

3mm LEDs

Order code	Manufacturer code	Description
56-2100	L-1334IT	3MM RED TRANSPARENT LED
56-2105	L-1334SRT	3MM SUPER RED TRANSPARENT LED
56-2110	L-1334GT	3MM GREEN TRANSPARENT LED
56-2115	L-1334YT	3MM YELLOW TRANSPARENT LED

3mm LEDs	Page 1 of 7
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 (3mm) CYLINDRICAL LED LAMPS

L-1334I HIGH EFFICIENCY RED L-1334N PURE ORANGE
 L-1334G GREEN L-1334PG PURE GREEN
 L-1334Y YELLOW
 L-1334SR SUPER BRIGHT RED
 L-1334SG SUPER BRIGHT GREEN

Features

- WIDE VIEWING ANGLE.
- LOW POWER CONSUMPTION.
- RELIABLE AND RUGGED.
- 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 Pure Green source color devices are made with Gallium Phosphide Pure Green Light Emitting Diode.

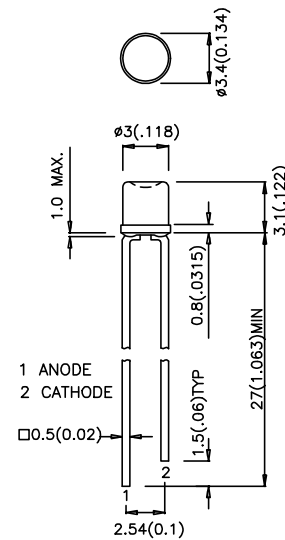
The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

The Pure Orange source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Pure 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 emerges package.
 4. Specifications are subjected to change without notice.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 10 mA		Viewing Angle 2 θ 1/2
			Min.	Max.	
L-1334IT	HIGH EFFICIENCY RED (GaAsP/GaP)	RED TRANS.	3.2	12.5	130°
L-1334GT	GREEN (GaP)	GREEN TRANS.	3.2	12.5	130°
L-1334YT	YELLOW (GaAsP/GaP)	YELLOW TRANS.	1.25	5	130°
L-1334SGT	SUPER BRIGHT GREEN (GaP)	GREEN TRANS.	*5	*20	130°
L-1334SRC	SUPER BRIGHT RED (GaAlAs)	WATER CLEAR	*20	*80	130°
L-1334SRT		RED TRANSPARENT	*20	*80	130°
L-1334SRWT		WHITE DIFFUSED	*20	*70	130°
L-1334NT	PURE ORANGE (GaAsP/GaP)	ORANGE TRANS.	3.2	12.5	130°
L-1334PGT	PURE GREEN (GaP)	GREEN TRANS.	1	4	130°

- Notes:
1. θ 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.

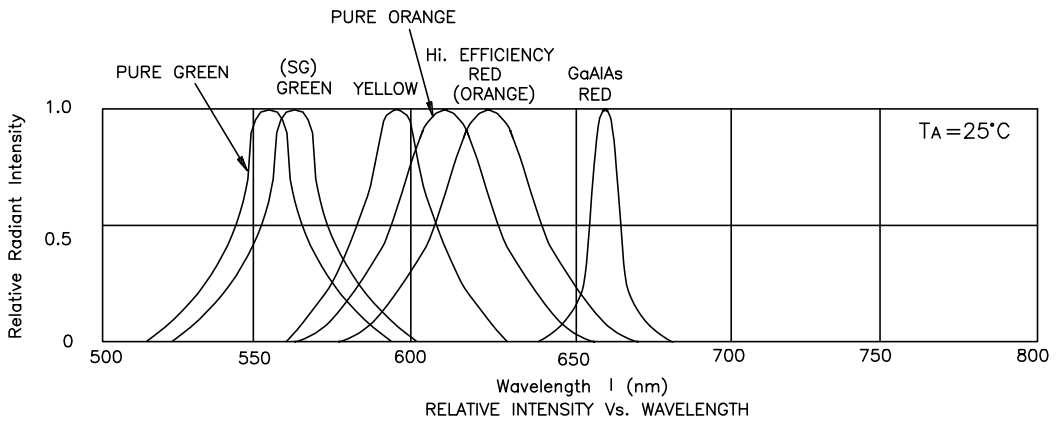
Electrical / Optical Characteristics at T_A=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ_{peak}	Peak Wavelength	High Efficiency Red Green Yellow Pure Orange Pure Green Super Bright Red Super Bright Green	625 565 590 610 555 660 565		nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Line Halfwidth	High Efficiency Red Green Yellow Pure Orange Pure Green Super Bright Red Super Bright Green	45 30 35 35 30 20 30		nm	IF=20mA
C	Capacitance	High Efficiency Red Green Yellow Pure Orange Pure Green Super Bright Red Super Bright Green	12 45 10 30 15 95 45		pF	VF=0V;f=1MHz
V _F	Forward Voltage	High Efficiency Red Green Yellow Pure Orange Pure Green Super Bright Red Super Bright Green	2.0 2.2 2.1 2.0 2.25 1.85 2.2	2.5 2.5 2.5 2.6 2.6 2.5 2.5	V	IF=20mA
I _R	Reverse Current	All	10		uA	VR = 5V

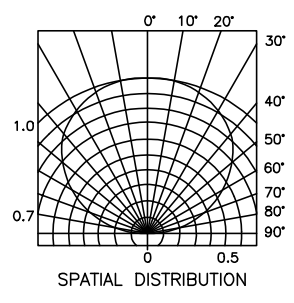
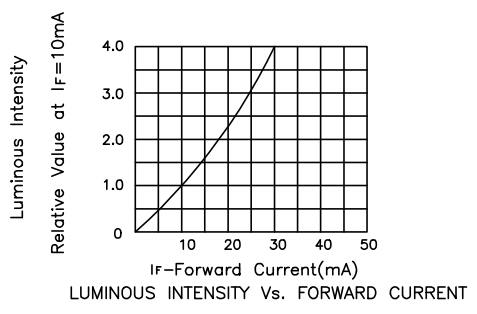
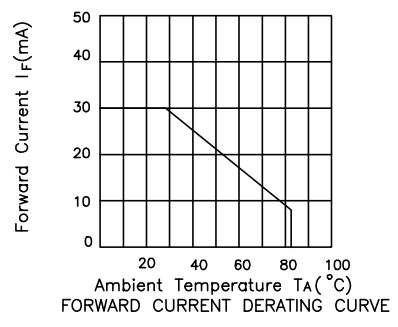
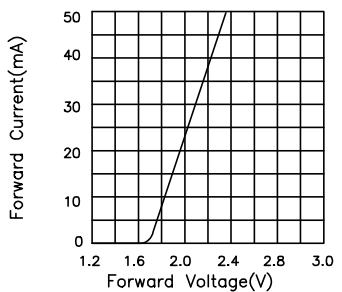
Absolute Maximum Ratings at T_A=25°C

Parameter	High Efficiency Red	Green	Yellow	Pure Orange	Pure Green	Super Bright Red	Super Bright Green	Units
Power dissipation	105	105	105	105	105	100	105	mW
DC Forward Current	30	25	30	30	25	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							

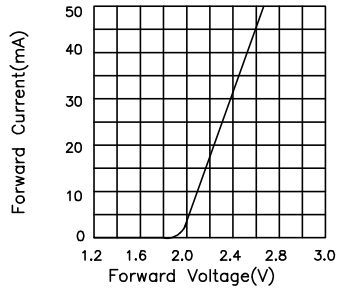
Notes:
 1. 1/10 Duty Cycle, 0.1ms Pulse Width.
 2. 4mm below package base.



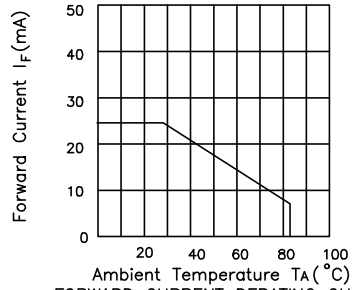
High Efficiency Red L-1334IT



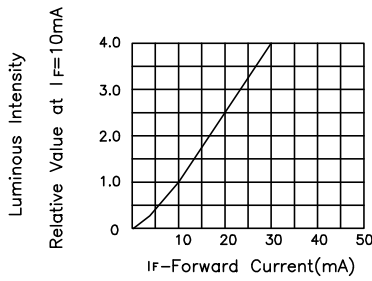
Green L-1334GT



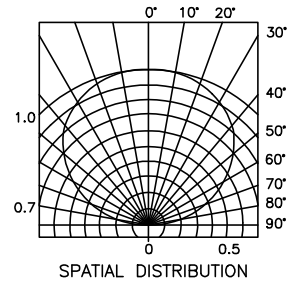
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

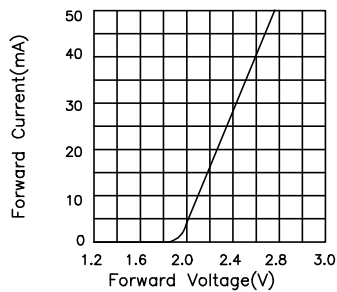


LUMINOUS INTENSITY Vs. FORWARD CURRENT

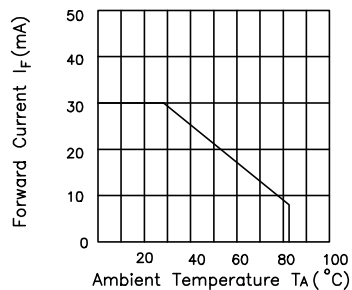


SPATIAL DISTRIBUTION

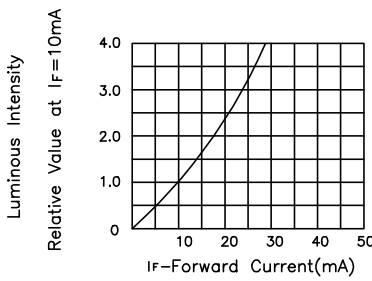
Yellow L-1334YT



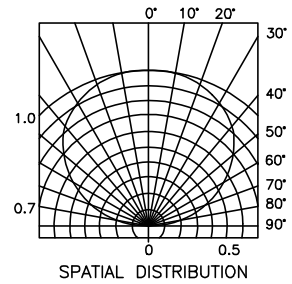
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

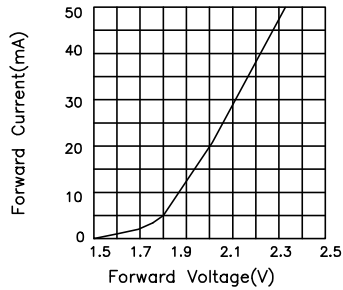


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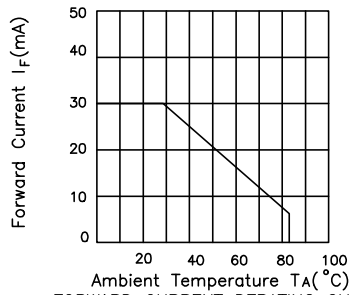


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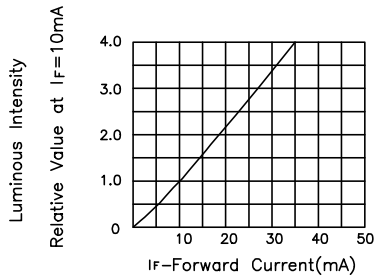
Pure Orange L-1334NT



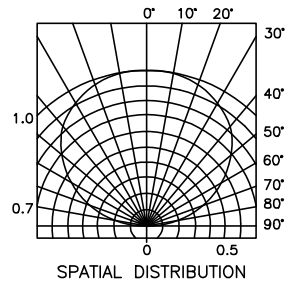
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

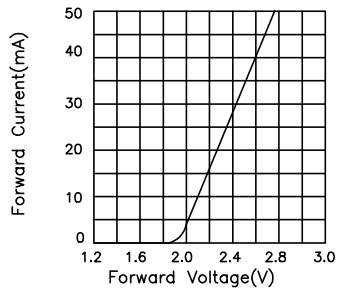


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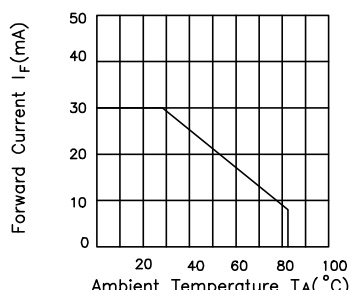


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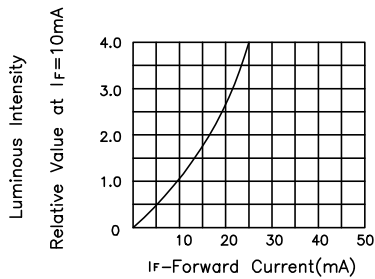
Pure Green L-1334PGT



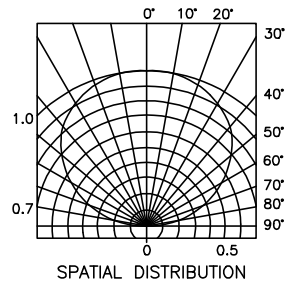
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

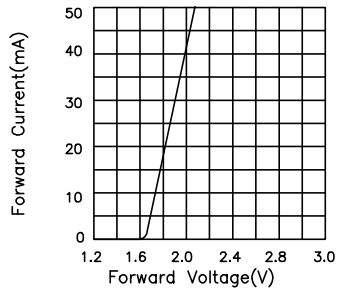


LUMINOUS INTENSITY Vs. FORWARD CURRENT

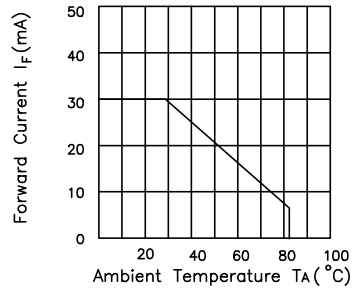


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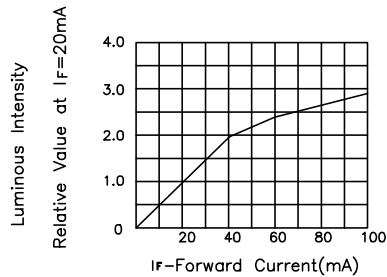
Super Bright Red L-1334SRC, L-1334SRT, L-1334SRWT



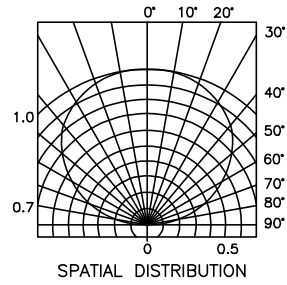
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

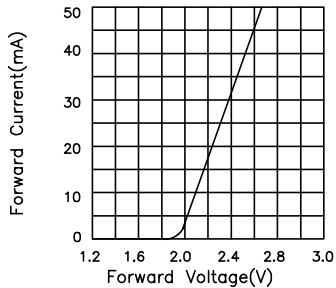


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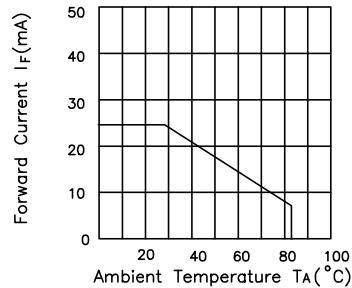


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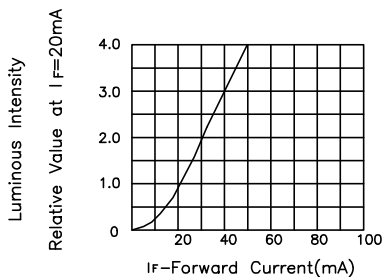
Super Bright Green L-1334SGT



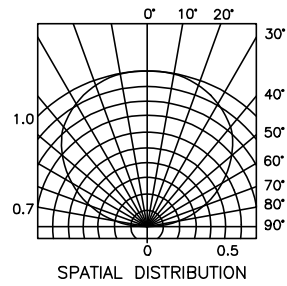
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION