

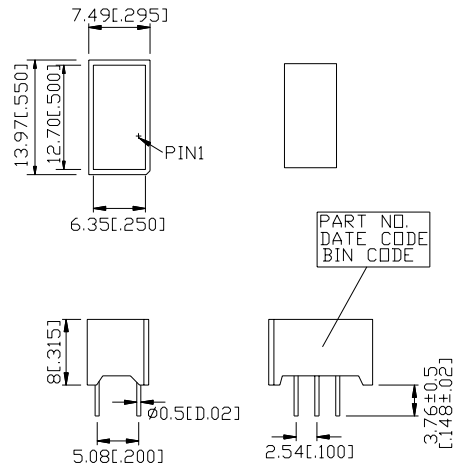
Features

- 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 required. 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: $\pm 0.25\text{mm}$ (0.010") unless otherwise noted.

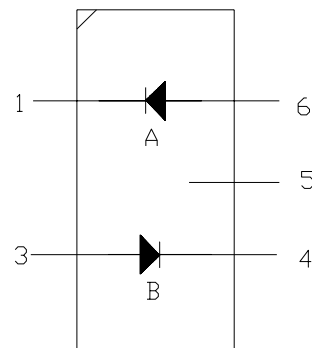
Devices

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°C

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°C Per Chip	25 0.33	20 0.27	25 0.33	mA mA/°C
Reverse Voltage Per Chip	5	5	5	V
Operating Temperature Range	-35°C to +85°C			
Storage Temperature Range	-35°C to +85°C			
Solder Temperature 1/16 Inch Below Seating Plane for 3 Seconds at 260°C				

Electrical/Optical Characteristics at Ta=25°C

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	Δλ		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	Δλ		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	Δλ		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.

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

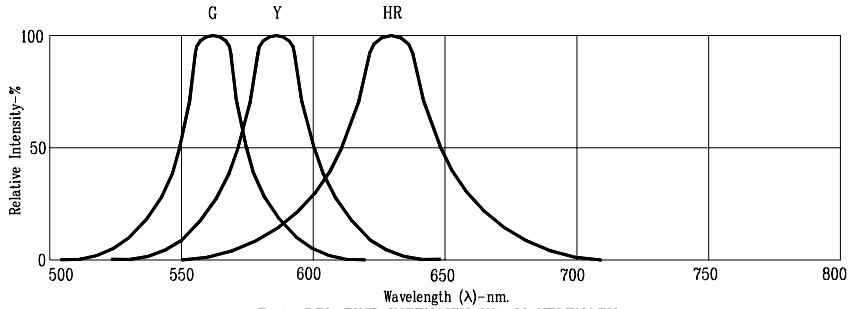


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

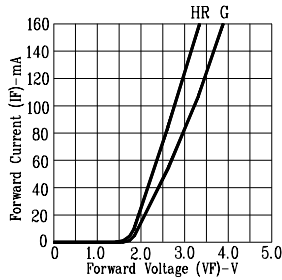


Fig2. FORWARD CURRENT VS. FORWARD VOLTAGE

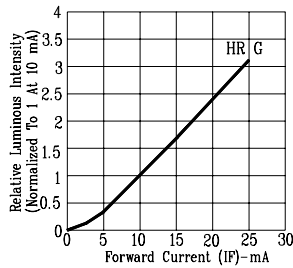


Fig3. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

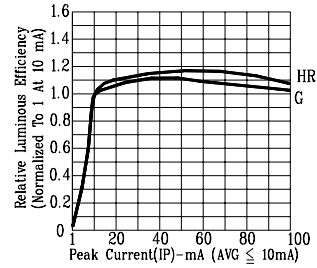


Fig4. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT

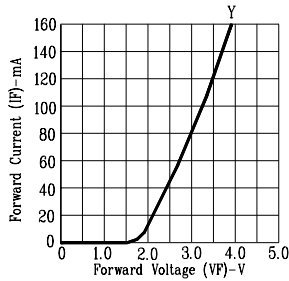


Fig5. FORWARD CURRENT VS. FORWARD VOLTAGE

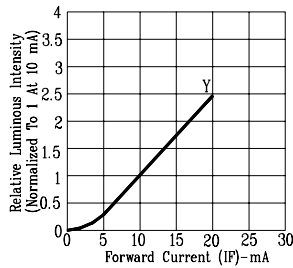


Fig6. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

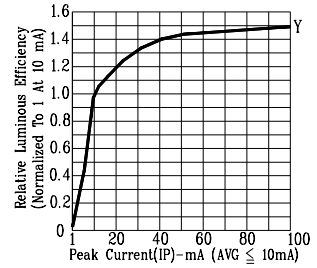


Fig7. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT

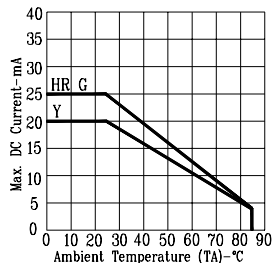


Fig8. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

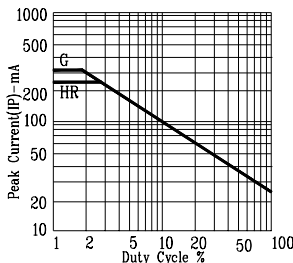


Fig9. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

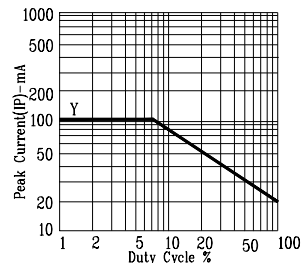


Fig10. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

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