Rectangular LEDs

Order code	Manufacturer code	Description
56-0380	n/a	RED RECTANGULAR 2.5X5 LED
56-0385	L-383GDT	GREEN RECTANGULAR 2.5X5 LED
56-0390	n/a	YELLOW RECTANGULAR 2.5X5 LED
56-0395	L-383EDT	AMBER RECTANGULAR 2.5X5 LED

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Kingbright®

2.5X5mm RECTANGULAR SOLID STATE LAMPS

L-383H BRIGHT RED
L-383I HIGH EFFICIENCY RED
L-383E AMBER
L-383SR SUPER BRIGHT RED
L-383SG SUPER BRIGHT GREEN
L-383G GREEN
L-383Y YELLOW

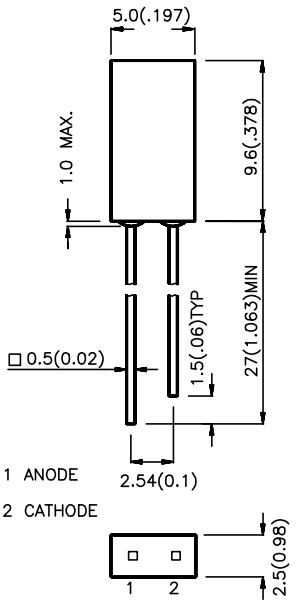
Features

- LOW POWER CONSUMPTION.
- ULTRA BRIGHTNESS IS AVAILABLE.
- RELIABLE AND RUGGED.
- 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 and Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.
The High Efficiency Red and Amber source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Amber Light Emitting Diode.
The Yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.
The Super Bright Red source color devices are made with Gallium Aluminum Arsenide Red Light Emitting Diode.

Package Dimensions



Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ⍬.25(0.01") unless otherwise noted.
3. Lead spacing is measured where the lead emerge package.
4. Specifications are subjected to change withoutnotice.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 10 mA		Viewing Angle
			Min.	Max.	2q1/2
L-383HDT	BRIGHT RED (GaP)	RED DIFFUSED	0.5	1.3	110°
L-383IDT	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	3.2	12.5	110°
L-383EDT	AMBER (GaAsP/GaP)	AMBER DIFFUSED	3.2	12.5	110°
L-383GDT	GREEN (GaP)	GREEN DIFFUSED	1.3	8	110°
L-383YDT	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	1.3	8	110°
L-383SRDT	SUPER BRIGHT RED (GaAlAs)	RED DIFFUSED	*40	*80	110°
L-383SRWT		WHITE DIFFUSED	*40	*80	110°
L-383SGWT	SUPER BRIGHT GREEN (GaP)	WHITE DIFFUSED	*8	*20	110°

Notes:
1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. * Luminous intensity with asterisk is measured at 20mA.

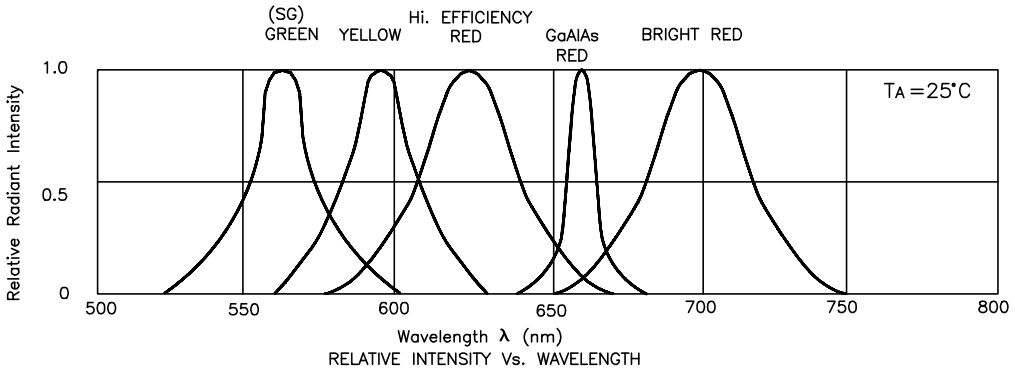
Electrical / Optical Characteristics at T_A=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Bright Red High Efficiency Red Amber Green Yellow Super Bright Red Super Bright Green	700 625 625 565 590 660 565		nm	IF=20mA
Δλ1/2	Spectral Line Halfwidth	Bright Red High Efficiency Red Amber Green Yellow Super Bright Red Super Bright Green	45 45 45 30 35 20 30		nm	IF=20mA
C	Capacitance	Bright Red High Efficiency Red Amber Green Yellow Super Bright Red Super Bright Green	40 12 12 45 10 95 45		pF	VF=0V;f=1MHz
V_F	Forward Voltage	Bright Red High Efficiency Red Amber Green Yellow Super Bright Red Super Bright Green	2.0 2.0 2.0 2.2 2.1 1.85 2.0	2.5 2.5 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

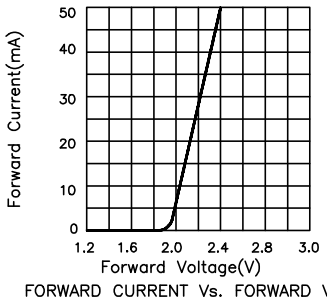
Parameter	Bright Red	High Efficiency Red	Amber	Green	Yellow	Super Bright Red	Super Bright Green	Units
Power dissipation	105	105	105	105	105	100	105	mW
DC Forward Current	25	30	30	25	30	30	25	mA
Peak Forward Current [1]	150	150	150	150	150	150	150	mA
Reverse Voltage	5	5	5	5	5	5	5	V
Operating/Storage Temperature	-40°C To +85 °C							
Lead Soldering Temperature [2]	260°C For 5 Seconds							

Notes:
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 4mm below package base.

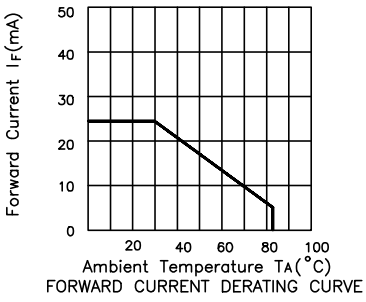


RELATIVE INTENSITY Vs. WAVELENGTH

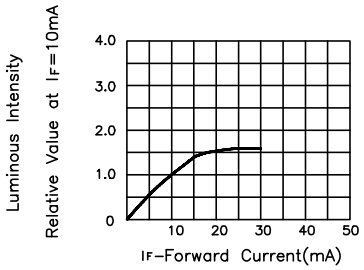
Bright Red L-383HDT



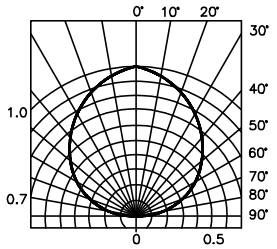
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

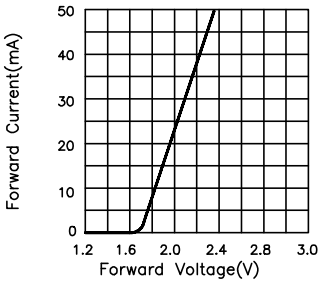


LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION

High Efficiency Red L-383IDT
Amber L-383EDT



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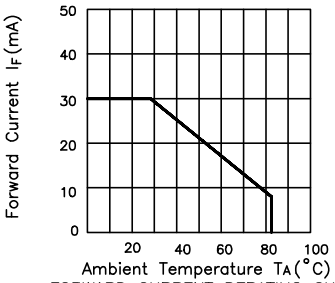

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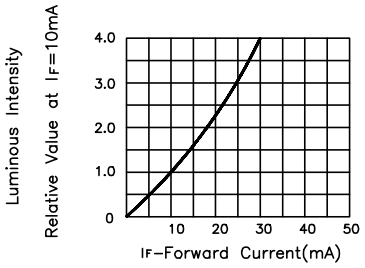
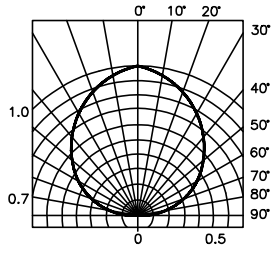
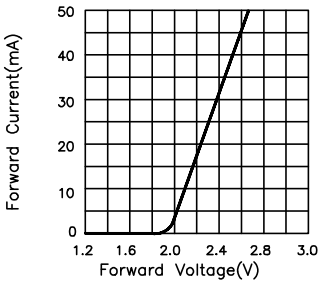


LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION

Green L-383GDT



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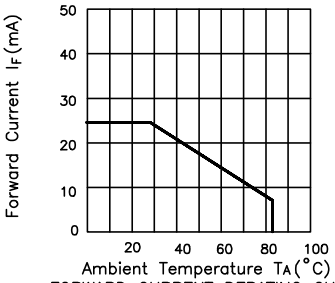

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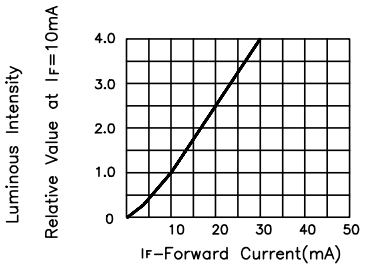

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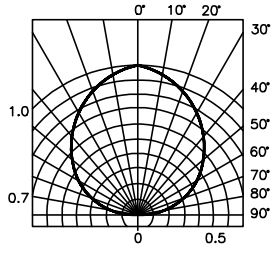
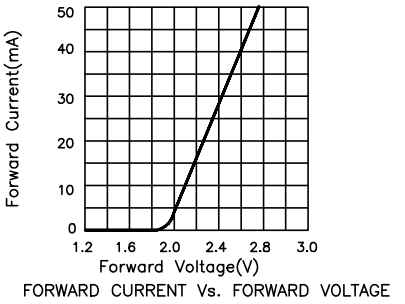


SPATIAL DISTRIBUTION

Yellow L-383YDT



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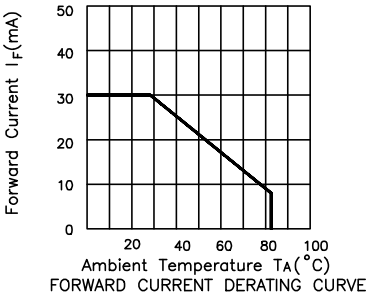

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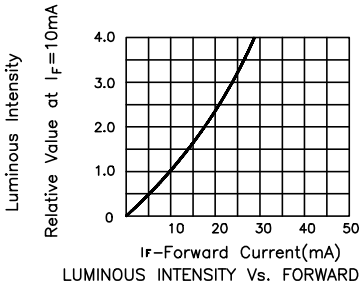
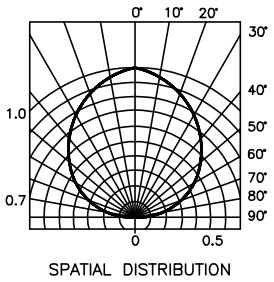
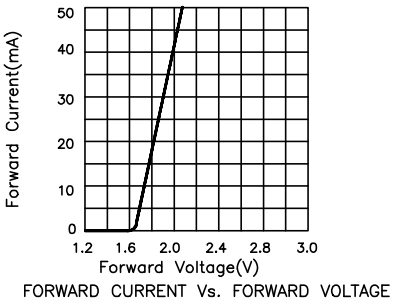


LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION

Super Bright Red L-383SRDT,L-383SRWT



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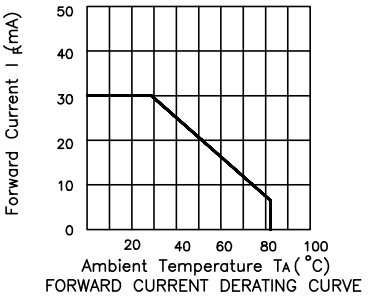

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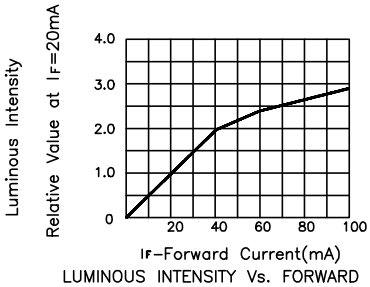

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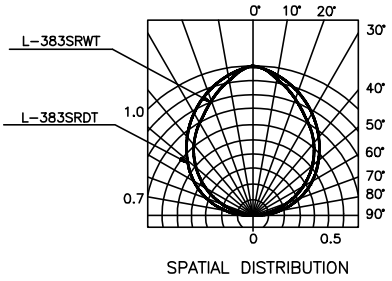
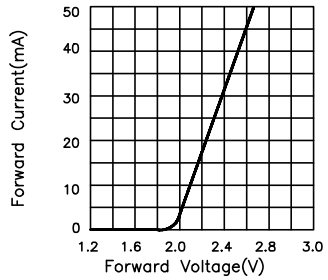


SPATIAL DISTRIBUTION

Super Bright Green L-383SGWT



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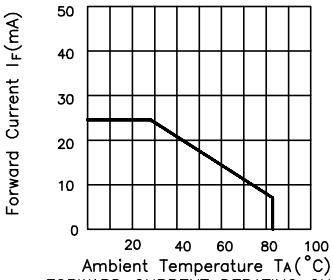

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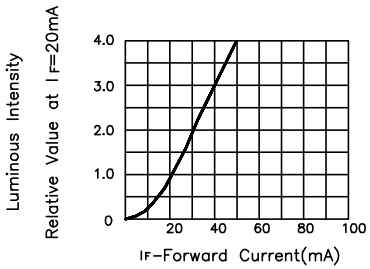

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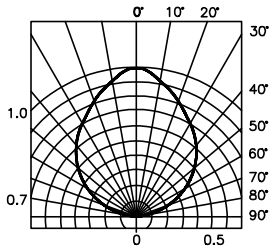

SPATIAL DISTRIBUTION