Kingbright®

127mm (5.0INCH) SINGLE DIGIT NUMERIC DISPLAYS

SA50-11 SC50-11

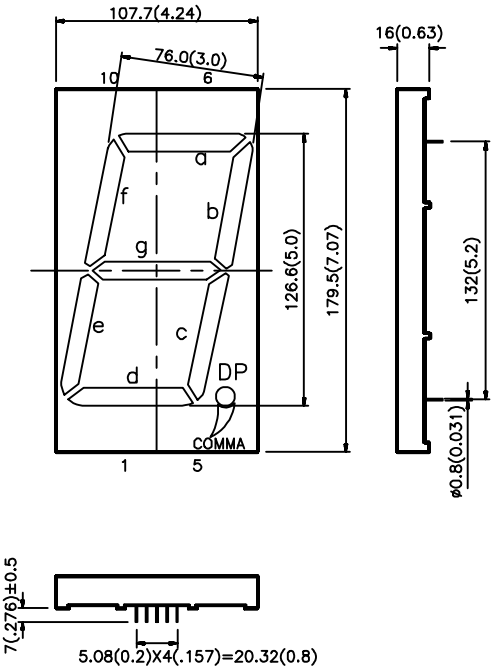
Features

- LARGE SIZE.
- 5.0 INCH DIGIT HEIGHT.
- EXCELLENT CHARACTER APPEARANCE.
- HIGH LIGHT OUTPUT.
- EASY MOUNTING ON P.C. BOARDS OR SOCKETS.
- I.C. COMPATIBLE.
- CATEGORIZED FOR LUMINOUS INTENSITY, YELLOW AND GREEN CATEGORIZED FOR COLOR.
- MECHANICALLY RUGGED.
- STANDARD : GRAY FACE, WHITE SEGMENT.

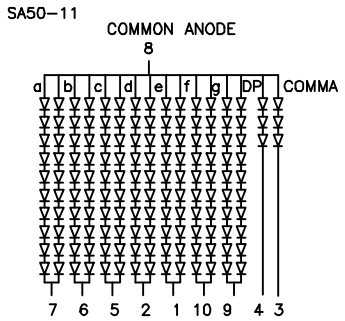
Description

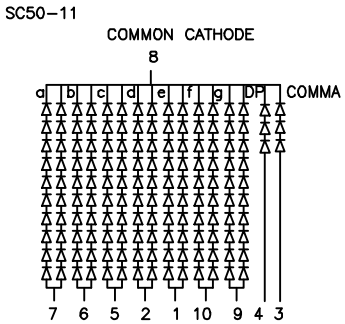
The Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.
The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.
The Yellow source color devices are made with Gallium Arsenide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



Internal Circuit Diagram





Notes:
1. All dimensions are in millimeters (inches), Tolerance is ±0.25(0.01")unless otherwise noted.
2. Specifications are subjected to change whitout notice.

Selection Guide

Part No.	Dice	Iv (ucd) @ 10 mA		Description
		Min.	Max.	
SA50-11EWA	HIGH EFFICIENCY RED (GaAsP/GaP)	14000	21000	Common Anode, Rt. Hand Decimal
SC50-11EWA				Common Cathode, Rt. Hand Decimal
SA50-11YWA	YELLOW (GaAsP/GaP)	9000	14000	Common Anode, Rt. Hand Decimal
SC50-11YWA				Common Cathode, Rt. Hand Decimal
SA50-11SRWA	SUPER BRIGHT RED (GaAlAs)	31000	50000	Common Anode, Rt. Hand Decimal
SC50-11SRWA				Common Cathode, Rt. Hand Decimal
SA50-11SGWA	SUPER BRIGHT GREEN (GaP)	21000	31000	Common Anode, Rt. Hand Decimal
SC50-11SGWA				Common Cathode, Rt. Hand Decimal

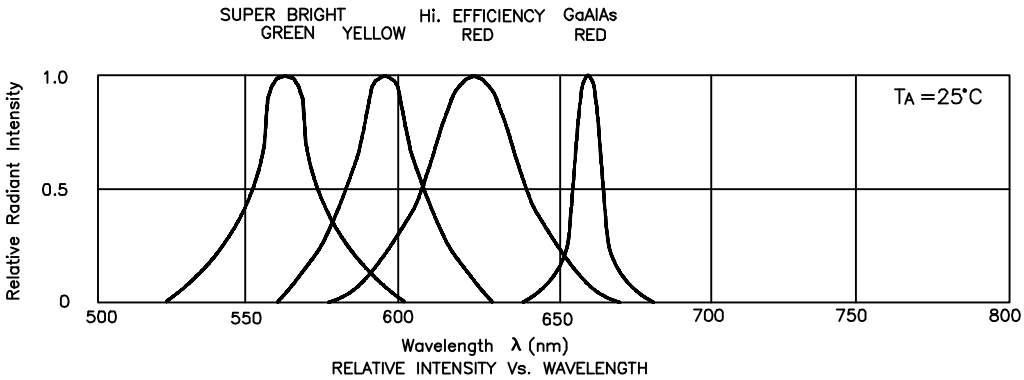
Electrical / Optical Characteristics at T_A=25°C

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

Absolute Maximum Ratings at T_A=25°C

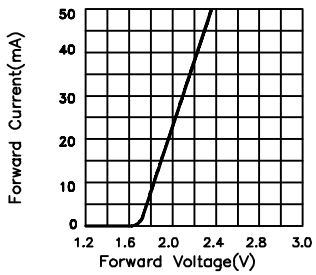
Parameter	High Efficiency Red	Super Bright Green	Yellow	Super Bright Red	Units
Power dissipation	105	105	105	100	mW
DC Forward Current	30	25	30	30	mA
Peak Forward Current [1]	150	150	150	150	mA
Reverse Voltage	5	5	5	5	V
Operating/Storage Temperature	-40° C To +85 ° C				
Lead Soldering Temperature [2]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

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

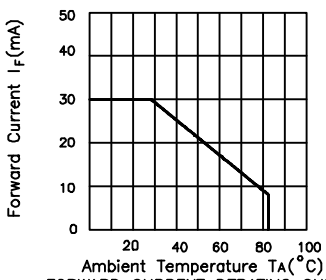


RELATIVE INTENSITY Vs. WAVELENGTH

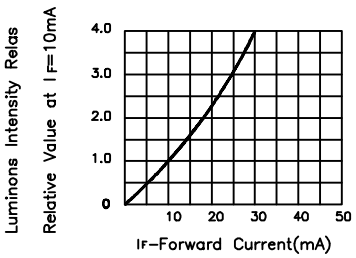
High Efficiecny Red



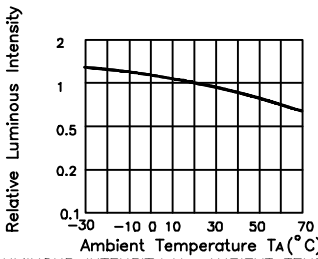
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

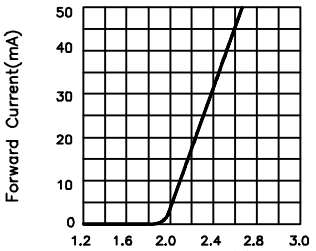


LUMINOUS INTENSITY Vs. FORWARD CURRENT



LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE

Super Bright Green



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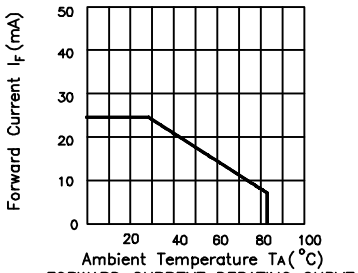

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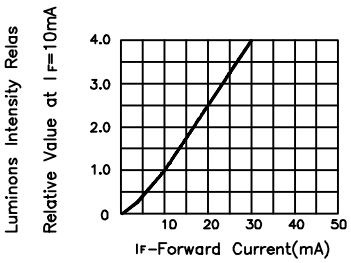

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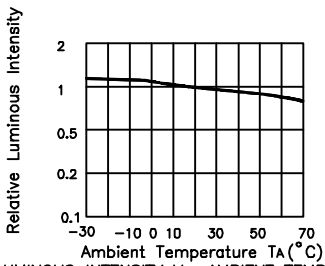
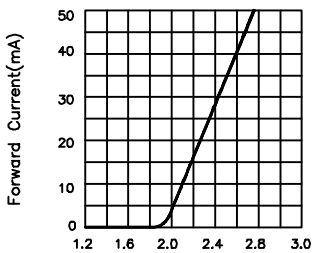


LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE

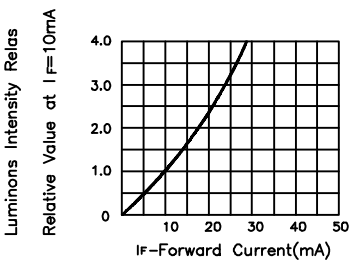
Yellow



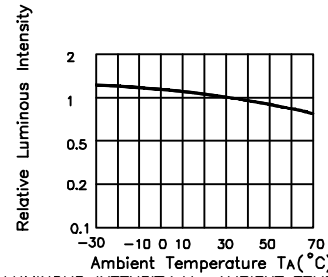
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

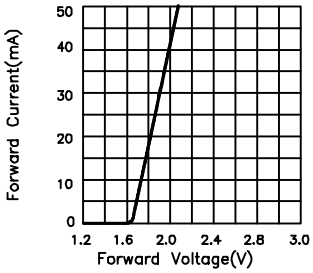


LUMINOUS INTENSITY Vs. FORWARD CURRENT

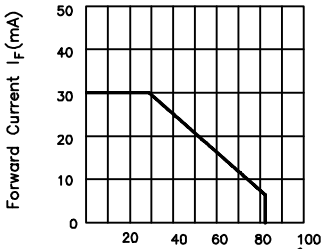


LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE

Super Bright Red



FORWARD CURRENT Vs. FORWARD VOLTAGE



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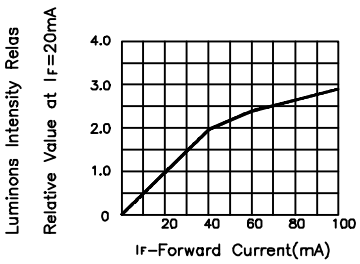

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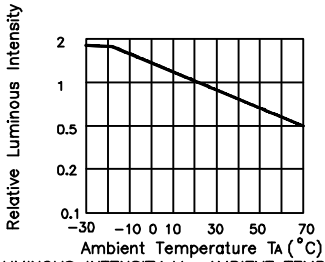

LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE