

Kingbright®

2X5mm RECTANGULAR SOLID STATE LAMPS

L-233H-12.5 BRIGHT RED	L-233G-12.5 GREEN
L-233I-12.5 HIGH EFFICIENCY RED	L-233Y-12.5 YELLOW
L-233E-12.5 ORANGE	L-233A-12.5 YELLOW

Features

- LOW POWER CONSUMPTION.
- RELIABLE AND RUGGED.
- 2x5MM RECTANGULAR LED LAMP WITH STOPPER.
- EXCELLENT UNIFORMITY OF LIGHT OUTPUT.
- SUITABLE FOR LEVEL INDICATOR.
- LONG LIFE - SOLID STATE RELIABILITY.

Description

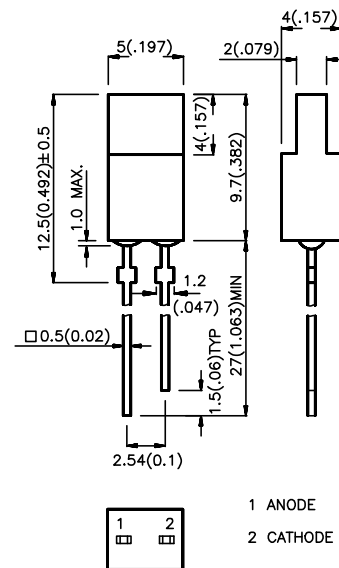
The Bright Red source color devices are made with Gallium Phosphide Red Light Emitting Diode.

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

The High Efficiency Red and Orange source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange 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 $\pm 0.25(0.01)$ unless otherwise noted.
 3. Lead spacing is measured where the lead emerge package.
 4. Specifications are subjected to change without notice.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 10 mA		Viewing Angle 2 θ 1/2
			Min.	Max.	
L-233HDT-12.5	BRIGHT RED (GaP)	RED DIFFUSED	0.5	2	110°
L-233IDT-12.5	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	3.2	12.5	110°
L-233EDT-12.5	ORANGE (GaAsP/GaP)	ORANGE DIFFUSED	3.2	12.5	110°
L-233GDT-12.5	GREEN (GaP)	GREEN DIFFUSED	2	5	110°
L-233YDT-12.5	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	2	5	110°
L-233ADT-12.5	YELLOW (GaAsP/GaP)	AMBER DIFFUSED	2	5	110°

Note:
1. θ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

Electrical / Optical Characteristics at T_A=25°C

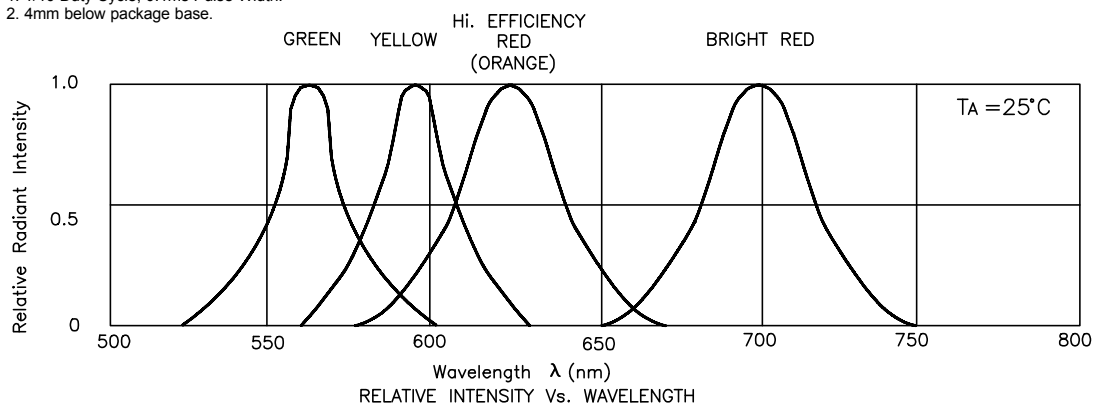
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ_{peak}	Peak Wavelength	Bright Red High Efficiency Red Orange Green Yellow	700 625 625 565 590		nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Line Halfwidth	Bright Red High Efficiency Red Orange Green Yellow	45 45 45 30 35		nm	IF=20mA
C	Capacitance	Bright Red High Efficiency Red Orange Green Yellow	40 12 12 45 10		pF	VF=0V;f=1MHz
V _F	Forward Voltage	Bright Red High Efficiency Red Orange Green Yellow	2.0 2.0 2.0 2.2 2.1	2.5 2.5 2.5 2.5 2.5	V	IF=20mA
I _R	Reverse Current	All	10		uA	VR = 5V

Absolute Maximum Ratings at T_A=25°C

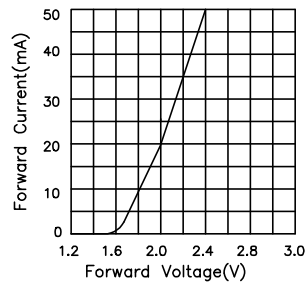
Parameter	Bright Red	High Efficiency Red	Orange	Green	Yellow	Units
Power dissipation	120	105	105	105	105	mW
DC Forward Current	25	30	30	25	30	mA
Peak Forward Current [1]	150	150	150	150	150	mA
Reverse Voltage	5	5	5	5	5	V
Operation/Storage Temperature	-40 °C To +85 °C					
Lead Solder Temperature [2]	260 °C For 5 Seconds					

Notes:

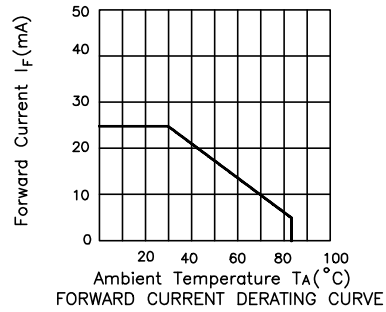
- 1/10 Duty Cycle, 0.1ms Pulse Width.
- 4mm below package base.



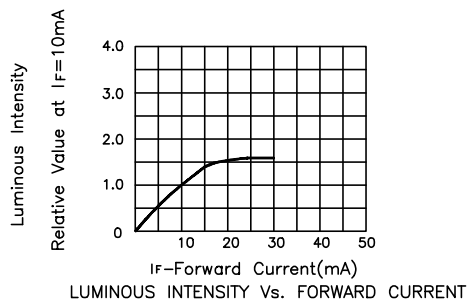
Bright Red L-233HDT-12.5



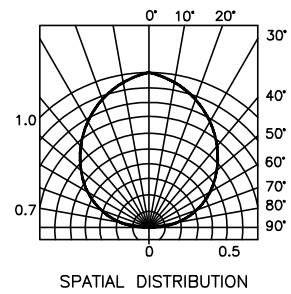
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

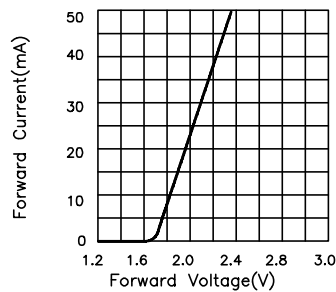


LUMINOUS INTENSITY Vs. FORWARD CURRENT

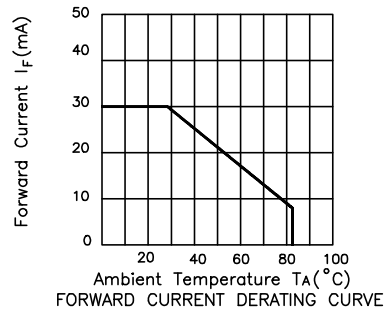


SPATIAL DISTRIBUTION

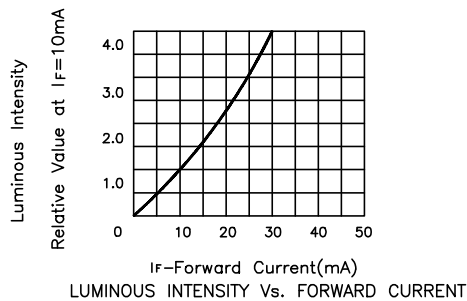
High Efficiency Red L-233IDT-12.5 Orange L-233EDT-12.5



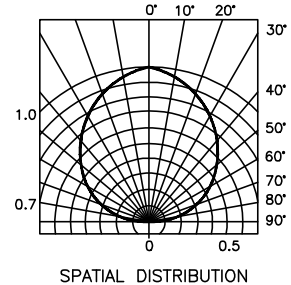
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

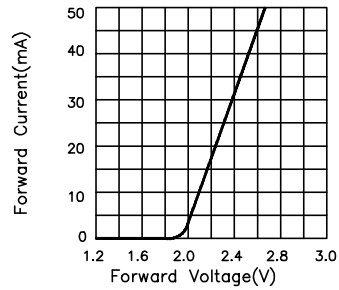


LUMINOUS INTENSITY Vs. FORWARD CURRENT

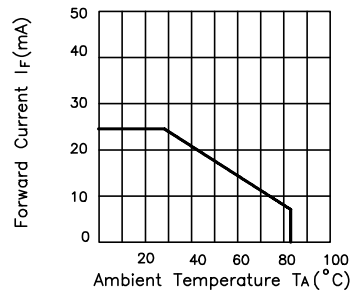


SPATIAL DISTRIBUTION

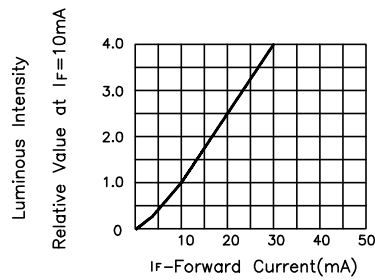
Green L-233GDT-12.5



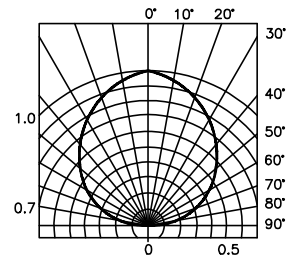
FORWARD CURRENT Vs. FORWARD VOLTAGE



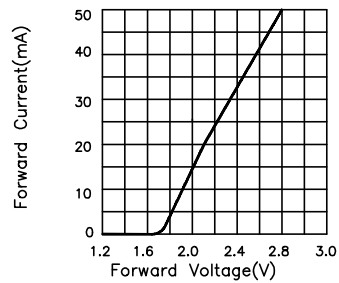
FORWARD CURRENT DERATING CURVE



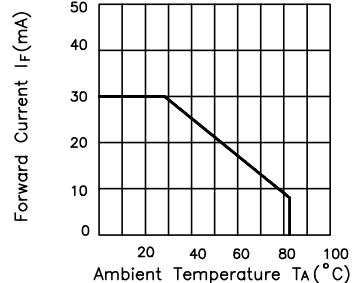
LUMINOUS INTENSITY Vs. FORWARD CURRENT



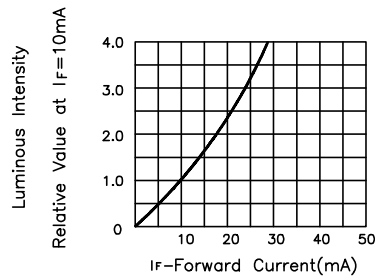
Yellow L-233YDT-12.5, L-233ADT-12.5



FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



LUMINOUS INTENSITY Vs. FORWARD CURRENT

