

SA23-11EWA/GWA/YWA/SRWA
SC23-11EWA/GWA/YWA/SRWA
SA23-12EWA/GWA/YWA/SRWA
SC23-12EWA/GWA/YWA/SRWA
SBA23-11EGWA
SBC23-11EGWA

Features

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

Description

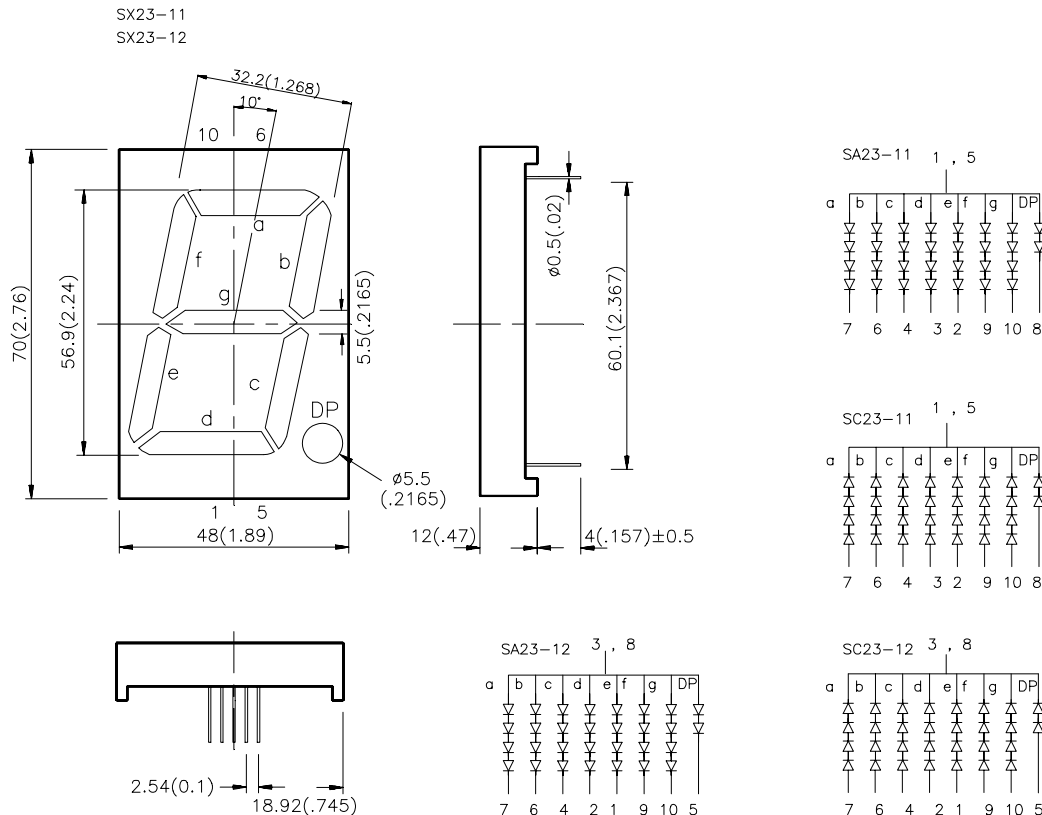
The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

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.

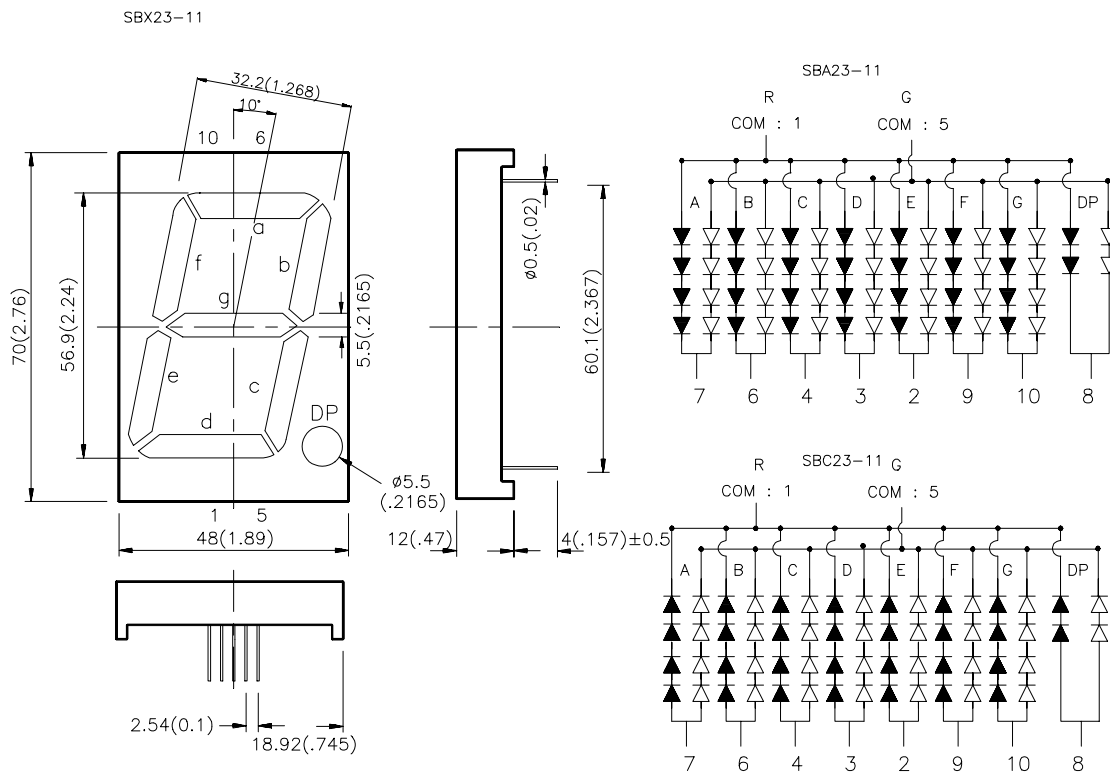
Package Dimensions & Internal Circuit Diagram



Notes:

1. All dimensions are in millimeters (inches), Tolerance is $\pm 0.25(0.01)$ unless otherwise noted.
2. Specifications are subject to change without notice.

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Selection Guide

Part No.	Dice	Iv (ucd) @ 10 mA		Description
		Min.	Typ.	
SA23-11EWA SA23-12EWA	HIGH EFFICIENCY RED (GaAsP/GaP)	8000	18000	Common Anode, Rt. Hand Decimal
SC23-11EWA SC23-12EWA				Common Cathode, Rt. Hand Decimal
SA23-11GWA SA23-12GWA	GREEN (GaP)	8000	24000	Common Anode, Rt. Hand Decimal
SC23-11GWA SC23-12GWA				Common Cathode, Rt. Hand Decimal
SA23-11YWA SA23-12YWA	YELLOW (GaAsP/GaP)	3000	8000	Common Anode, Rt. Hand Decimal
SC23-11YWA SC23-12YWA				Common Cathode, Rt. Hand Decimal
SA23-11SRWA SA23-12SRWA	SUPER BRIGHT RED (GaAlAs)	26000	75000	Common Anode, Rt. Hand Decimal
SC23-11SRWA SC23-12SRWA				Common Cathode, Rt. Hand Decimal
SBA23-11EGWA	HIGH EFFICIENCY RED (GaAsP/GaP) GREEN (GaP)	8000	18000	Common Anode, Rt. Hand Decimal
SBC23-11EGWA		8000	24000	Common Cathode, Rt. Hand Decimal

Electrical / Optical Characteristics at T_A=25°C

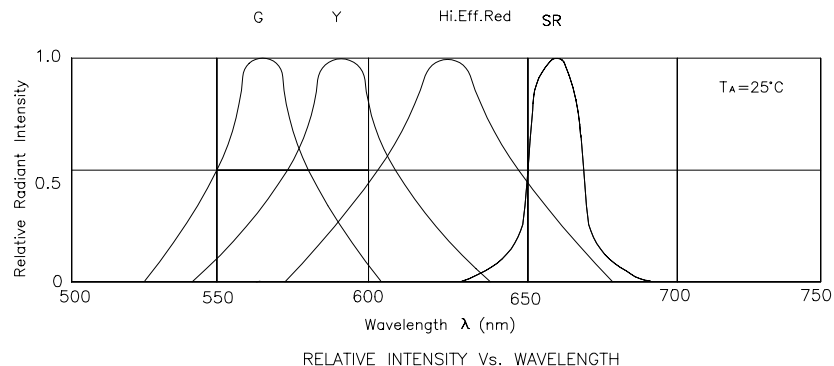
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ_{peak}	Peak Wavelength	High Efficiency Red Green Yellow Super Bright Red	627 565 590 660		nm	IF=20mA
λ_D	Dominate Wavelength	High Efficiency Red Green Yellow Super Bright Red	625 568 588 640		nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Line Halfwidth	High Efficiency Red Green Yellow Super Bright Red	45 30 35 20		nm	IF=20mA
C	Capacitance	High Efficiency Red Green Yellow Super Bright Red	15 15 20 45		pF	VF=0V;f=1MHz
V _F	Forward Voltage	High Efficiency Red 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

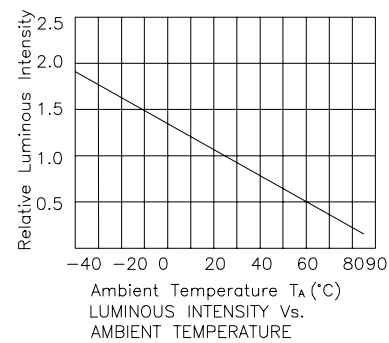
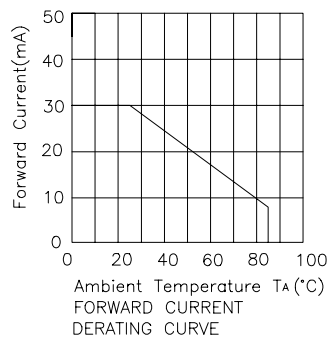
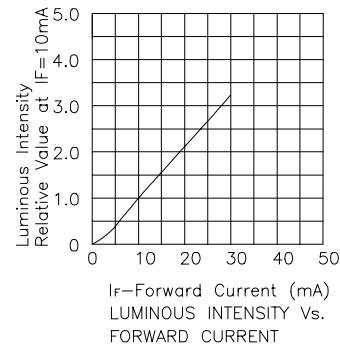
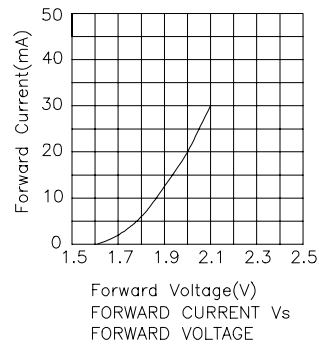
Parameter	High Efficiency Red	Green	Yellow	Super Bright Red	Units
Power dissipation	105	105	105	100	mW
DC Forward Current	30	25	30	30	mA
Peak Forward Current [1]	160	140	140	155	mA
Reverse Voltage	5	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C				
Lead Solder Temperature [2]	260°C For 5 Seconds				

Notes:

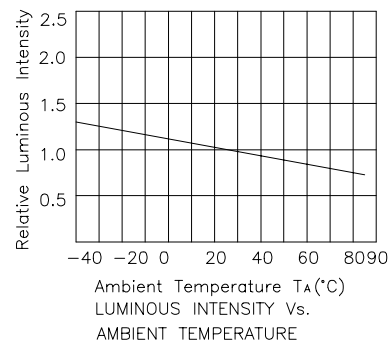
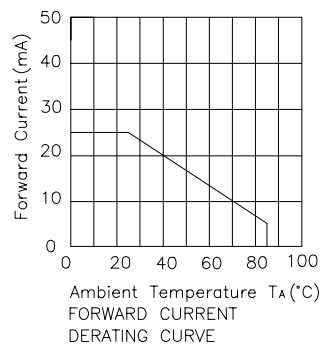
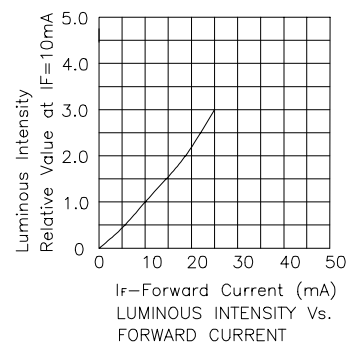
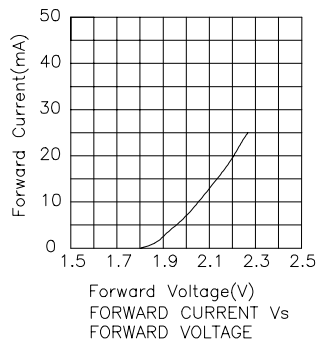
- 1/10 Duty Cycle, 0.1ms Pulse Width.
- 4mm below package base.



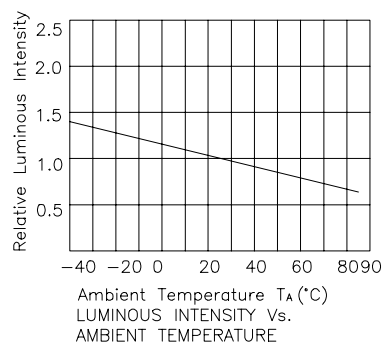
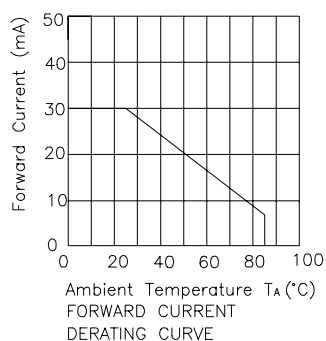
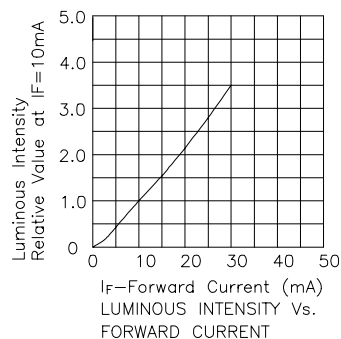
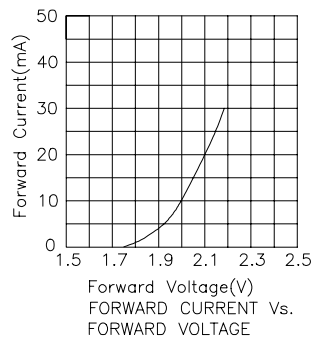
High Efficiency Red



Green



Yellow



Super Bright Red

