Kingbright®

3.65x6.15mm SINGLE CHIP LED LIGHT BARS

L-1043I HIGH EFFICIENCY RED
L-1043G GREEN
L-1043SR SUPER BRIGHT RED
L-1043Y YELLOW
L-1043SG SUPER BRIGHT GREEN
L-1049EG HIGH EFFICIENCY RED / GREEN
L-1049SRSG SUPER BRIGHT RED / SUPER BRIGHT GREEN

Features

- FLAT RECTANGULAR LIGHT EMITTING SURFACE.
- SINGLE & DUAL COLORS.
- THIRD (MIXED) COLOR AVAILABLE FOR 3 LEADS VERSION.
- IDEAL AS FLUSH MOUNTED PANEL INDICATORS.
- EXCELLENT ON/OFF CONTRAST.
- LONG LIFE - SOLID STATE RELIABILITY.

Description

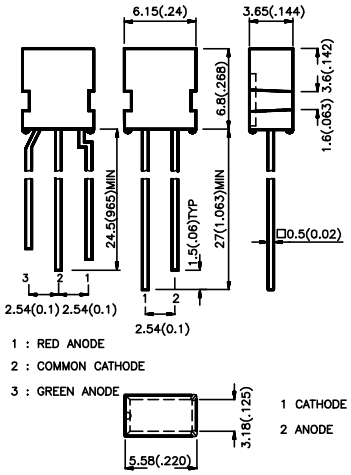
The Green and Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

The High Efficiency Red 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.

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 ±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
			Min.	Max.	**2q1/2**
L-1043ID	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	5	20	100°
L-1043GD	GREEN (GaP)	GREEN DIFFUSED	2	8	100°
L-1043YD	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	2	8	100°
L-1043SRD	SUPER BRIGHT RED (GaAlAs)	RED DIFFUSED	*32	*100	100°
L-1043SGD	SUPER BRIGHT GREEN (GaP)	GREEN DIFFUSED	*5	*12.5	100°
L-1049EGW	HIGH EFFICIENCY RED (GaAsP/GaP)	WHITE DIFFUSED	*8	*20	100°
	GREEN (GaP)		*2	*8	100°
L-1049SRSGW-CC	SUPER BRIGHT RED (GaAlAs)	WHITE DIFFUSED	*32	*100	100°
	SUPER BRIGHT GREEN (GaP)		*20	*50	100°

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.

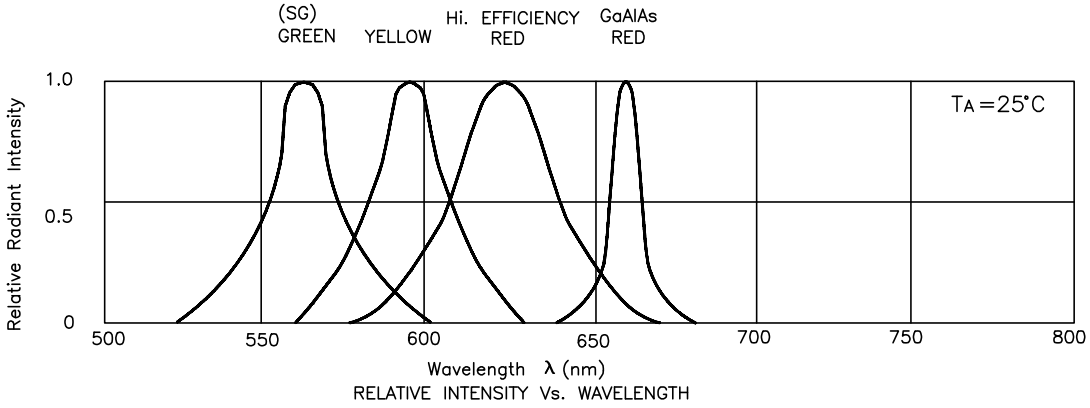
Electrical / Optical Characteristics at T_A=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	High Efficiency Red Green Yellow Super Bright Red Super Bright Green	625 565 590 660 565		nm	IF=20mA
Δλ1/2	Spectral Line Halfwidth	High Efficiency Red Green Yellow Super Bright Red Super Bright Green	45 30 35 20 30		nm	IF=20mA
C	Capacitance	High Efficiency Red Green Yellow Super Bright Red Super Bright Green	12 45 10 95 45		pF	VF=0V;f=1MHz
V_F	Forward Voltage	High Efficiency Red Green Yellow Super Bright Red Super Bright Green	2.0 2.2 2.1 1.85 2.2	2.5 2.5 2.5 2.5 2.5	V	IF=20mA
	Reverse Current	All	10		uA	VR = 5V

Absolute Maximum Ratings at T_A=25°C

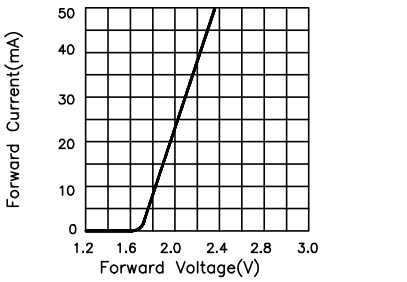
Parameter	High Efficiency Red	Green	Yellow	Super Bright Red	Super Bright Green	Units
Power dissipation	105	105	105	100	105	mW
DC Forward Current	30	25	30	30	25	mA
Peak Forward Current [1]	150	150	150	150	150	mA
Reverse Voltage	5	5	5	5	5	V
Operation/Storage Temperature	-40° C To +85° C					
Lead Solder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

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

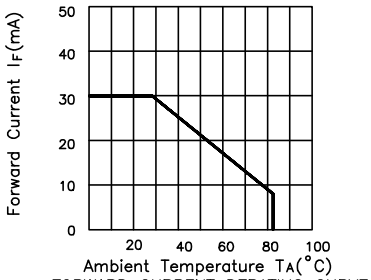


RELATIVE INTENSITY Vs. WAVELENGTH

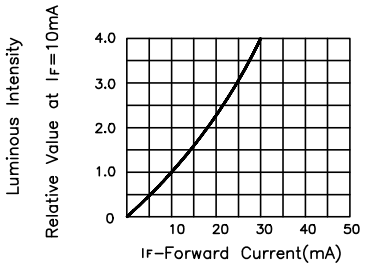
High Efficiency Red L-1043ID



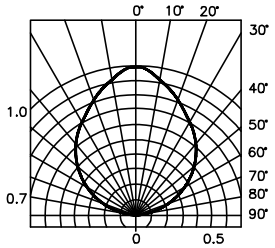
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

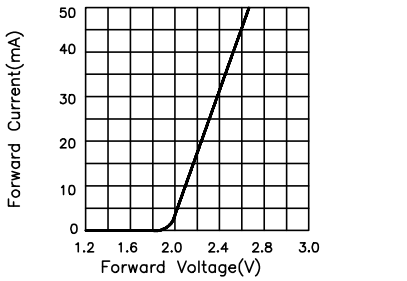


LUMINOUS INTENSITY Vs. FORWARD CURRENT

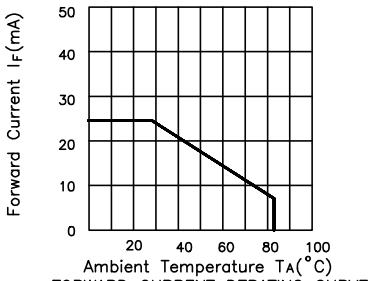


SPATIAL DISTRIBUTION

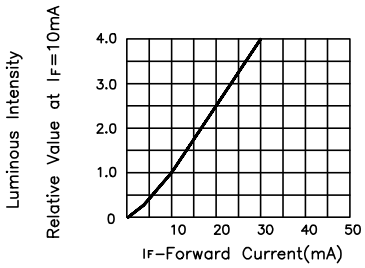
Green L-1043GD



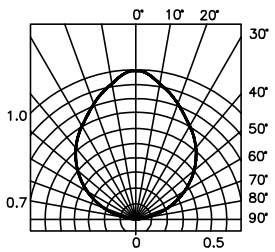
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

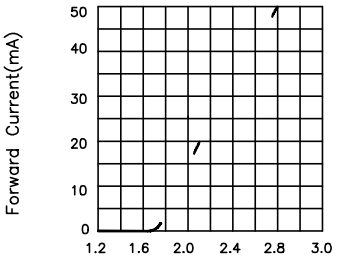


LUMINOUS INTENSITY Vs. FORWARD CURRENT

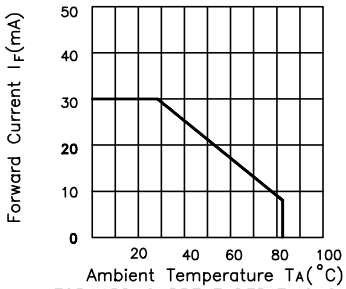


SPATIAL DISTRIBUTION

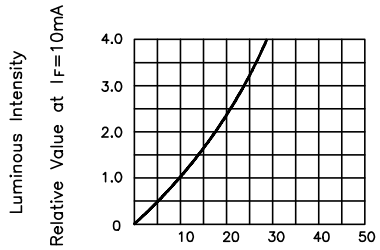
Yellow L-1043YD



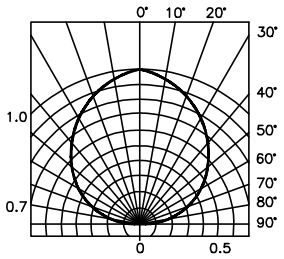
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

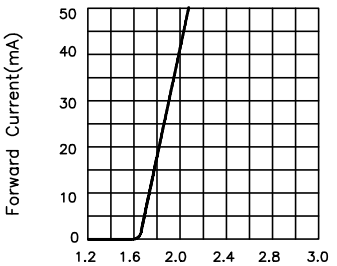


LUMINOUS INTENSITY Vs. FORWARD CURRENT

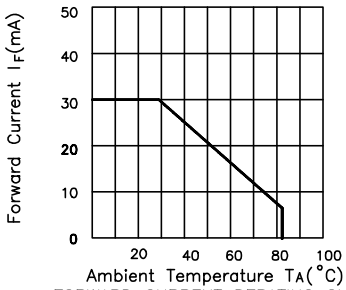


SPATIAL DISTRIBUTION

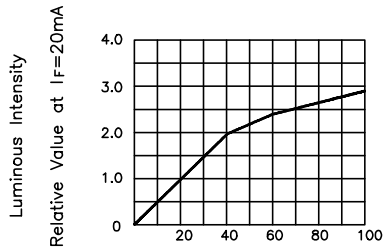
Super Bright Red L-1043SRD



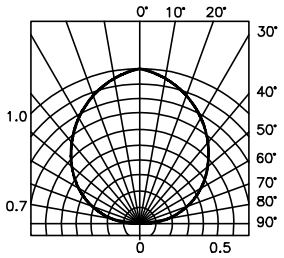
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

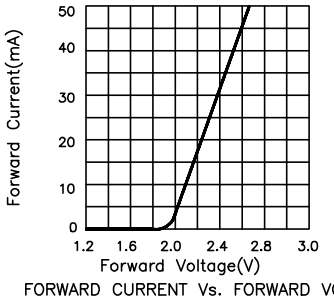


LUMINOUS INTENSITY Vs. FORWARD CURRENT

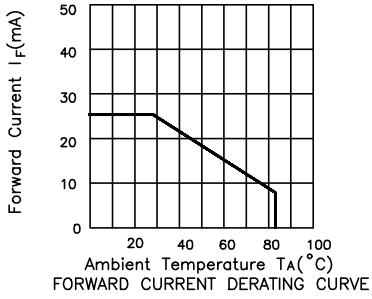


SPATIAL DISTRIBUTION

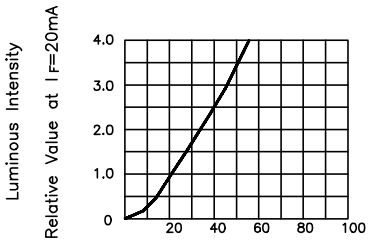
Super Bright Green L-1043SGD



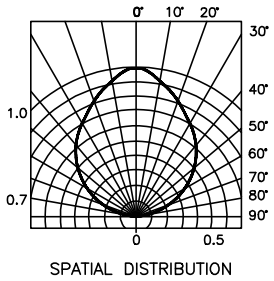
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

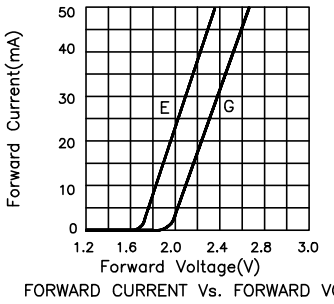


LUMINOUS INTENSITY Vs. FORWARD CURRENT

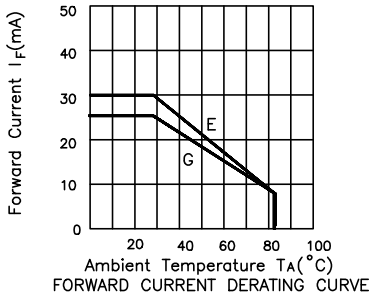


SPATIAL DISTRIBUTION

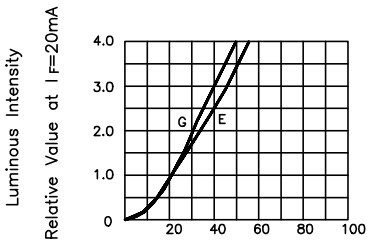
High Efficiency Red / Green L-1049EGW



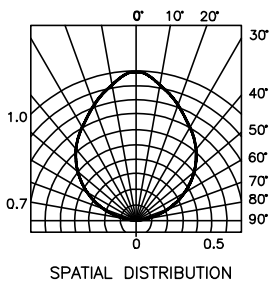
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

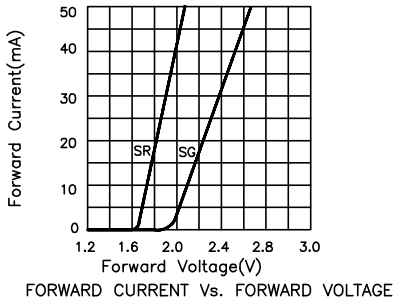


LUMINOUS INTENSITY Vs. FORWARD CURRENT

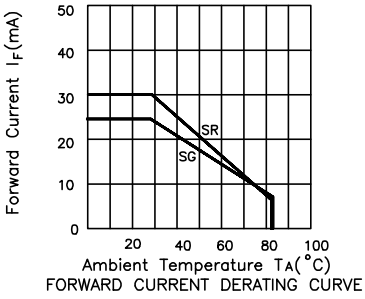


SPATIAL DISTRIBUTION

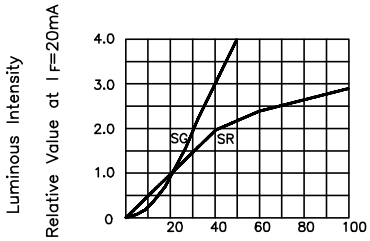
Super Bright Red / Super Bright Green L-1049SRSGW-CC



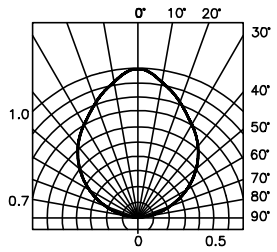
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION