Kingbright

2mm SOLID STATE LAMPS

Features

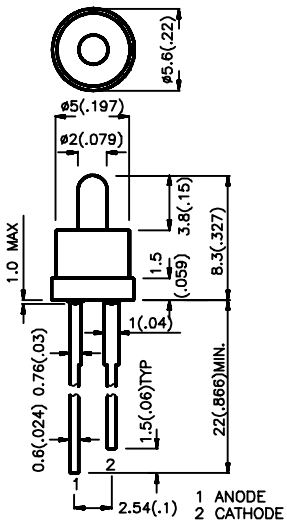
- ●LOW POWER CONSUMPTION.
- ●SUITABLE FOR AUDIO PANEL INDICATOR.
- ●LONG LIFE-SOLID STATE RELIABILITY.

L21HD BRIGHT RED
L21ID HIGH EFFICIENCY RED
L21SGD SUPER BRIGHT GREEN
L21GD GREEN
L21ED ORANGE
L21YD YELLOW

Package Dimensions

Description

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



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.	Typ.	2θ1/2
L21HD	BRIGHT RED (GaP)	RED DIFFUSED	0.5	0.8	60°
L21ID	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	3	4	60°
L21ED	ORANGE (GaAsP/GaP)	ORANGE DIFFUSED	3	4	60°
L21GD	GREEN (GaP)	GREEN DIFFUSED	1.2	3	60°
L21YD	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	1.2	3	60°
L21SGD	SUPER BRIGHT GREEN (GaP)	GREEN DIFFUSED	*5	*6	60°

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.

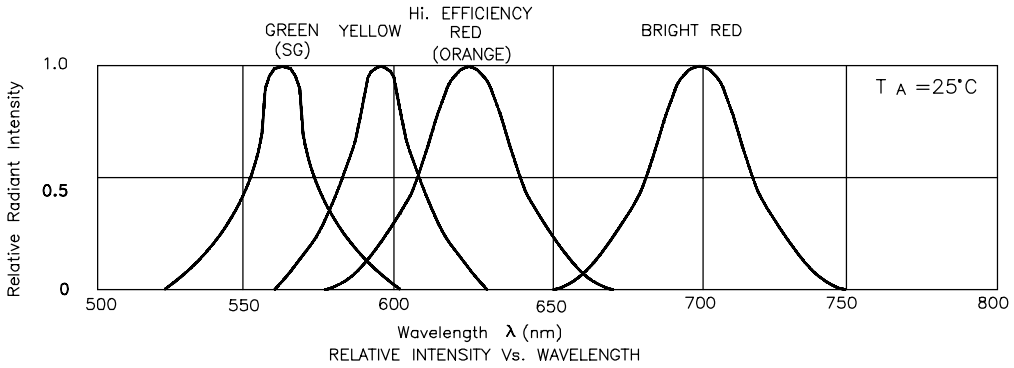
Electrical / Optical Characteristics at T_A=25ºC

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Bright Red High Efficiency Red Orange Green Yellow Super Bright Green	700 625 625 565 590 565		nm	IF=20mA
Δλ1/2	Spectral Line Halfwidth	Bright Red High Efficiency Red Orange Green Yellow Super Bright Green	45 45 45 30 35 30		nm	IF=20mA
C	Capacitance	Bright Red High Efficiency Red Orange Green Yellow Super Bright Green	40 12 12 45 10 45		pF	VF=0V;f=1MHz
V_F	Forward Voltage	Bright Red High Efficiency Red Orange Green Yellow Super Bright Green	2.0 2.0 2.0 2.2 2.1 2.2	2.5 2.5 2.5 2.5 2.5 2.5	V	IF=20mA
I_R	Reverse Current	All		10	uA	VR = 5V

Absolute Maximum Ratings at T_A=25ºC

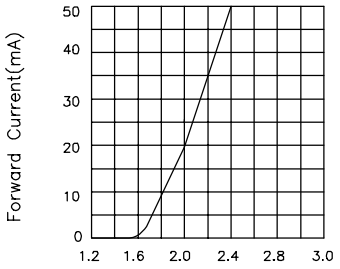
Parameter	**Bright** Red	**High** Efficiency Red	Orange	Green	Yellow	**Super** Bright Green	Units
Power dissipation	120	105	105	105	105	105	mW
DC Forward Current	25	30	30	25	30	25	mA
Peak Forward Current [1]	150	150	150	150	150	150	mA
Reverse Voltage	5	5	5	5	5	5	V
Operating/Storage Temperature	-40°C 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.

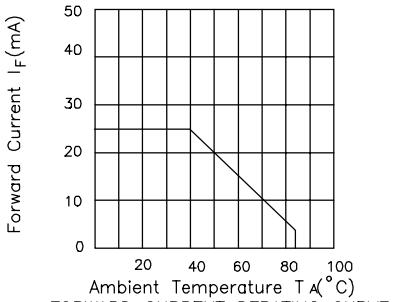


RELATIVE INTENSITY Vs. WAVELENGTH

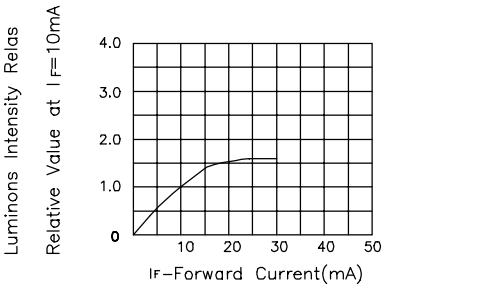
Bright Red L21HD



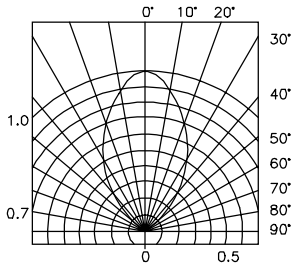
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

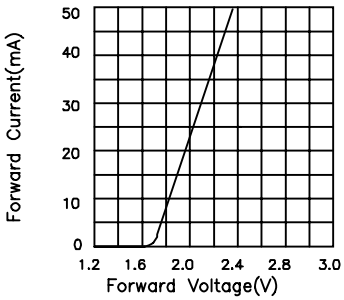


LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION

High Efficiency Red L21ID
Orange L21ED



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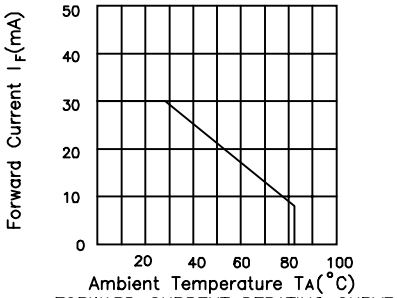

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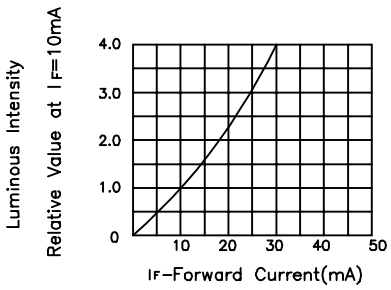
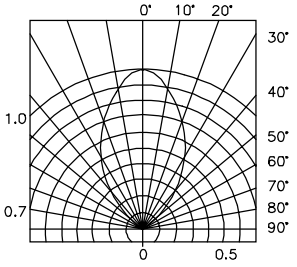
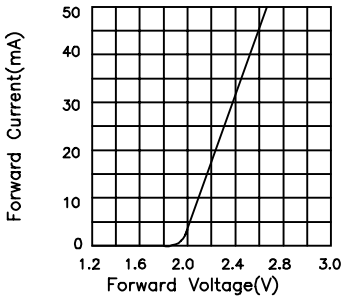
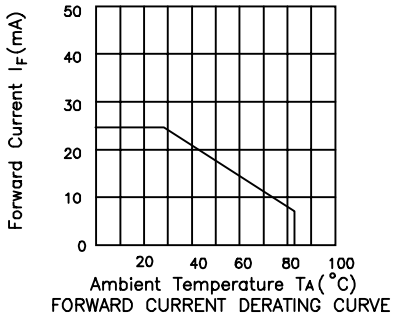




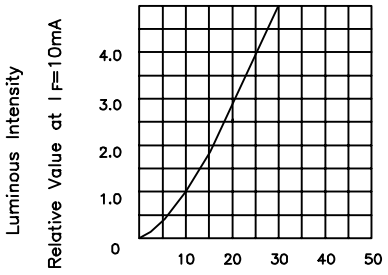
SPATIAL DISTRIBUTION

Green L21GD

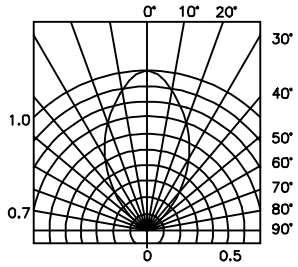




FORWARD CURRENT DERATING CURVE

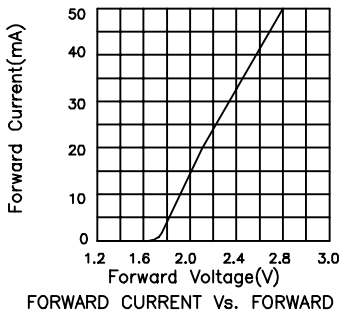


LUMINOUS INTENSITY Vs. FORWARD CURRENT

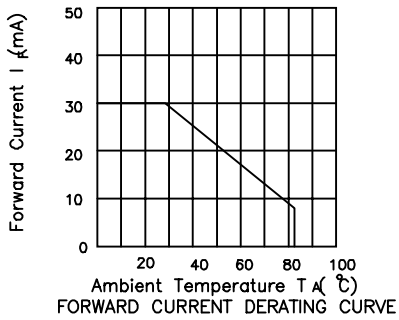


SPATIAL DISTRIBUTION

Yellow L21YD



FORWARD CURRENT Vs. FORWARD VOLTAGE



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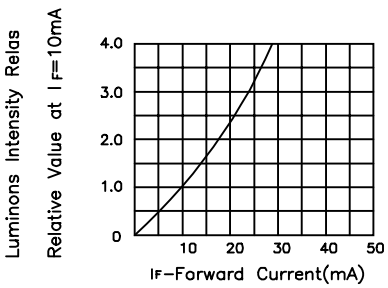
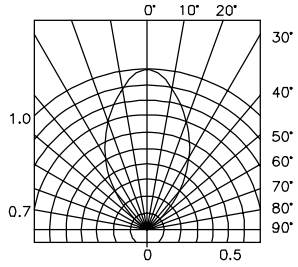
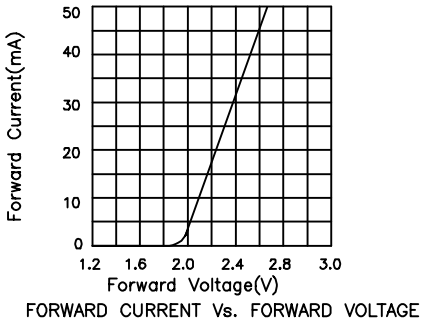


LUMINOUS INTENSITY Vs. FORWARD CURRENT

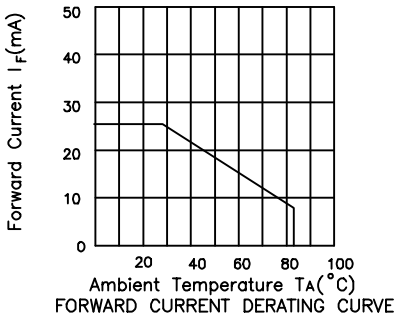


SPATIAL DISTRIBUTION

Super Bright Green L21SGD



FORWARD CURRENT Vs. FORWARD VOLTAGE



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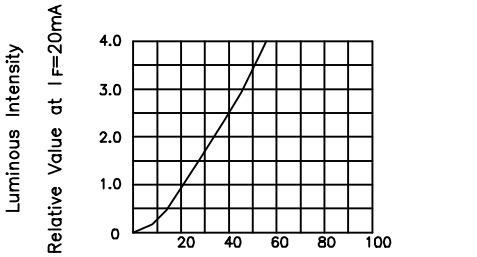
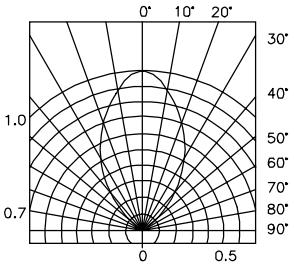


LUMINOUS INTENSITY Vs. FORWARD CURRENT



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