LITEON

×6.35mm Light Bar

LTL-50000 Series

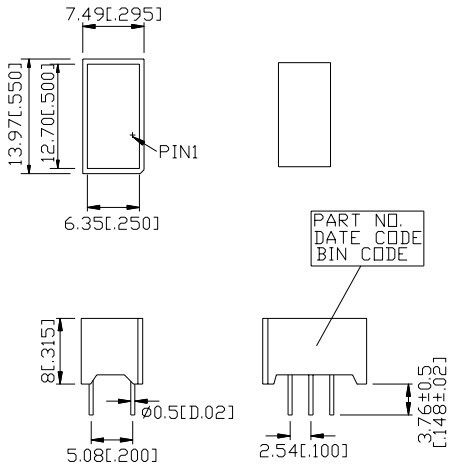
Features

- 12.7mm × 6.35mm rectangular light bar.
- Choices of three bright colors-green/yellow/high efficiency red.
- Large, bright, uniform light emitting areas.
- Low power requirement.
- Excellent ON-OFF contrast.
- Can be used with panel and legend mount.
- Easy mounting on P.C. board.
- Categorized for light output.
- Yellow and green categorized for dominant wavelength.

Description

The LTL-53173Y/54173G/57173HR series bars are rectangular light sources designed for a variety of applications where a large bright source of light is reguired. These light bars are configured in dual-in- line packages. The green series devices utilize LED chips which are made from GaP on a transparent GaP substrate. The yellow and high efficiency red series devices utilize LED chips which are made from GaAsP on a transparent GaP substrate. The green Devices have green bars, yellow devices have yellow bars, and high-efficiency red devices have red bars.

Package Dimensions



Notes :
All dimensions are in millimeters (inches).
Tolerance: ± 0.25mm (0.010") unless otherwise noted.

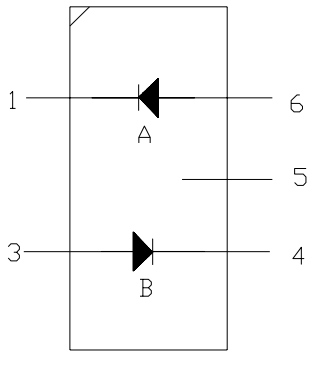
Devices

Part No. LTL-			Description
Green	Yellow	Hi. Eff. Red	
54173G	53173Y	57173HR	Universal, Rectangular Bar

Pin Connection

Pin No.	Connection
1	Cathode A
2	No Pin
3	Anode B
4	Cathode B
5	No Connection
6	Anode A

Internal Circuit Diagram



Absolute Maximum Ratings at Ta=25℃

Parameter	Green	Yellow	Hi. -Eff. Red	Unit
Power Dissipation Per Chip	75	60	75	mW
Peak Forward Current Per Chip (1/10 Duty Cycle, 0.1ms Pulse Width)	100	80	100	mA
Continuous Forward Current Per Chip Derating Linear from 25℃ Per Chip	25 0.33	20 0.27	25 0.33	mA mA/℃
Reverse Voltage Per Chip	5	5	5	V
Operating Temperature Range	-35℃ to +85℃			
Storage Temperature Range	-35℃ to +85℃			
Solder Temperature 1/16 Inch Below Seating Plane for 3 Seconds at 260℃				

Electrical/Optical Characteristics at Ta=25℃

LTL-54173G

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Average Luminous Intensity	I_V	2.3	4.2		mcd	I_F=10mA
Peak Emission Wavelength	λ P		565		nm	I_F=20mA
Spectral Line Half-Width	$\Delta\lambda$		30		nm	I_F=20mA
Dominant Wavelength	λ d		569		nm	I_F=20mA
Forward Voltage, and Chip	V_F		2.1	2.6	V	I_F=20mA
Reverse Current, and Chip	I_R			100	μA	V_R=5V

LTL-53173Y

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Average Luminous Intensity	I_V	2.3	4.2		mcd	I_F=10mA
Peak Emission Wavelength	λ P		585		nm	I_F=20mA
Spectral Line Half-Width	$\Delta\lambda$		35		nm	I_F=20mA
Dominant Wavelength	λ d		588		nm	I_F=20mA
Forward Voltage, and Chip	V_F		2.1	2.6	V	I_F=20mA
Reverse Current, and Chip	I_R			100	μA	V_R=5V

LTL-57173HR

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Average Luminous Intensity	I_V	2.3	4.2		mcd	I_F=10mA
Peak Emission Wavelength	λ P		635		nm	I_F=20mA
Spectral Line Half-Width	$\Delta\lambda$		40		nm	I_F=20mA
Dominant Wavelength	λ d		623		nm	I_F=20mA
Forward Voltage, and Chip	V_F		2.0	2.6	V	I_F=20mA
Reverse Current, and Chip	I_R			100	μA	V_R=5V

Notes: 1.Clean only in water, isopropanol,ethanol,freon TF (or equivalent).
2.Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commision Internationale De L'Eclairage)eye-response curve.

(25℃ Ambient Temperature Unless Otherwise Noted)

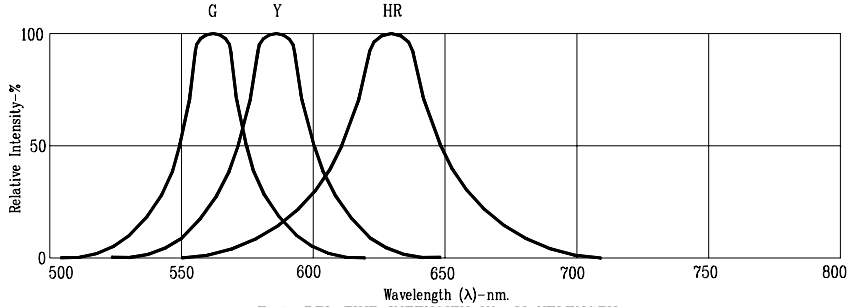


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

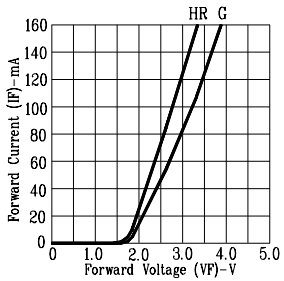


Fig2. FORWARD CURRENT VS. FORWARD VOLTAGE

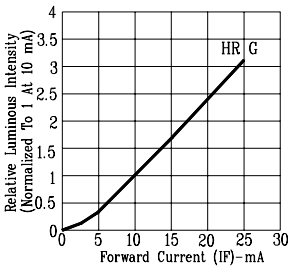


Fig3. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

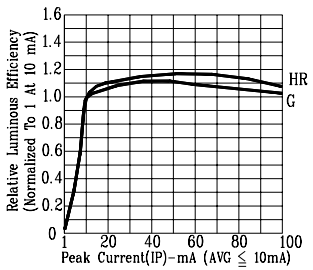


Fig4. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT

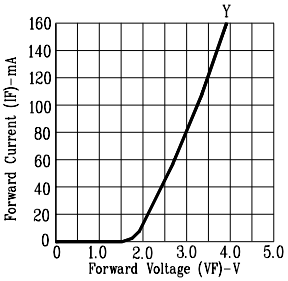


Fig5. FORWARD CURRENT VS. FORWARD VOLTAGE

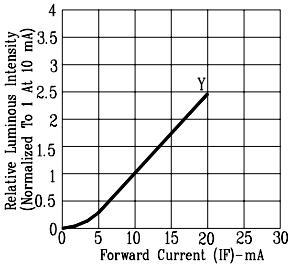


Fig6. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

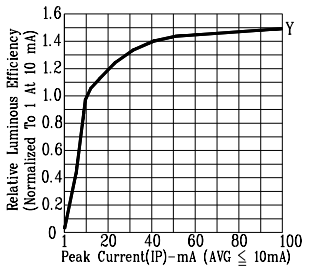


Fig7. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT

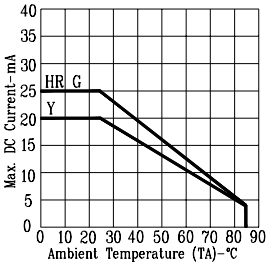


Fig8. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

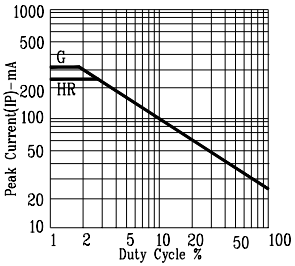


Fig9. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

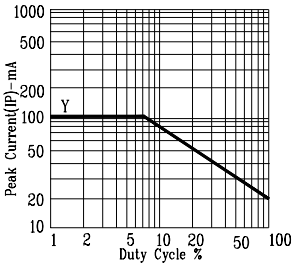


Fig10. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: HR=HI.EFF.RED G=GREEN Y=YELLOW (REFRESH RATE 1KHz)