

# Kingbright®

## LIGHT BARS

L-835/2	5x10mm	L-875/4	10x10mm
L-845/3	5x16mm	L-885/6	10x16mm
L-865/4	5x22mm	L-895/8	10x22mm

### Features

- UNIFORM LIGHT EMITTING AREA.
- EASILY MOUNTED ON P.C. BOARDS OR INDUSTRY STANDARD SOCKETS.
- FLUSH MOUNTABLE.
- EXCELLENT ON/OFF CONTRAST.
- CAN BE USED WITH PANELS AND LEGEND MOUNTS.
- MECHANICALLY RUGGED.
- I.C. COMPATIBLE.
- SUPER BRIGHT RED AVAILABLE.
- BOTTOM SURFACE OF EPOXY IS NOT FLAT.

### Description

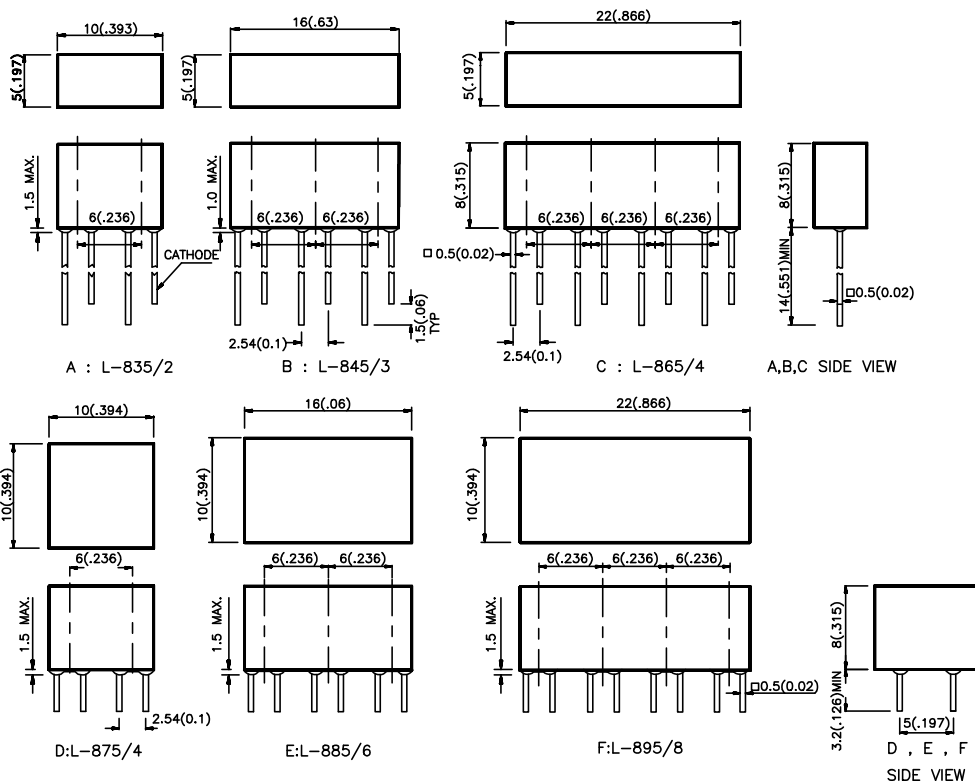
The Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

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), Tolerance is  $\pm 0.25(0.01)$  unless otherwise noted.
2. Specifications are subjected to change without notice.

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6-L835-1

## Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 10 mA		Viewing Angle
			Min.	Max.	2 $\theta$ 1/2
L-835/2IDT L-845/3IDT L-865/4IDT L-875/4IDT L-885/6IDT L-895/8IDT	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	5	20	120°
L-835/2GDT L-845/3GDT L-865/4GDT L-875/4GDT L-885/6GDT L-895/8GDT	Green (GaP)	GREEN DIFFUSED	5	20	120°
L-835/2YDT L-845/3YDT L-865/4YDT L-875/4YDT L-885/6YDT L-895/8YDT	Yellow (GaAsP/GaP)	YELLOW DIFFUSED	5	20	120°
L-835/2SRDT L-845/3SRDT L-865/4SRDT L-875/4SRDT L-885/6SRDT L-895/8SRDT	Super Bright RED (GaAlAs)	RED DIFFUSED	*20	*100	120°

Notes:

1.  $\theta$ 1/2 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 20 mA.

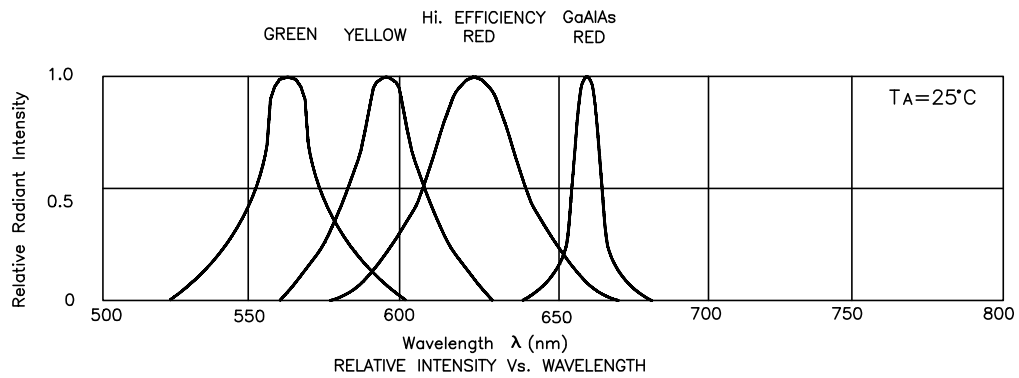
## Electrical / Optical Characteristics at T<sub>A</sub>=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
$\lambda_{peak}$	Peak Wavelength	High Efficiency Red Green Yellow Super Bright Red	625 565 590 660		nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Line Halfwidth	High Efficiency Red Green Yellow Super Bright Red	45 30 35 20		nm	IF=20mA
C	Capacitance	High Efficiency Red Green Yellow Super Bright Red	12 45 10 95		pF	VF=0V;f=1MHz
V <sub>F</sub>	Forward Voltage	High Efficiency Red Green Yellow Super Bright Red	2.0 2.2 2.1 1.85	2.5 2.5 2.5 2.5	V	IF=20mA
I <sub>R</sub>	Reverse Current	All	10		uA	VR = 5V

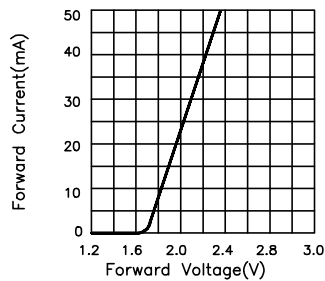
### Absolute Maximum Ratings at $T_A=25^\circ\text{C}$

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

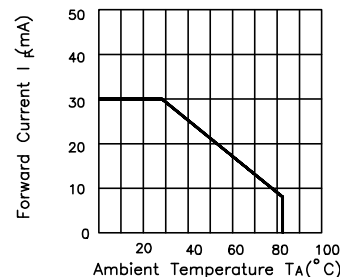
Notes:  
 1. 1/10 Duty Cycle, 0.1ms Pulse Width.  
 2. 4mm below package base.



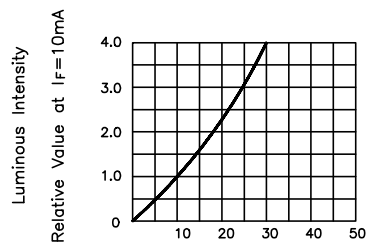
### High Efficiency Red



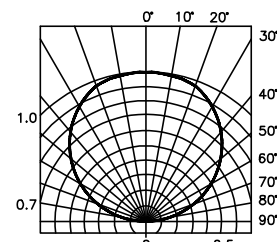
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

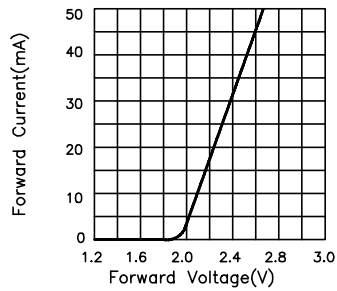


LUMINOUS INTENSITY Vs. FORWARD CURRENT

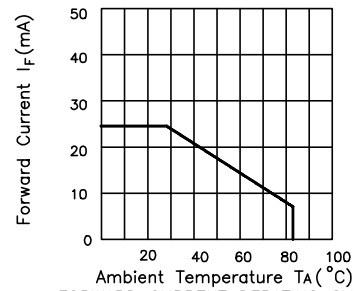


SPATIAL DISTRIBUTION

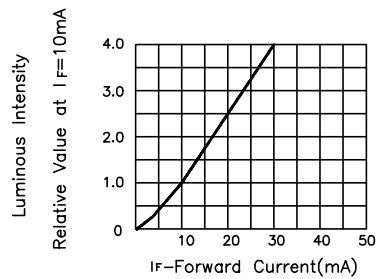
## Green



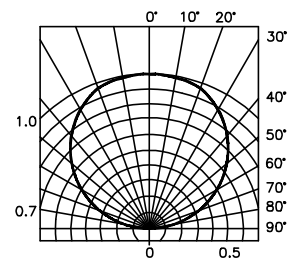
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

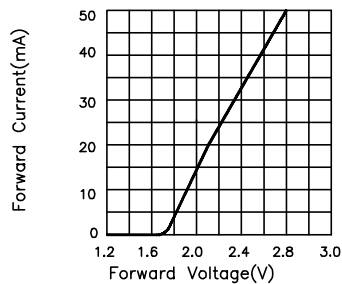


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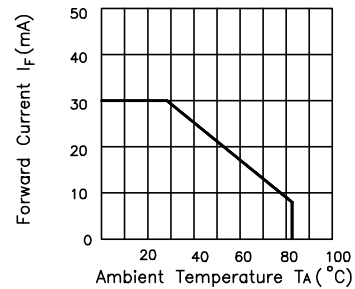


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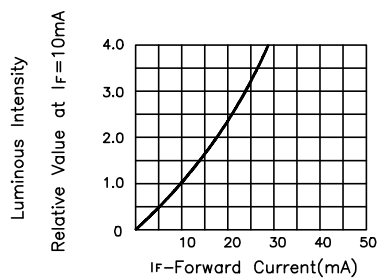
## Yellow



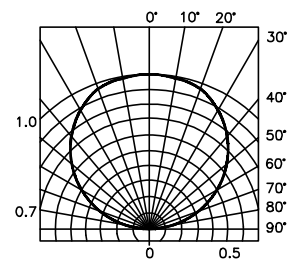
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

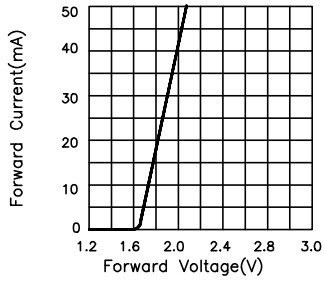


LUMINOUS INTENSITY Vs. FORWARD CURRENT

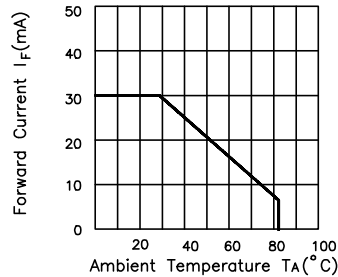


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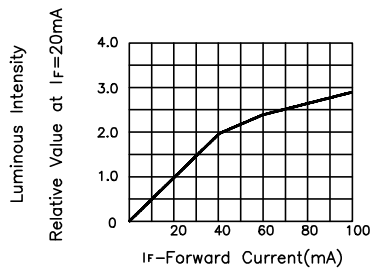
# Super Bright Red



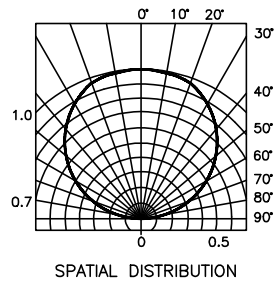
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION