



2x5 RECTANGULAR BAR LED LAMPS

T-41-23

LTL-767P BRIGHT RED

LTL-767G GREEN

LTL-767E HIGH EFFICIENCY RED

LTL-767Y YELLOW

FEATURES

- LOW POWER CONSUMPTION
- MOST SUITABLE FOR USE LIKE LEVEL INDICATOR
- EXCELLENT UNIFORMITY OF LIGHT EMISSION.
- LONG LIFE-SOLID STATE RELIABILITY.
- I.C. COMPATIBLE.

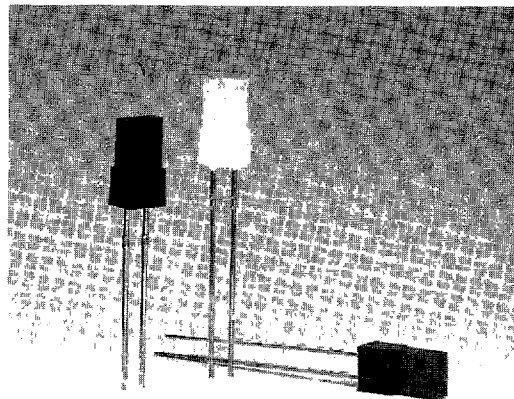
DESCRIPTION

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

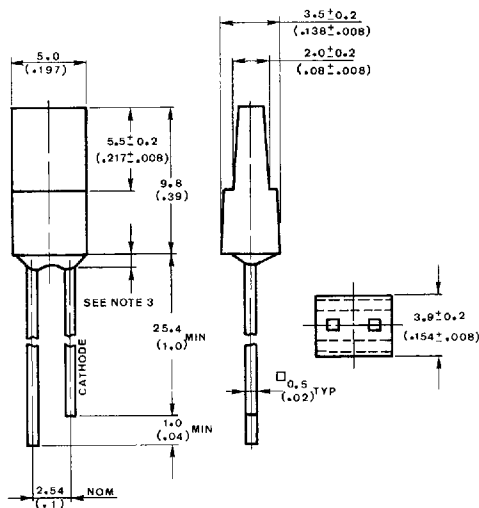
The High Efficiency Red Source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

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 1.5mm (.059") 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	
767P	Red	Diffused	Bright Red
767E	Red	Diffused	Hi. Eff. Red
767G	Green	Diffused	Green
767Y	Yellow	Diffused	Yellow

ABSOLUTE MAXIMUM RATINGS AT T_A = 25°C

PARAMETER	BRIGHT RED	GREEN	YELLOW	HI. EFF. RED	UNIT
Power Dissipation	40	100	60	100	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	60	120	80	120	mA
Continuous Forward Current	15	30	20	30	mA
Derating Linear From 25°C	0.2	0.4	0.25	0.4	mA/°C
Reverse Voltage	5	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 (0.063 in) From Body)	260°C for 5 Seconds				

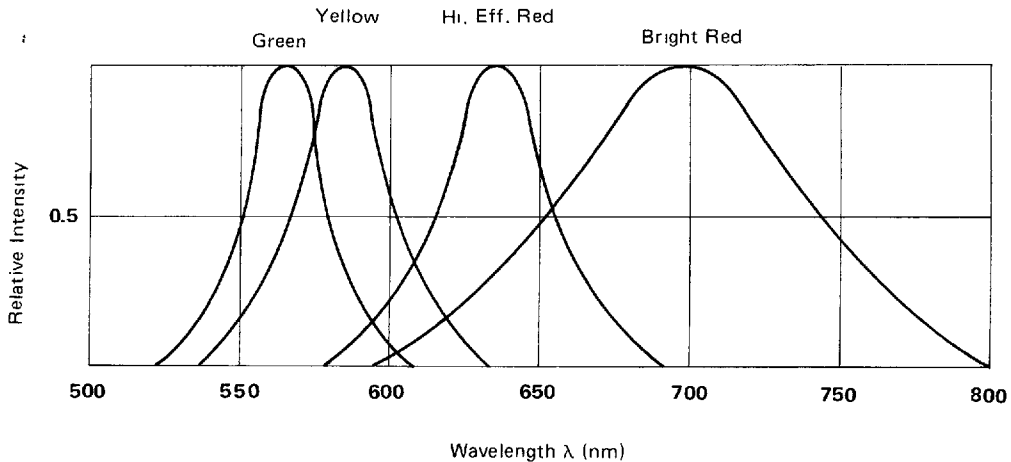


FIG. 1 RELATIVE INTENSITY VS. WAVELENGTH

ELECTRICAL/OPTICAL CHARACTERISTICS AND CURVES AT $T_A = 25^\circ\text{C}$

PARAMETER	SYMBOL	PART NO. LTL	MIN	TYP	MAX	UNIT	TEST CONDITION
Luminous Intensity	I_V	767P 767E	0.1 0.6	0.4 1.7		md	$I_F = 10\text{ mA}$ Note 1
Viewing Angle	$2\theta\%$	767P 767E		140		deg	Note 2 (Fig. 6)
Peak Emission Wavelength	λ_{PEAK}	767P 767E		697 635		nm	Measurement @ Peak (Fig. 1)
Spectral Line Half Width	$\Delta\lambda$	767P 767E		90 40		nm	
Forward Voltage	V_F	767P 767E		2.1 2.0	2.8	V	$I_F = 20\text{ mA}$
Reverse Current	I_R	767P 767E			100	μA	$V_R = 5\text{ V}$
Capacitance	C	767P 767E		55 20		PF	$V_F = 0$ $f = 1\text{ MHz}$

NOTES: 1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commission Internationale De L'Eclairage) eye-response curve.
2. $\theta\%$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity

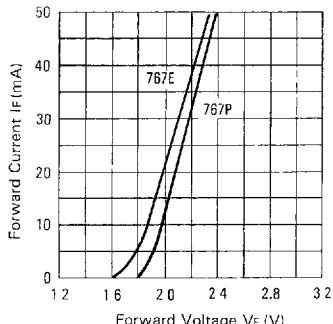


FIG 2 FORWARD CURRENT VS FORWARD VOLTAGE

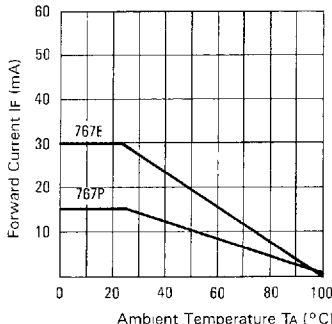


FIG 3 FORWARD CURRENT DERATING CURVE

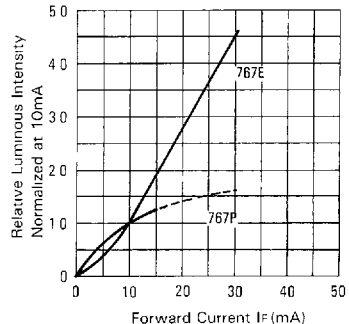


FIG 4 RELATIVE LUMINOUS INTENSITY VS FORWARD CURRENT

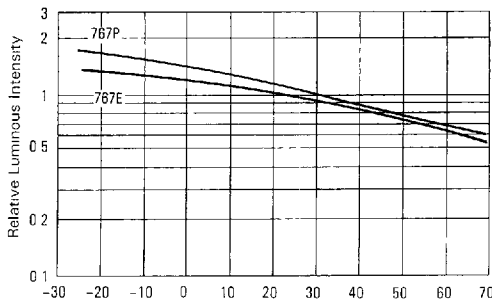


FIG 5 LUMINOUS INTENSITY VS AMBIENT TEMPERATURE

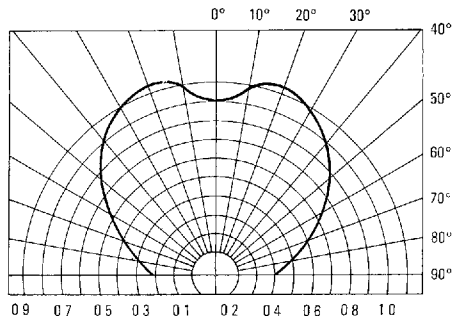


FIG 6 SPATIAL DISTRIBUTION