

BA56-11EWA/GWA/YWA/SRWA  
 BC56-11EWA/GWA/YWA/SRWA  
 BA56-12EWA/GWA/YWA/SRWA  
 BC56-12EWA/GWA/YWA/SRWA  
 BA56-13EWA/GWA/YWA/SRWA  
 BC56-13EWA/GWA/YWA/SRWA

### Features

- 0.56 INCH DIGIT HEIGHT.
- LOW CURRENT OPERATION.
- EXCELLENT CHARACTER APPEARANCE.
- 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 High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

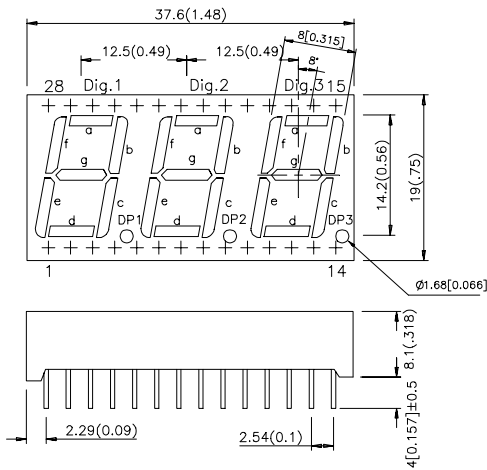
The Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

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.

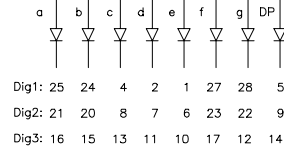
### Package Dimensions & Internal Circuit Diagram

BA/BC56-11  
 BA/BC56-13



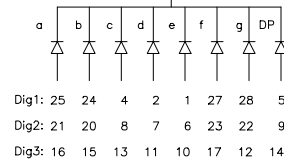
BA56-11

Dig1 : 3,26  
 Dig2 : 19  
 Dig3 : 18



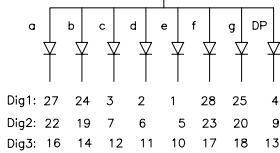
BC56-11

Dig1 : 3,26  
 Dig2 : 19  
 Dig3 : 18



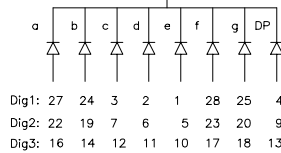
BA56-13

Dig1 : 26  
 Dig2 : 8,21  
 Dig3 : 15



BC56-13

Dig1 : 26  
 Dig2 : 8,21  
 Dig3 : 15

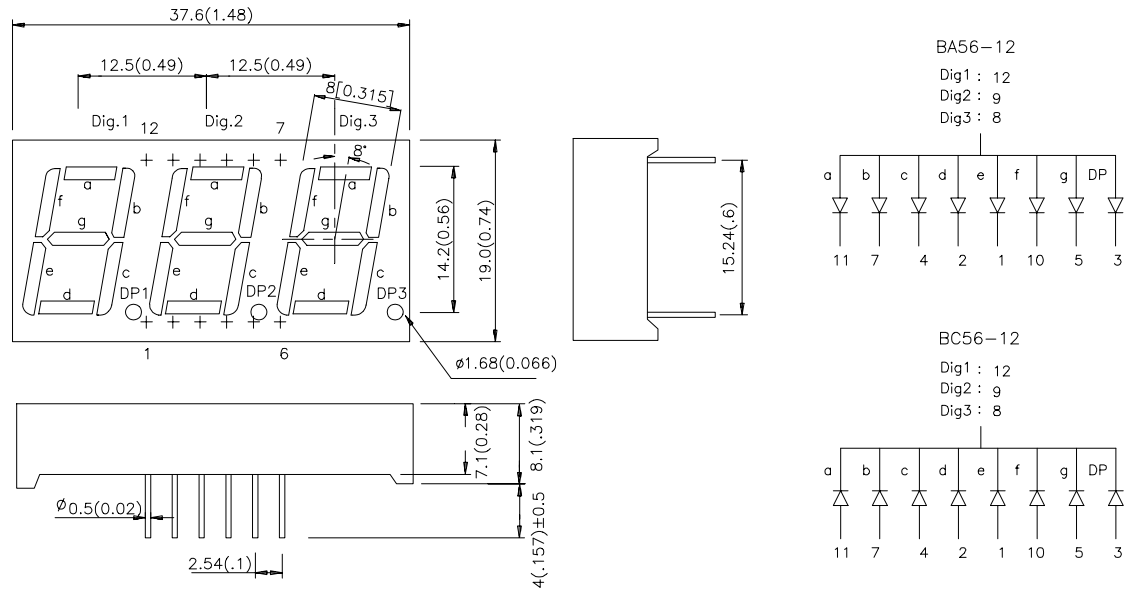


### Notes:

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.

## Package Dimensions & Internal Circuit Diagram

BA/BC56-12



**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.

### Selection Guide

Part No.	Dice	Lens Type	Iv (ucd) @ 10 mA		Description
			Min.	Typ.	
BA56-11EWA BA56-12EWA BA56-13EWA	HIGH EFFICIENCY RED (GaAsP/GaP)	WHITE DIFFUSED	1900	6400	Common Anode, Rt. Hand Decimal
BC56-11EWA BC56-12EWA BC56-13EWA					Common Cathode, Rt. Hand Decimal
BA56-11GWA BA56-12GWA BA56-13GWA	GREEN (GaP)	WHITE DIFFUSED	3000	10500	Common Anode, Rt. Hand Decimal
BC56-11GWA BC56-12GWA BC56-13GWA					Common Cathode, Rt. Hand Decimal
BA56-11YWA BA56-12YWA BA56-13YWA	YELLOW (GaAsP/GaP)	WHITE DIFFUSED	1900	4700	Common Anode, Rt. Hand Decimal
BC56-11YWA BC56-12YWA BC56-13YWA					Common Cathode, Rt. Hand Decimal
BA56-11SRWA BA56-12SRWA BA56-13SRWA	SUPER BRIGHT RED (GaAlAs)	WHITE DIFFUSED	8000	24000	Common Anode, Rt. Hand Decimal
BC56-11SRWA BC56-12SRWA BC56-13SRWA					Common Cathode, Rt. Hand Decimal

## Electrical / Optical Characteristics at T<sub>A</sub>=25°C

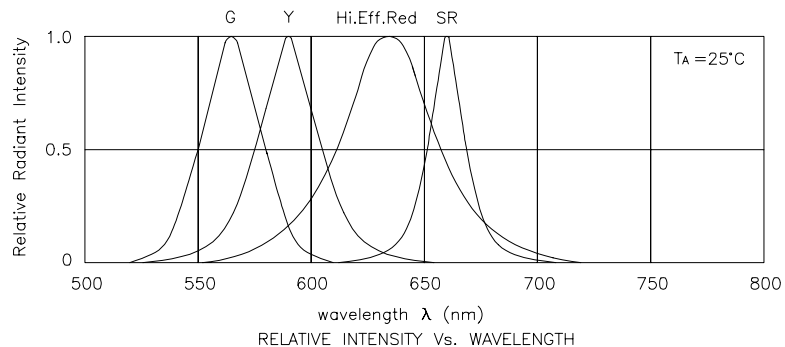
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
$\lambda_{peak}$	Peak Wavelength	High Efficiency Red Green Yellow Super Bright Red	627 565 590 660		nm	I <sub>F</sub> =20mA
$\lambda_D$	Dominate Wavelength	High Efficiency Red Green Yellow Super Bright Red	625 568 588 640		nm	I <sub>F</sub> =20mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	High Efficiency Red Green Yellow Super Bright Red	45 30 35 20		nm	I <sub>F</sub> =20mA
C	Capacitance	High Efficiency Red Green Yellow Super Bright Red	15 15 20 45		pF	V <sub>F</sub> =0V;f=1MHz
V <sub>F</sub>	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	I <sub>F</sub> =20mA
I <sub>R</sub>	Reverse Current	All		10	uA	V <sub>R</sub> = 5V

## Absolute Maximum Ratings at T<sub>A</sub>=25°C

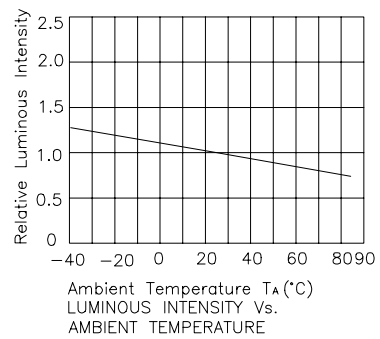
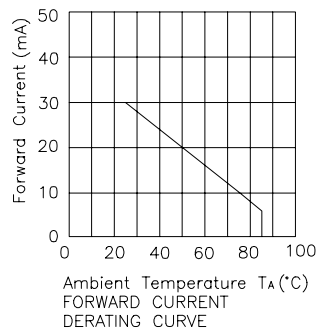
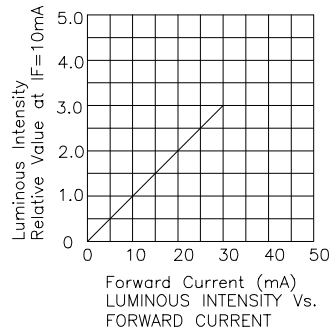
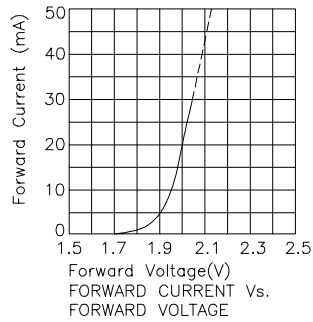
Parameter	High Efficiency Red	Green	Yellow	Super Bright Red	Units
Power dissipation	105	105	105	100	mW
DC Forward Current	30	25	30	30	mA
Peak Forward Current [1]	160	140	140	155	mA
Reverse Voltage	5	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C				
Lead Solder Temperature [2]	260°C For 5 Seconds				

Notes:

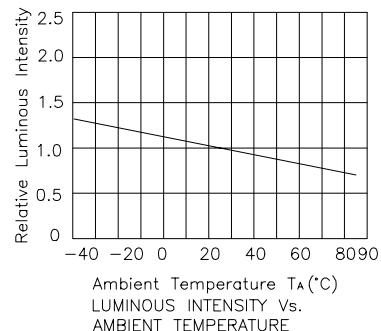
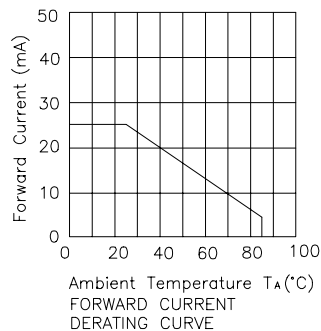
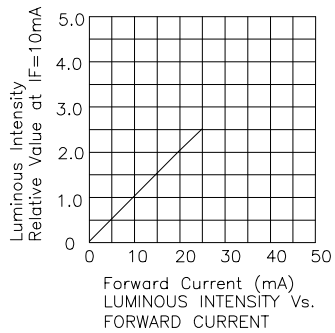
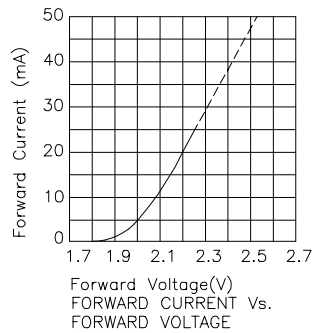
- 1/10 Duty Cycle, 0.1ms Pulse Width.
- 2mm below package base.



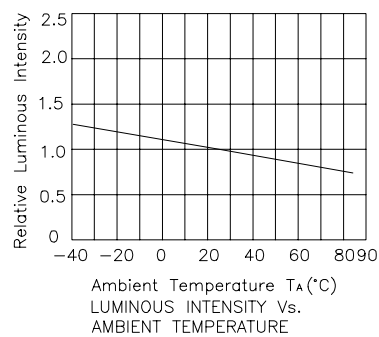
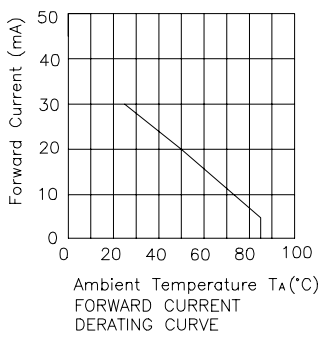
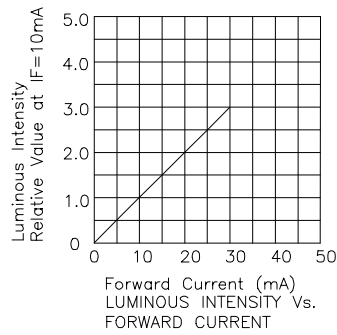
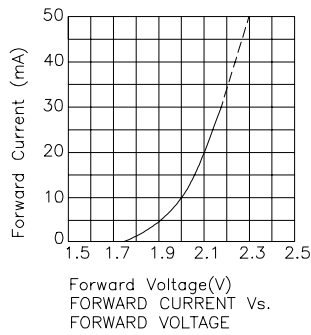
## High Efficiency Red



## Green



## Yellow



## Super Bright Red

