

## 5mm LEDs

Order code	Manufacturer code	Description
56-0330	L-483HDT	RED CYLINDRICAL 5MM LED
56-0335	L-483GDT	GREEN CYLINDRICAL 5MM LED
56-0340	L-483YDT	YELLOW CYLINDRICAL 5MM LED
56-0345	L-483EDT	AMBER CYLINDRICAL 5MM LED

5mm LEDs	Page 1 of 6
The enclosed information is believed to be correct, Information may change 'without notice' due to product improvement. Users should ensure that the product is suitable for their use. E. & O. E.	Revision A 04/07/2003

# Kingbright®

## T-1 (5mm) CYLINDRICAL LED LAMPS

L-483 BRIGHT RED  
 L-483I HIGH EFFICIENCY RED  
 L-483E ORANGE  
 L-483SRSG SUPER BRIGHT RED / SUPER BRIGHT GREEN  
 L-483G GREEN  
 L-483Y YELLOW

### Features

- CYLINDRICAL TYPE, TOP DIFFUSED.
- LOW POWER CONSUMPTION.
- SUPER BRIGHT RED AND SUPER GREEN BI-COLOR VERSION IS AVAILABLE.
- I.C. COMPATIBLE.
- RELIABLE AND RUGGED.
- LONG LIFE - SOLID STATE RELIABILITY.
- AVAILABLE ON TAPE AND REEL.

### Description

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

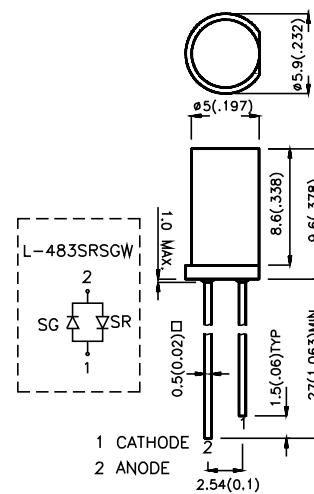
The Green and Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

The High Efficiency Red and 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.

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  $\pm 0.25(0.01)$  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
			Min.	Max.	
L-483HDT	BRIGHT RED (GaP)	RED DIFFUSED	0.5	3.2	100°
L-483IDT	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	3.2	12.5	100°
L-483EDT	ORANGE (GaAsP/GaP)	ORANGE DIFFUSED	3.2	12.5	100°
L-483GDT	GREEN (GaP)	GREEN DIFFUSED	1.3	8	100°
L-483YDT	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	1.3	8	100°
L-483SRSGW	SUPER BRIGHT RED (GaAlAs)	WHITE DIFFUSED	*12.5	*60	80°
	SUPER BRIGHT GREEN (GaP)		*5	*20	

- 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 is 20mA.

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

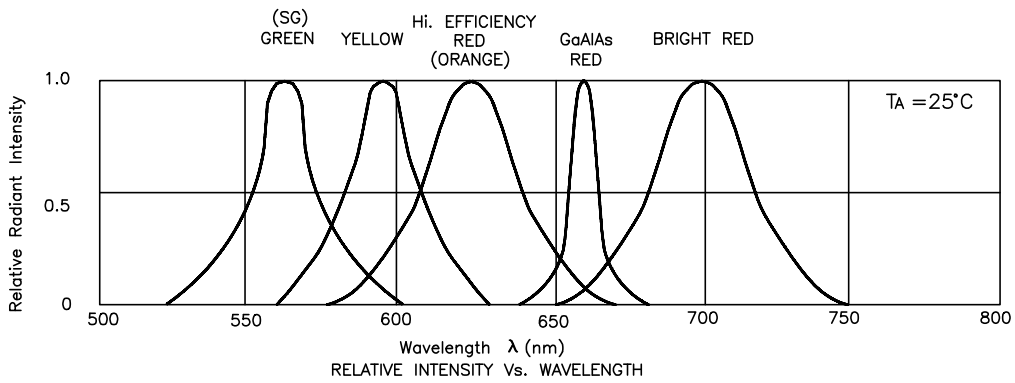
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
$\lambda_{peak}$	Peak Wavelength	Bright Red High Efficiency Red Orange Green Yellow Super Bright Red Super Bright Green	700 625 625 565 590 660 565		nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Line Halfwidth	Bright Red High Efficiency Red Orange Green Yellow Super Bright Red Super Bright Green	45 45 45 30 35 20 30		nm	IF=20mA
C	Capacitance	Bright Red High Efficiency Red Orange Green Yellow Super Bright Red Super Bright Green	40 12 12 45 10 95 45		pF	VF=0V;f=1MHz
V <sub>F</sub>	Forward Voltage	Bright Red High Efficiency Red Orange 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 <sub>R</sub>	Reverse Current	All	10		uA	VR = 5V

Absolute Maximum Ratings at T<sub>A</sub>=25°C

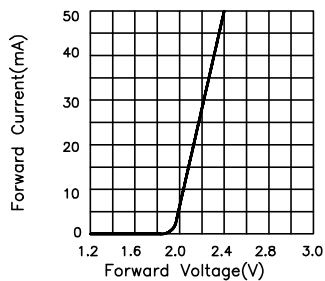
Parameter	Bright Red	High Efficiency Red	Orange	Green	Yellow	Super Bright Red	Super Bright Green	Units
Power dissipation	105	105	105	105	105	100	105	mW
DC Forward Current	25	30	30	25	30	30	25	mA
Peak Forward Current [1]	150	150	150	150	150	150	150	mA
Reverse Voltage	5	5	5	5	5	5	5	V
Operating/Storage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

Notes:

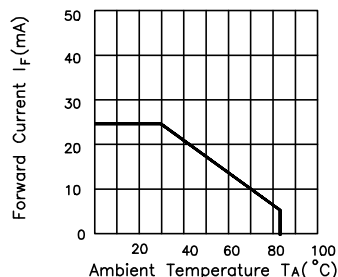
- 1/10 Duty Cycle, 0.1ms Pulse Width.
- 4mm below package base.



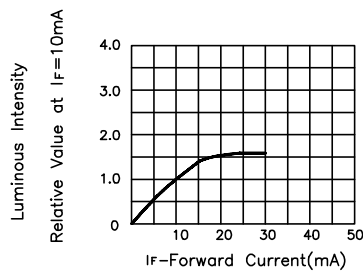
Bright Red L-483HDT



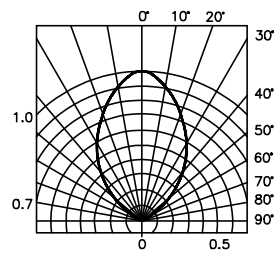
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

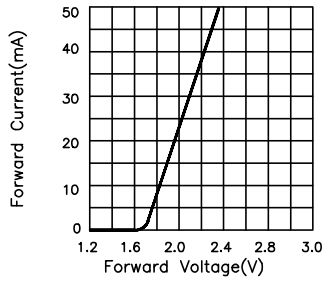


LUMINOUS INTENSITY Vs. FORWARD CURRENT

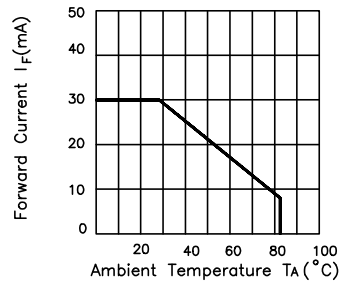


SPATIAL DISTRIBUTION

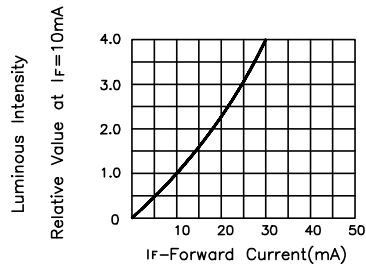
High Efficiency Red L-483IDT  
Orange L-483EDT



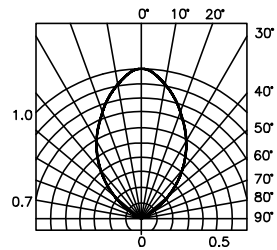
FORWARD CURRENT Vs. FORWARD VOLTAGE



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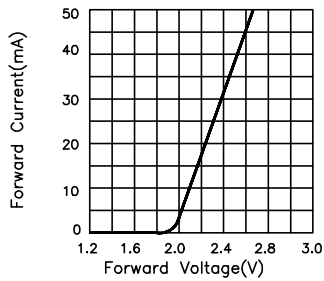


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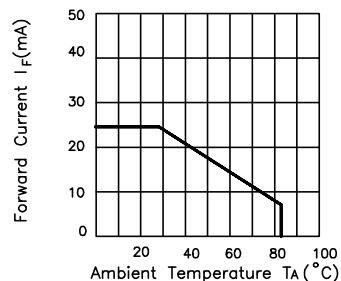


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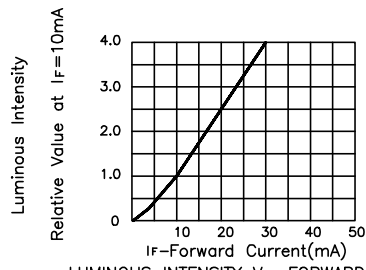
Green L-483GDT



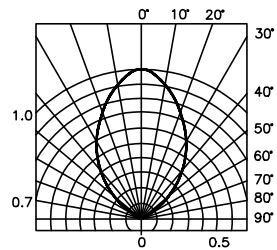
FORWARD CURRENT Vs. FORWARD VOLTAGE



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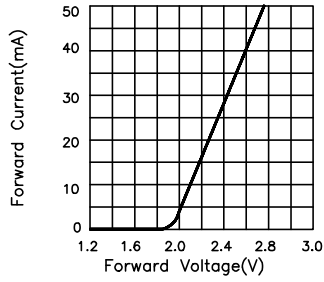


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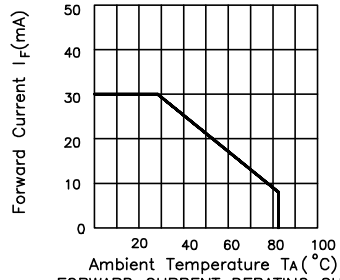


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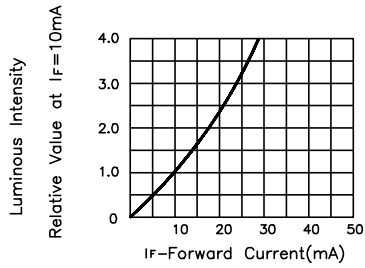
## Yellow L-483YDT



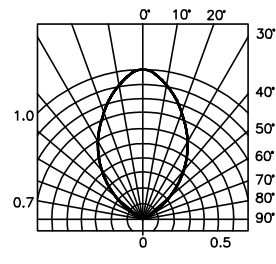
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

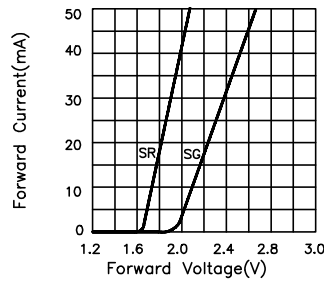


LUMINOUS INTENSITY Vs. FORWARD CURRENT

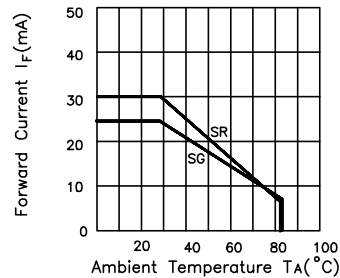


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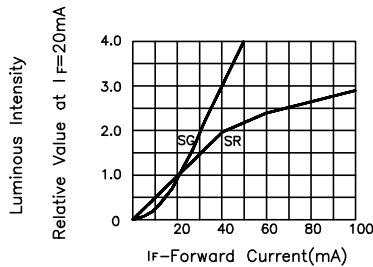
## Super Bright Red / Super Bright Green L-483SRSGW



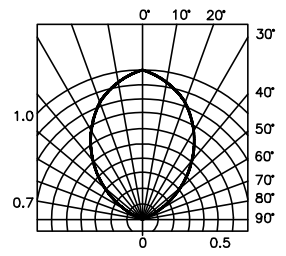
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION