavelength	λP	5224 5234 5254		635 565 585		nm	Measurement @Peak (Fig.1)
Dominant Wavelength	λd	5224 5234 5254		623 569 588		nm	Note 3
Spectral Line Half Width	△λ	5224 5234 5254		40 30 35		nm	
Forward Voltage	VF	5224 5234 5254		2.0 2.1 2.1	2.6 2.6 2.6	V	IF=20mA
Reverse Current	IR	52x4			100	μA	VR=5V
Capacitance	C	5224 5234 5254		20 35 15		pF	VF=0 , f=1MHz

Notes:1.Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
2. θ1/2 is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
3.The dominant wavelength, λd is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.
4.Iv needs ± 15% additionary for guaranteed limits.

Typical Electrical/Optical Characteristic Curves (25℃ Ambient Temperature Unless Otherwise Noted)

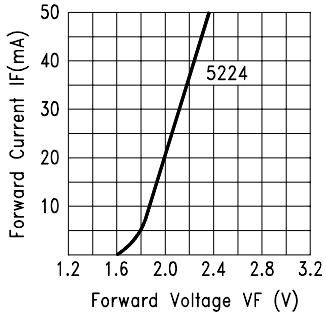


Fig.2 FORWARD CURRENT VS. FORWARD VOLTAGE

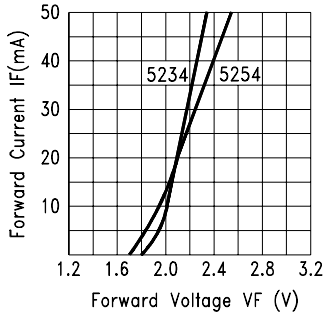


Fig.3 FORWARD CURRENT VS. FORWARD VOLTAGE

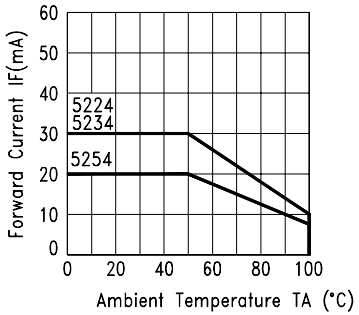


Fig.4 FORWARD CURRENT DERATING CURVE

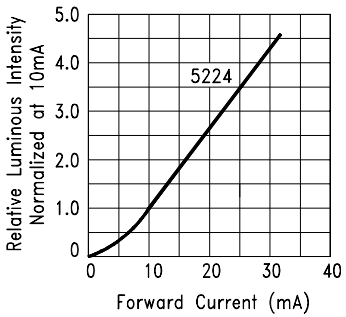


Fig.5 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

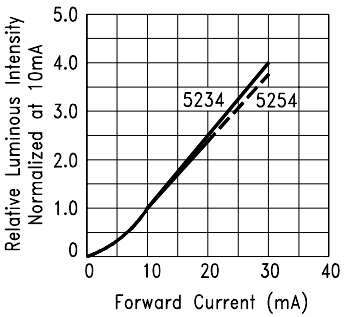


Fig.6 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

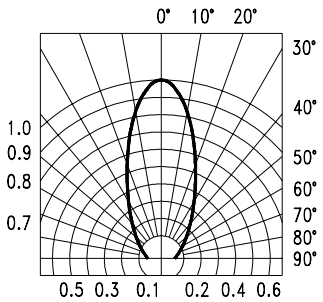


Fig.7 SPATIAL DISTRIBUTION

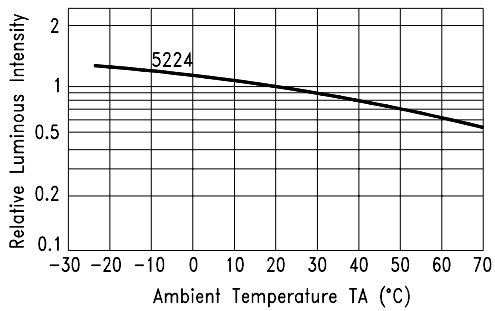


Fig.8 LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

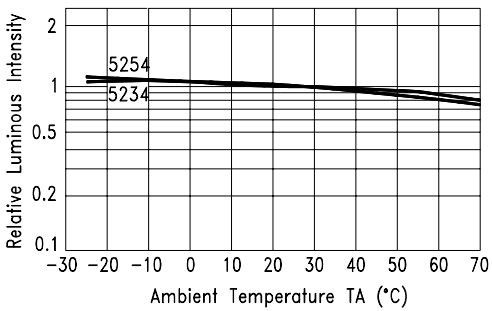


Fig.9 LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE