

# Kingbright®

## T-1 (3mm) SOLID STATE LAMPS

L-934H BRIGHT RED	L-934E ORANGE
L-934I HIGH EFFICIENCY RED	L-934G GREEN
L-934N PURE ORANGE	L-934Y YELLOW
L-934PG PURE GREEN	

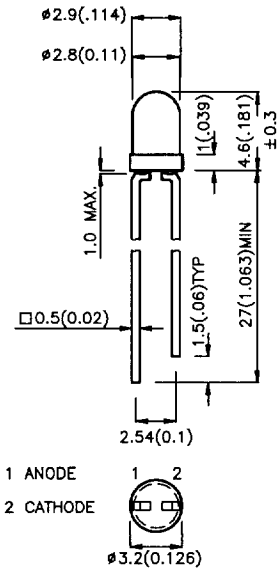
### Feature

HIGH INTENSITY.  
 LOW POWER CONSUMPTION.  
 POPULAR T-1 DIAMETER PACKAGE.  
 GENERAL PURPOSE LEADS.  
 RELIABLE AND RUGGED.  
 AVAILABLE ON TAPE AND REEL.  
 DIFFUSED, TRANSPARENT AND WATER CLEAR TYPE.

### 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.  
 The Pure Orange source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Pure Orange Light Emitting Diode.  
 The Pure Green source color devices are made with Gallium Phosphide Pure Green Light Emitting Diode.

### Package Dimensions



1 ANODE  
 2 CATHODE

- 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-934HD	BRIGHT RED (GaP)	RED DIFFUSED	1.3	5	60°
L-934ID		RED DIFFUSED	8	50	60°
L-934IT	HIGH EFFICIENCY RED (GaAsP/GaP)	RED TRANSPARENT	20	125	50°
L-934EC		WATER CLEAR	20	125	50°
L-934ED	ORANGE (GaAsP/GaP)	ORANGE DIFFUSED	8	50	60°
L-934GD		GREEN DIFFUSED	8	32	60°
L-934GT	GREEN (GaP)	GREEN TRANSPARENT	20	80	50°
L-934GC		WATER CLEAR	20	80	50°
L-934YD		YELLOW DIFFUSED	8	32	60°
L-934YT	YELLOW (GaAsP/GaP)	YELLOW TRANSPARENT	10	50	50°
L-934YC		WATER CLEAR	10	50	50°
L-934ND		ORANGE DIFFUSED	8	50	60°
L-934NT	PURE ORANGE	ORANGE TRANSPARENT	20	125	50°
L-934NC		WATER CLEAR	20	125	50°
L-934PGD		GREEN DIFFUSED	2	8	60°
L-934PGT	PURE GREEN (GaP)	GREEN TRANSPARENT	3.2	20	50°
L-934PGC		WATER CLEAR	3.2	20	50°

Note:  
 1.  $\theta_{1/2}$  is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

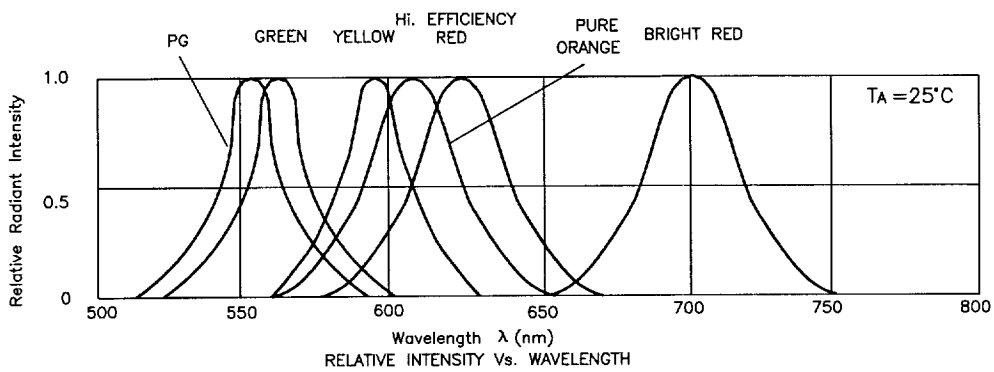
Electrical / Optical Characteristics at T<sub>A</sub>=25°

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
peak	Peak Wavelength	Bright Red High Efficiency Red Orange Green Yellow Pure Orange Pure Green	700 625 625 565 590 610 555		nm	IF=20mA
$\Delta\lambda/2$	Spectral Line Halfwidth	Bright Red High Efficiency Red Orange Green Yellow Pure Orange Pure Green	45 45 45 30 35 35 30		nm	IF=20mA
	Capacitance	Bright Red High Efficiency Red Orange Green Yellow Pure Orange Pure Green	40 12 12 45 10 15 45		pF	VF=0V;f=1MHz
	Forward Voltage	Bright Red High Efficiency Red Orange Green Yellow Pure Orange Pure Green	2.0 2.0 2.0 2.2 2.1 2.0 2.25	2.5 2.5 2.5 2.5 2.5 2.6 2.6	V	IF=20mA
	Reverse Current	All	10		uA	VR = 5V

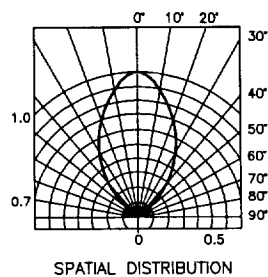
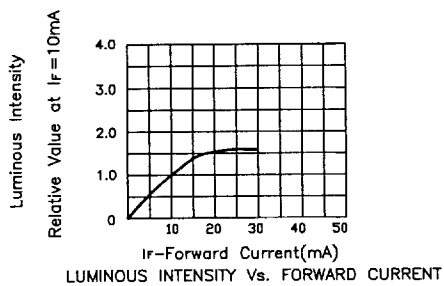
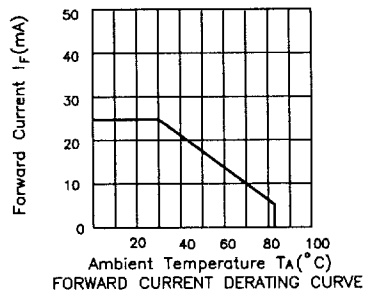
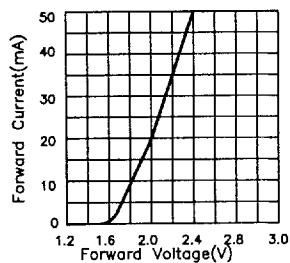
Absolute Maximum Ratings at T<sub>A</sub>=25°

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

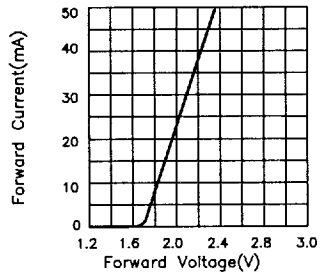
Notes:  
 1. 1/10 Duty Cycle, 0.1ms Pulse Width.  
 2. 4mm below package base.



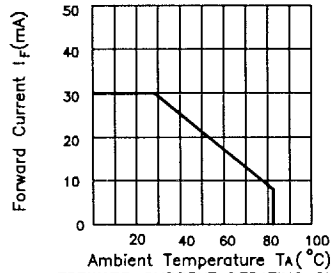
### Bright Red L-934HD



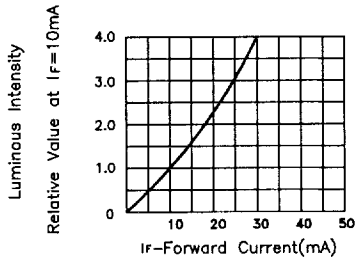
High Efficiency Red L-934ID,L-934IT,L-934EC  
Orange L-934ED



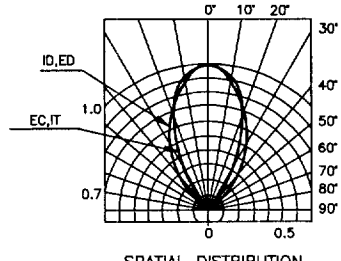
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

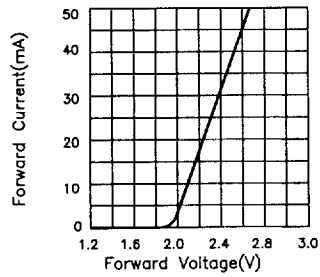


LUMINOUS INTENSITY Vs. FORWARD CURRENT

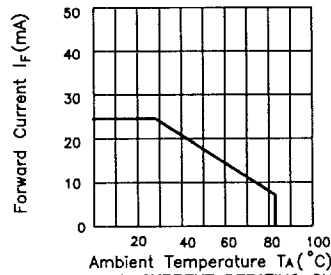


SPATIAL DISTRIBUTION

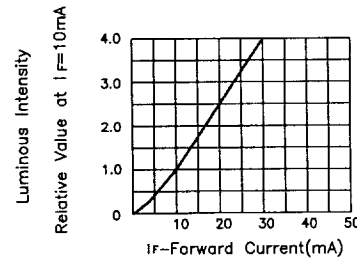
Green L-934GD,L-934GT,L-934GC



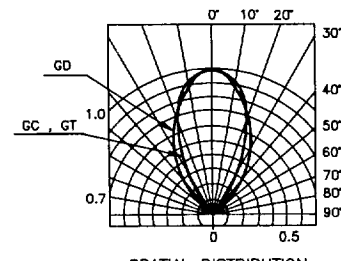
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

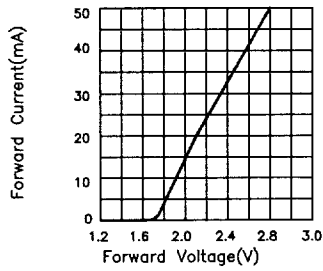


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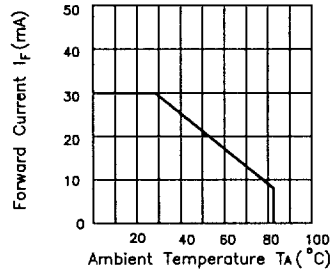


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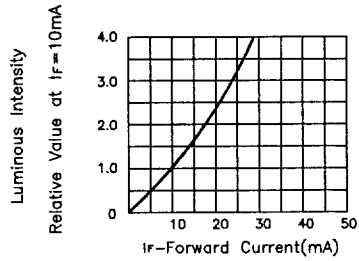
Yellow L-934YD,L-934YT,L-934YC



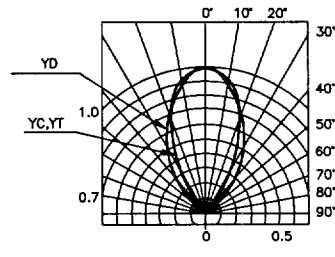
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

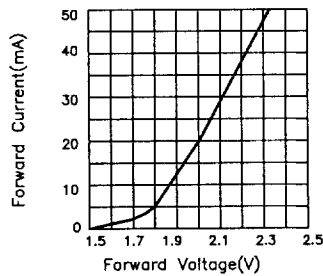


LUMINOUS INTENSITY Vs. FORWARD CURRENT

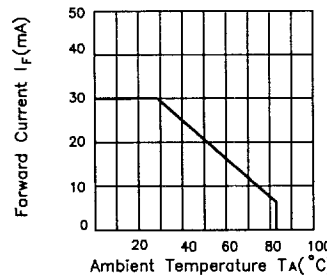


SPATIAL DISTRIBUTION

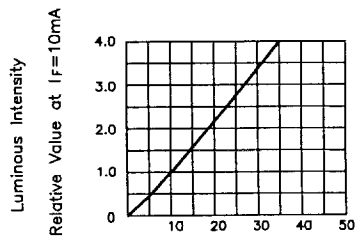
Pure Orange L-934ND,L-934NT,L-934NC



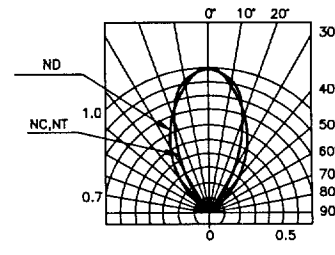
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

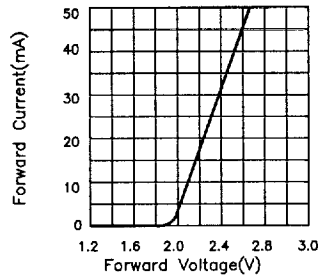


LUMINOUS INTENSITY Vs. FORWARD CURRENT

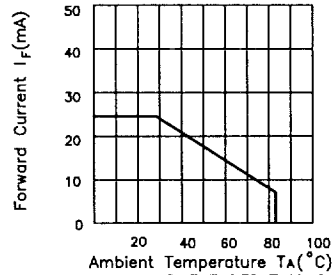


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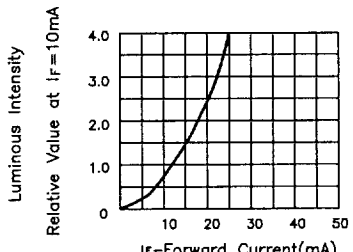
Pure Green L-934PGD,L-934PGT,L-934PGC



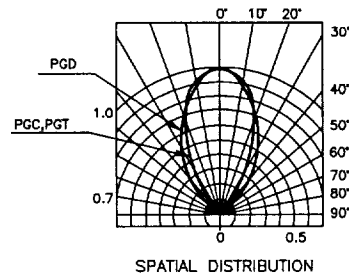
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION