

LITEON

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

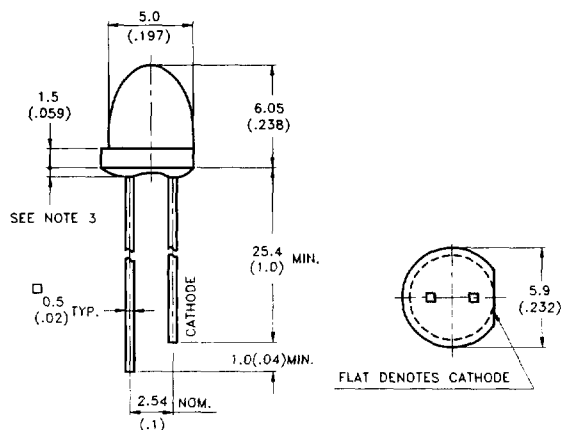
Description

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 $\pm 0.25\text{mm}$ (.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
	Color	Diffusion	
5224	Red	Transparent	Hi. Eff. Red
5234	Green	Transparent	Green
5254	Yellow	Transparent	Yellow

Absolute Maximum Ratings at Ta=25 °C

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 °C	0.4	0.4	0.25	mA/ °C
Reverse Voltage	5	5	5	V
Operating Temperature Range	-55 °C to +100 °C			
Storage Temperature Range	-55 °C to +100 °C			
Lead Soldering Temperature [1.6mm (0.063in) From Body]	260 °C for 5 Seconds			

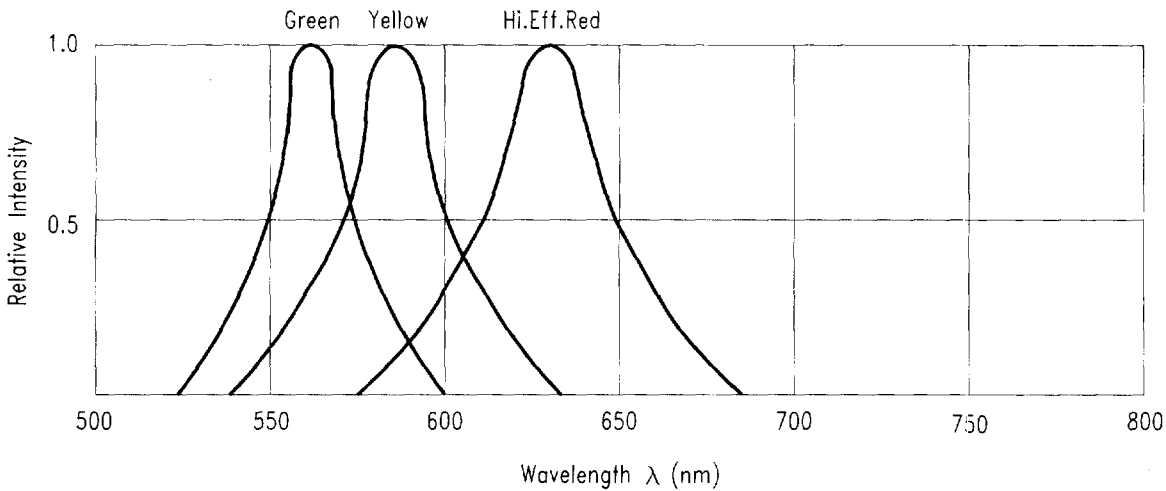


Fig.1 RELATIVE INTENSITY VS. WAVELENGTH

LED LAMPS

Electrical / Optical Characteristics and Curves at Ta = 25 °C

Parameter	Symbol	Part No. LTL-	Min.	Typ.	Max.	Unit	Test Condition
Luminous Inten- sity	Iv	5224 5234 5254	1.7 1.7 1.0	5.6 5.6 4.0		mcd	IF=10 mA Note 1
Viewing Angle	2 θ 1/2	5224 5234 5254		44		deg	Note 2 (Fig.6)
Peak Emission Wavelength	λ P	5224 5234 5254		635 565 585		nm	Measurement @Peak (Fig.1)
Dominant Wavelength	λ d	5224 5234 5254		621 569 588		nm	Note 3
Spectral Line Half Width	$\Delta \lambda$	5224 5234 5254		40 30 35		nm	
Forward Voltage	VF	5224 5234 5254		2.0 2.1 2.1	2.8 2.8 2.8	V	IF=20mA
Reverse Current	IR	5224 5234 5254			100	μ A	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. θ 1/2 is the off-axis angle at which the luminous intensity is half the axial luminous intensity.
3. The dominant wavelength, λ d is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

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

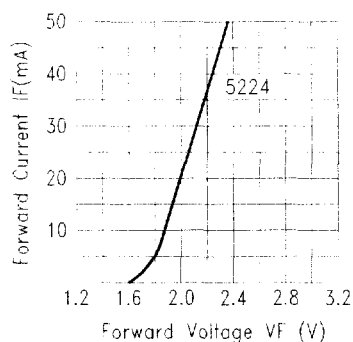


Fig.2 FORWARD CURRENT VS. FORWARD VOLTAGE

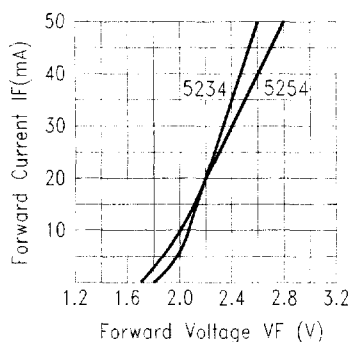


Fig.3 FORWARD CURRENT VS. FORWARD VOLTAGE

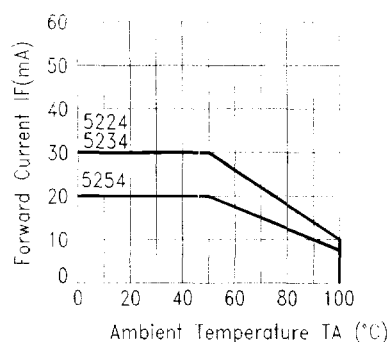


Fig.4 FORWARD CURRENT DERATING CURVE

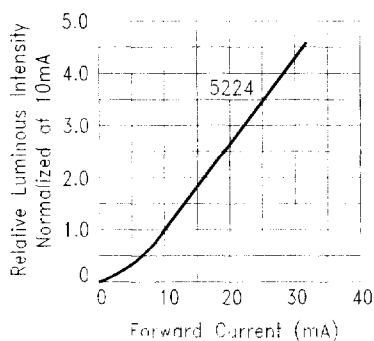


Fig.5 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

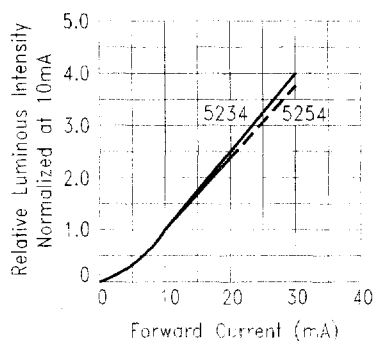


Fig.6 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

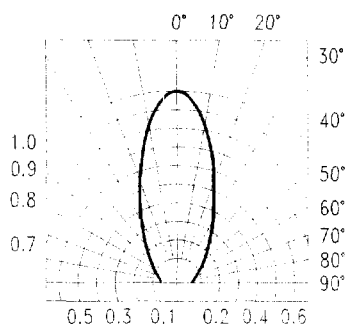


Fig.7 SPATIAL LIGHT DISTRIBUTION

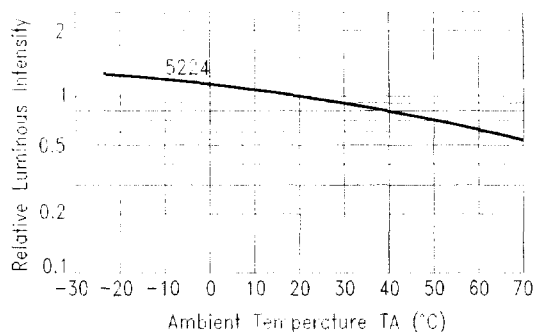


Fig.8 LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

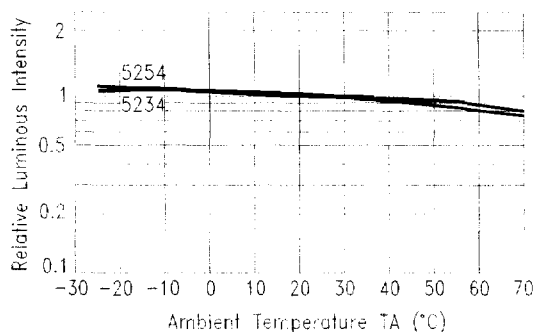


Fig.9 LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE