

Part Number: SBA18-11SURKCGKWA

Hyper Red  
Green

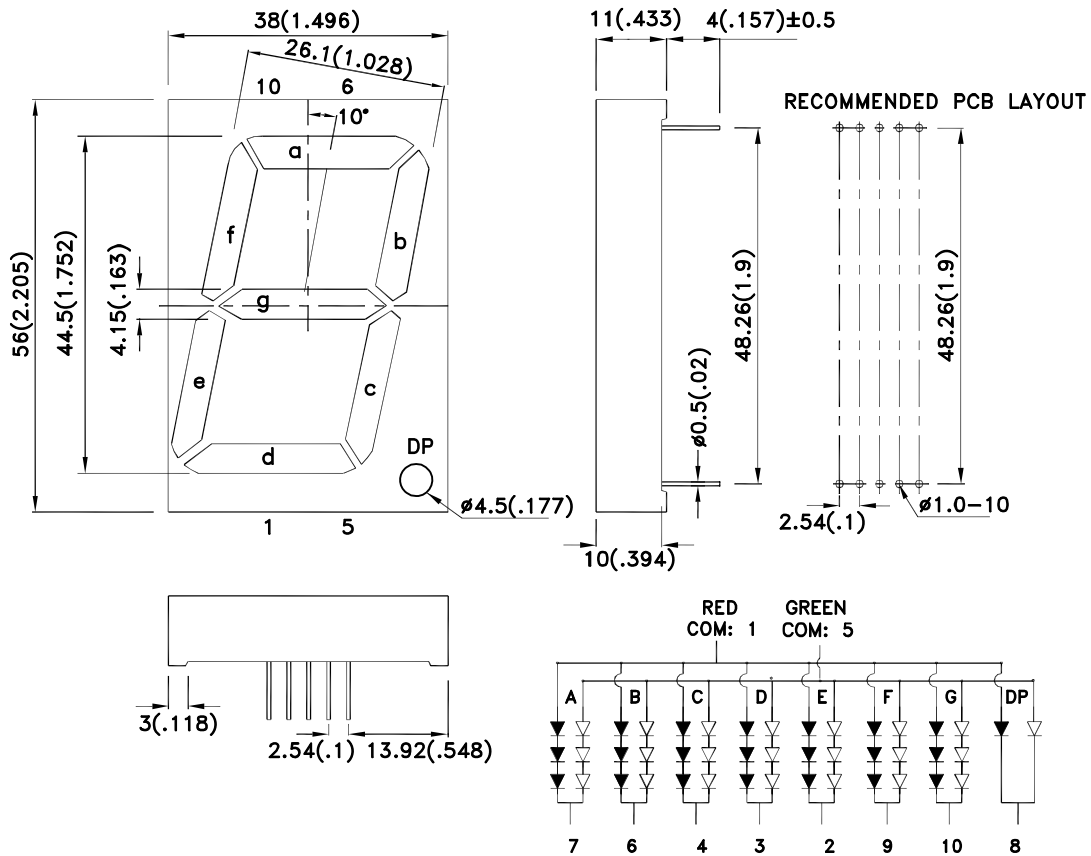
### Features

- 1.75 inch digit height.
- Low current operation.
- Excellent character appearance.
- Easy mounting on P.C. boards or sockets.
- Categorized for luminous intensity.
- Mechanically rugged.
- Standard : gray face, white segment.
- RoHS compliant.

### Description

The Hyper Red source color devices are made with Al-GaN on GaAs substrate Light Emitting Diode.  
The Green source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode.

### Package Dimensions & Internal Circuit Diagram



Notes:

1. All dimensions are in millimeters (inches), Tolerance is  $\pm 0.25(0.01)$  unless otherwise noted.
2. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.



## Selection Guide

Part No.	Dice	Lens Type	Iv (ucd) [1] @ 10mA		Description
			Min.	Typ.	
SBA18-11SURKCGKWA	Hyper Red (AlGaInP)	WHITE DIFFUSED	88000	280000	Common Anode ,Rt. Hand Decimal.
	Green (AlGaInP)		52000	110000	

Note:

1. Luminous intensity/ luminous Flux: +/-15%.

## Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
$\lambda_{peak}$	Peak Wavelength	Hyper Red Green	650 574		nm	I <sub>F</sub> =20mA
$\lambda_D$ [1]	Dominant Wavelength	Hyper Red Green	630 570		nm	I <sub>F</sub> =20mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	Hyper Red Green	28 20		nm	I <sub>F</sub> =20mA
C	Capacitance	Hyper Red Green	35 15		pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub> [2]	Forward Voltage Per Segment Or (DP)	Hyper Red Green	5.85 (1.95) 6.3 (2.1)	7.5 (2.5) 7.5 (2.5)	V	I <sub>F</sub> =20mA
I <sub>R</sub>	Reverse Current Per Segment Or (DP)	Hyper Red Green		10 (10)	uA	V <sub>R</sub> =15V (V <sub>R</sub> =5V)

Notes:

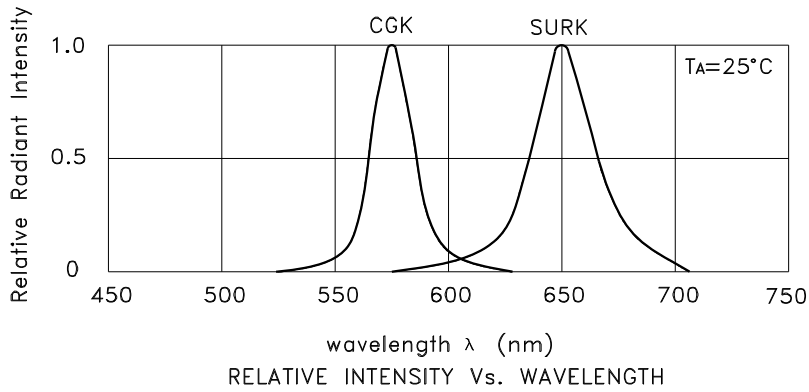
1. Wavelength: +/-1nm.  
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at TA=25°C

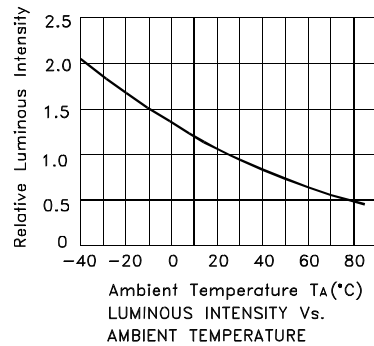
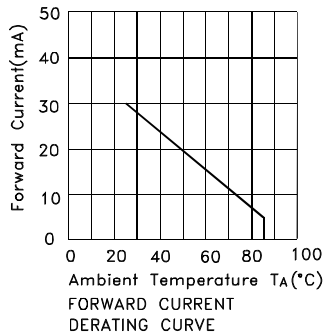
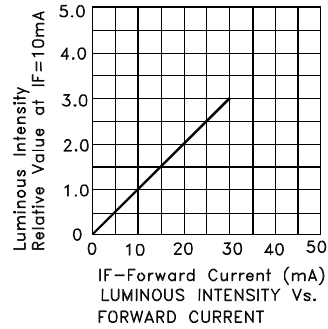
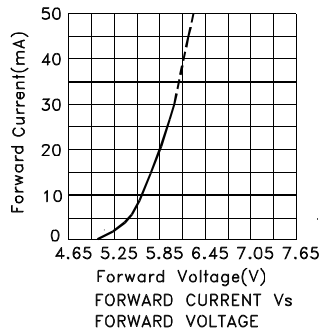
Parameter	Hyper Red	Green	Units
Power dissipation Per Segment Or (DP)	225 (75)	225 (75)	mW
DC Forward Current Per Segment Or (DP)	30 (30)	30 (30)	mA
Peak Forward Current [1] Per Segment Or (DP)	185 (185)	150 (150)	mA
Reverse Voltage Per Segment Or (DP)	15 (5)		V
Operating/Storage Temperature	-40°C To +85°C		
Lead Solder Temperature [2]	260°C For 3-5 Seconds		

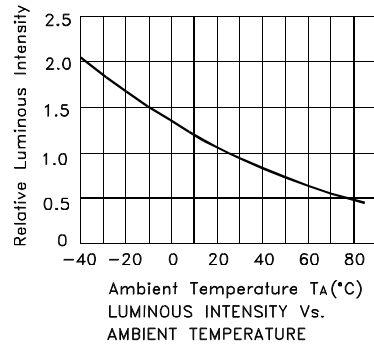
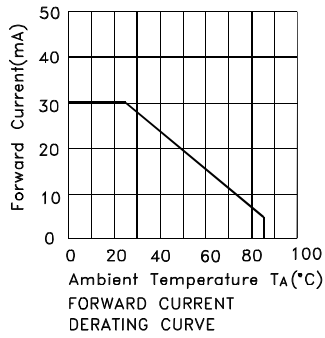
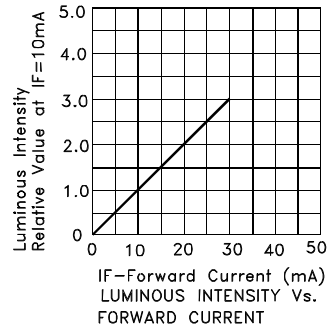
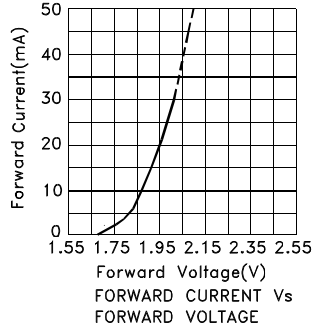
Notes:

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

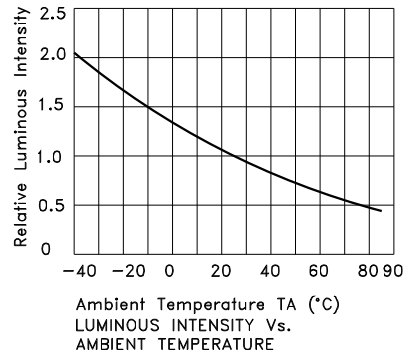
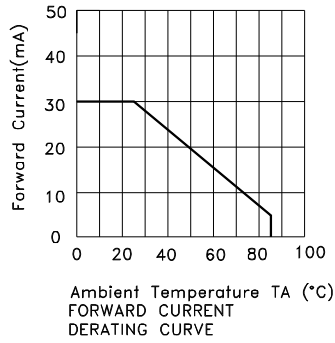
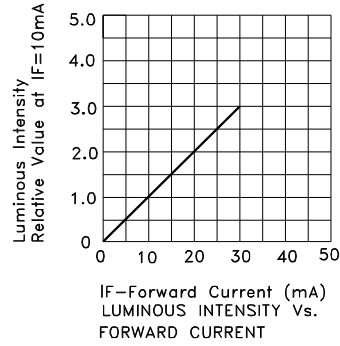
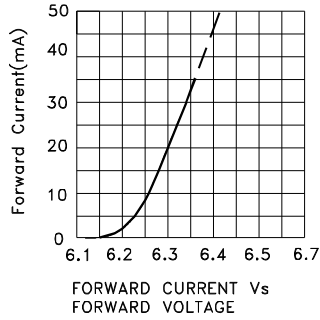


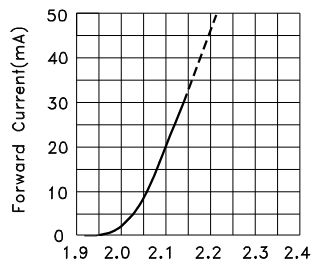
**SBA18-11SURKCGKWA**  
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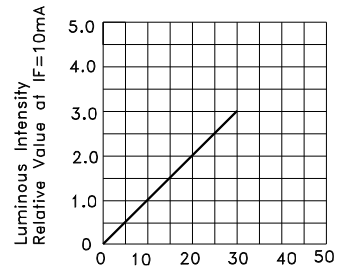


## Green

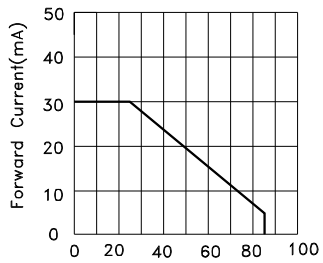




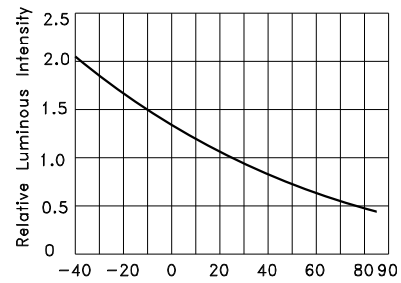
Forward Voltage(V)  
FORWARD CURRENT vs  
FORWARD VOLTAGE



IF-Forward Current (mA)  
LUMINOUS INTENSITY vs.  
FORWARD CURRENT



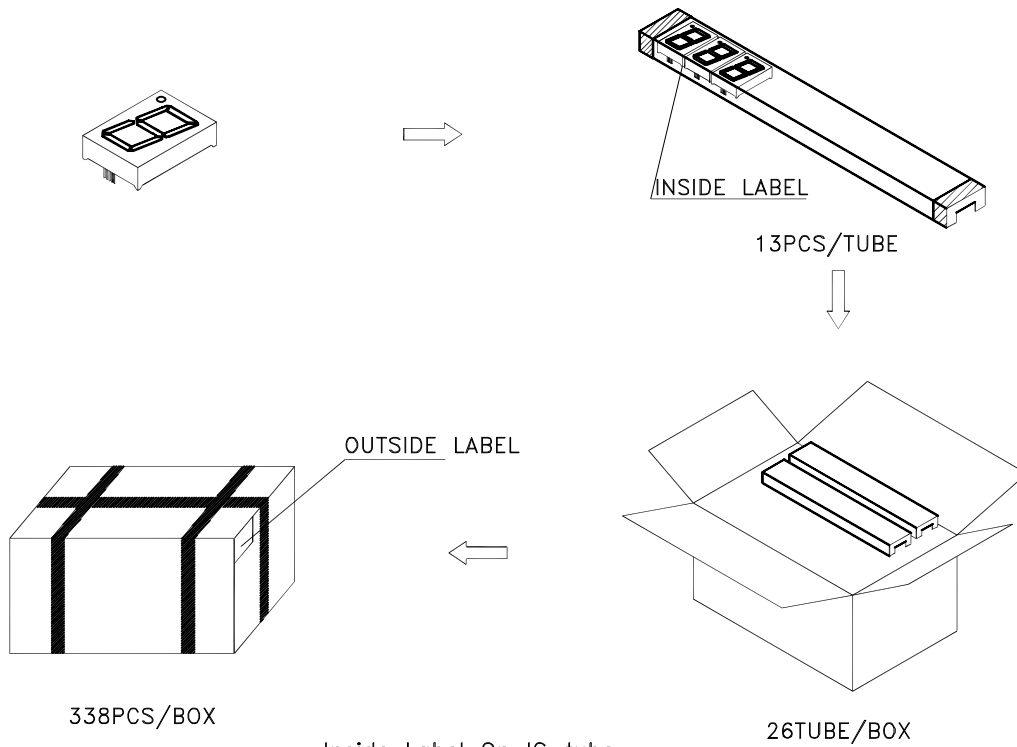
Ambient Temperature TA (°C)  
FORWARD CURRENT  
DERATING CURVE



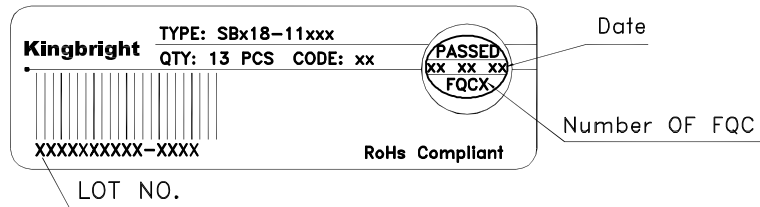
Ambient Temperature TA (°C)  
LUMINOUS INTENSITY vs.  
AMBIENT TEMPERATURE

**PACKING & LABEL SPECIFICATIONS**

**SBA18-11SURKCGKWA**



Inside Label On IC-tube



Outside Label On Box

