SA18-11	SC18-11
SBA18-11	SBC18-11

Features

- ●1.8 INCH DIGIT HEIGHT.
- ●LOW CURRENT OPERATION.
- ●EXCELLENT CHARACTER APPEARANCE.
- ●HIGH LIGHT OUTPUT.
- ●EASY MOUNTING ON P.C. BOARDS OR SOCKETS.
- ●I.C. COMPATIBLE.
- ●MULTICOLOR AVAILABLE.
- ●CATEGORIZED FOR LUMINOUS INTENSITY, YELLOW AND GREEN CATEGORIZED FOR COLOR.
- ●MECHANICALLY RUGGED.
- ●STANDARD : GRAY FACE, WHITE SEGMENT.

Description

The Bright Red source color devices are made with Gallium Phosphide Red Light Emitting Diode.

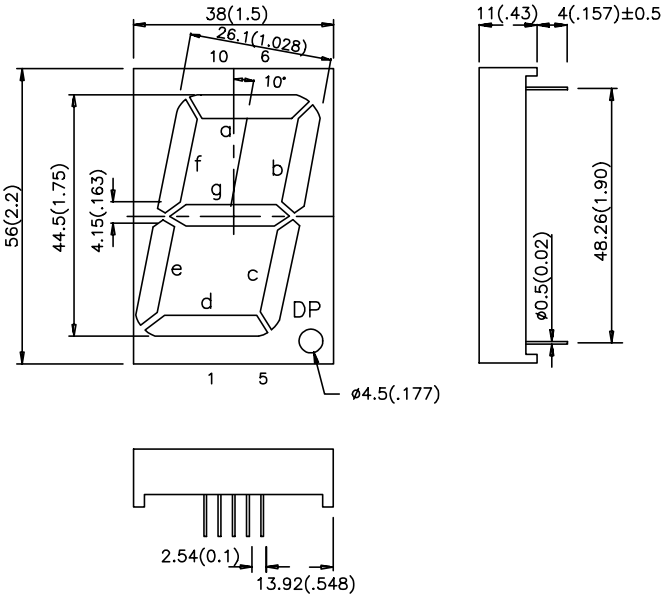
The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

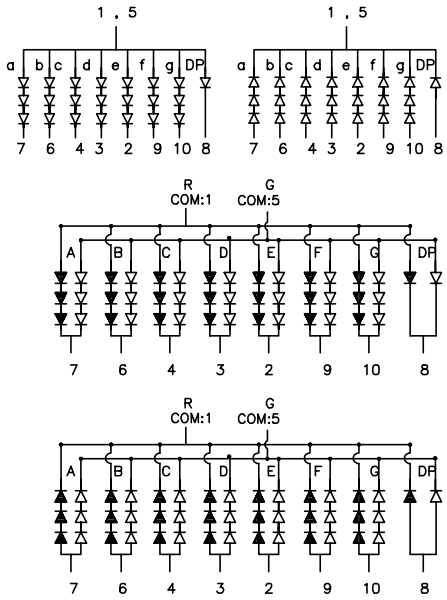
The Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

The Yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.

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.	Typ.	
SA18-11HWA	BRIGHT RED (GaP)	1200	3000	Common Anode, Rt. Hand Decimal
SC18-11HWA				Common Cathode, Rt Hand Decimal
SA18-11EWA	HIGH EFFICIENCY RED (GaAsP/GaP)	8000	24000	Common Anode, Rt. Hand Decimal
SC18-11EWA				Common Cathode, Rt Hand Decimal
SA18-11GWA	GREEN (GaP)	12000	26000	Common Anode, Rt. Hand Decimal
SC18-11GWA				Common Cathode, Rt Hand Decimal
SA18-11YWA	YELLOW (GaAsP/GaP)	3000	8000	Common Anode, Rt. Hand Decimal
SC18-11YWA				Common Cathode, Rt Hand Decimal
SA18-11SRWA	SUPER BRIGHT RED (GaAlAs)	26000	75000	Common Anode, Rt. Hand Decimal
SC18-11SRWA				Common Cathode, Rt Hand Decimal
SBA18-11EGWA	HIGH EFFICIENCY RED (GaAsP/GaP) GREEN (GaP)	8000	18000	Common Anode, Rt. Hand Decimal
SBC18-11EGWA		12000	26000	Common Cathode, Rt Hand Decimal

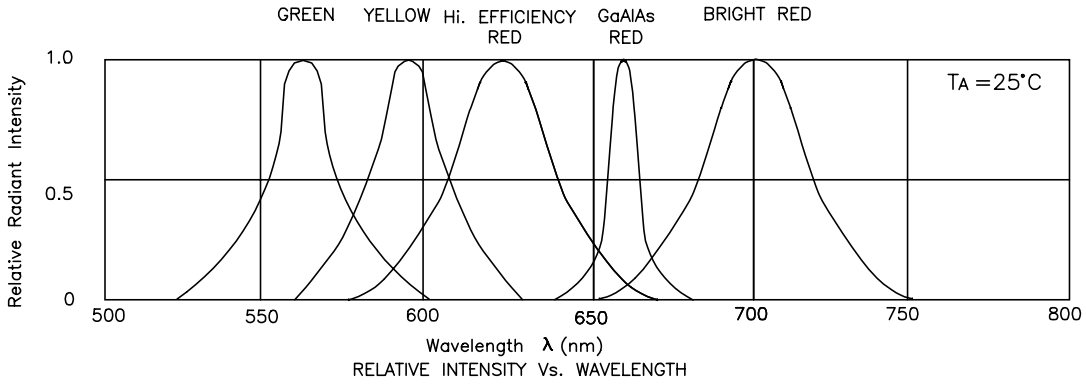
Electrical / Optical Characteristics at T_A=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Bright Red High Efficiency Red Green Yellow Super Bright Red	700 627 565 590 660		nm	IF=20mA
λ D	Dominate Wavelength	Bright Red High Efficiency Red Green Yellow Super Bright Red	660 625 568 588 640		nm	IF=20mA
Δλ1/2	Spectral Line Halfwidth	Bright Red High Efficiency Red Green Yellow Super Bright Red	45 45 30 35 20		nm	IF=20mA
C	Capacitance	Bright Red High Efficiency Red Green Yellow Super Bright Red	40 15 15 20 45		pF	VF=0V;f=1MHz
V_F	Forward Voltage	Bright Red High Efficiency Red Green Yellow Super Bright Red	2.25 2.0 2.0 2.1 1.85	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=25°C

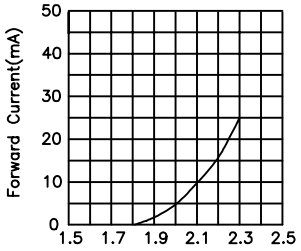
Parameter	Bright Red	High Efficiency Red	Green	Yellow	Super Bright Red	Units
Power dissipation	120	105	105	105	100	mW
DC Forward Current	25	30	25	30	30	mA
Peak Forward Current [1]	120	160	140	140	155	mA
Reverse Voltage	5	5	5	5	5	V
Operation/Storage Temperature	-40°C To +85°C					
Lead Solder Temperature [2]	260°C For 5 Seconds					

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

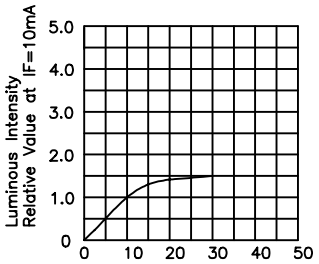


RELATIVE INTENSITY Vs. WAVELENGTH

Bright Red

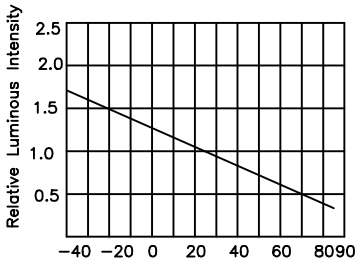


FORWARD CURRENT Vs.
FORWARD VOLTAGE



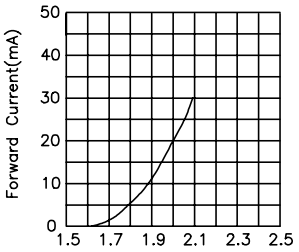
LUMINOUS INTENSITY Vs.
FORWARD CURRENT

FORWARD CURRENT
DERATING CURVE

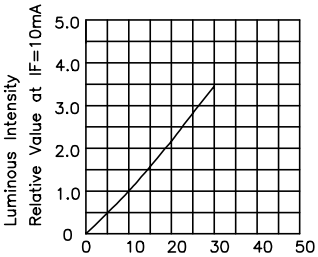


LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

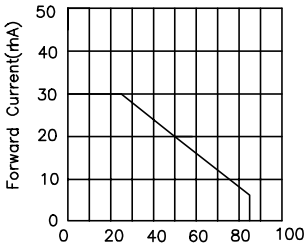
High Efficiency Red



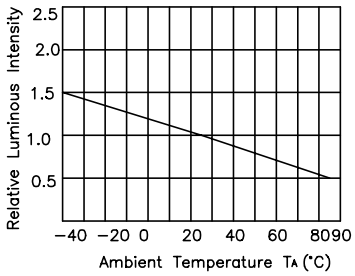
FORWARD CURRENT Vs
FORWARD VOLTAGE



LUMINOUS INTENSITY Vs.
FORWARD CURRENT

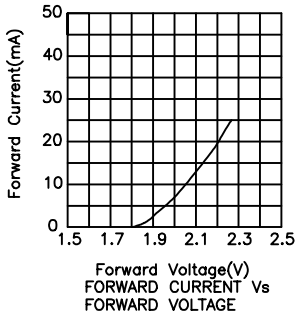


FORWARD CURRENT
DERATING CURVE

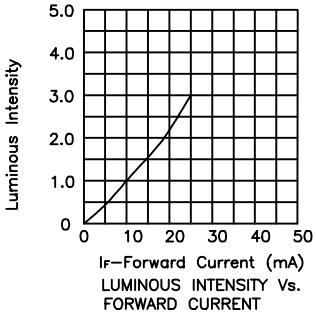


LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

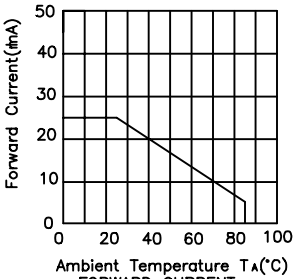
Green



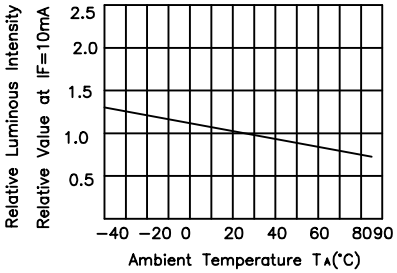
FORWARD CURRENT Vs
FORWARD VOLTAGE



LUMINOUS INTENSITY Vs.
FORWARD CURRENT

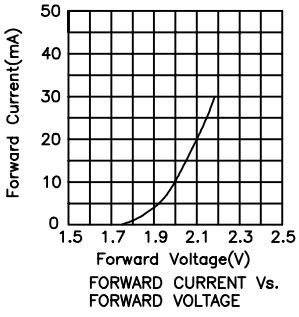


FORWARD CURRENT
DERATING CURVE

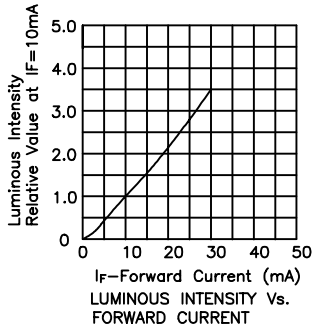


LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

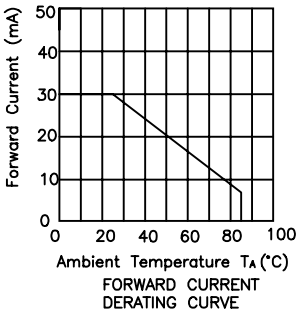
Yellow



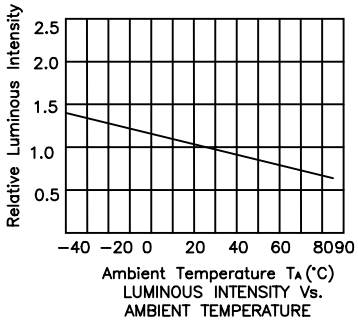
FORWARD CURRENT Vs.
FORWARD VOLTAGE



LUMINOUS INTENSITY Vs.
FORWARD CURRENT

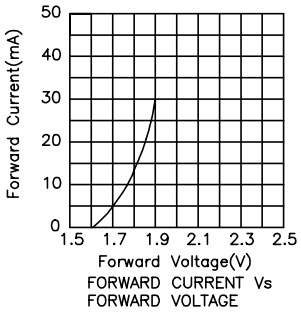


FORWARD CURRENT
DERATING CURVE

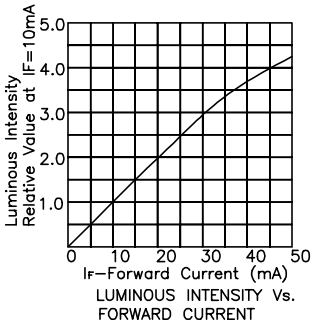


LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

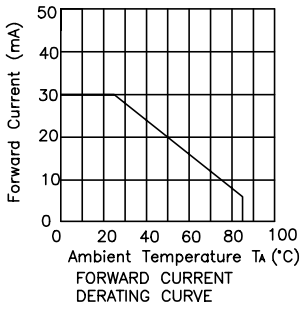
Super Bright Red



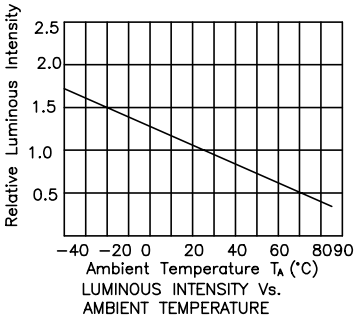
FORWARD CURRENT Vs
FORWARD VOLTAGE



LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE



LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE