Kingbright®

14.2mm (0.56INCH) FOUR DIGIT NUMERIC DISPLAYS

CA56-11	CC56-11
CA56-12	CC56-12
CA56-21	CC56-21

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

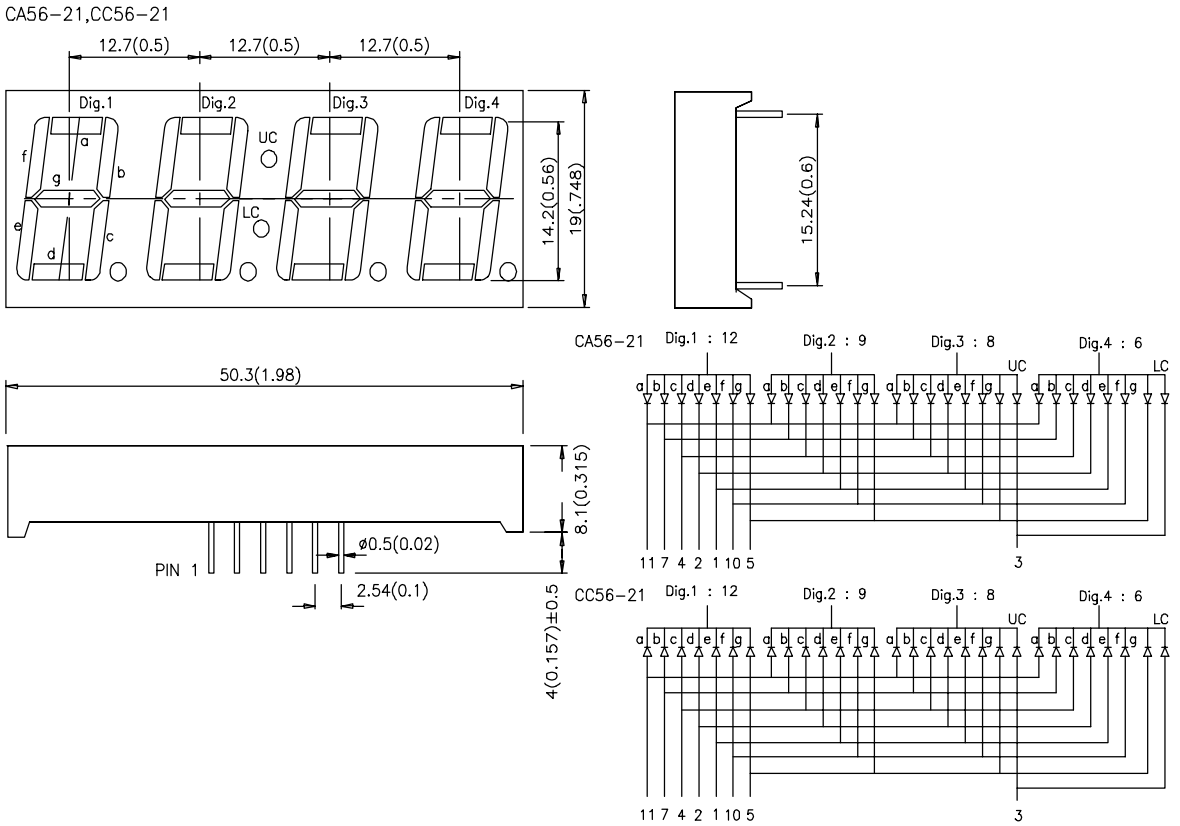
The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

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

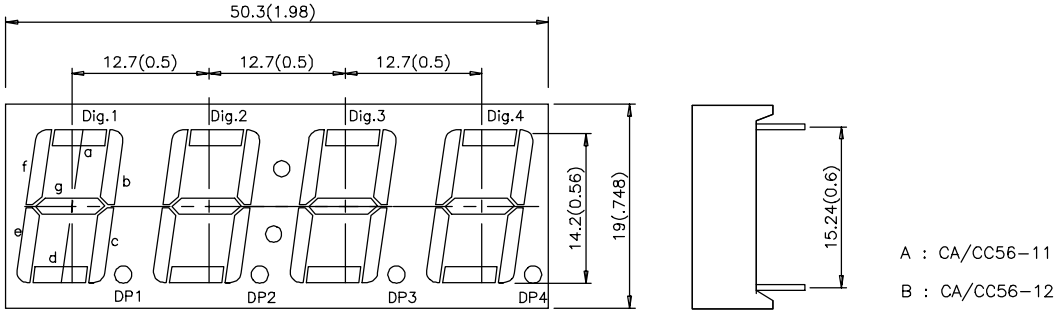
The Yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.

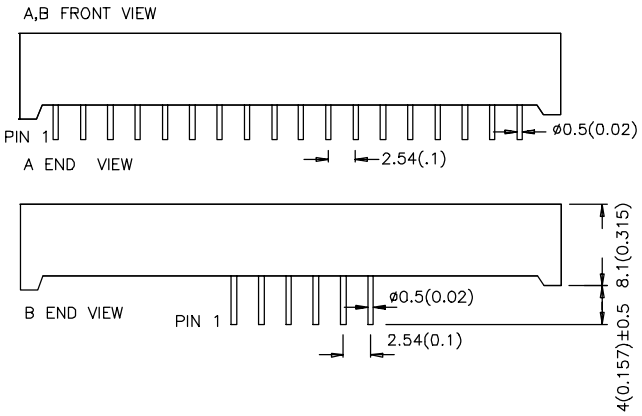
The Super Bright Red source color devices are made with Gallium Aluminum Arsenide Red Light Emitting Diode.

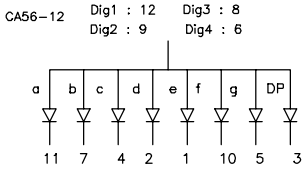
Package Dimensions & Internal Circuit Diagram

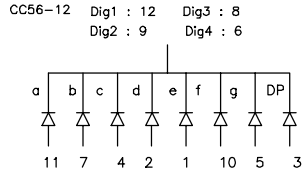


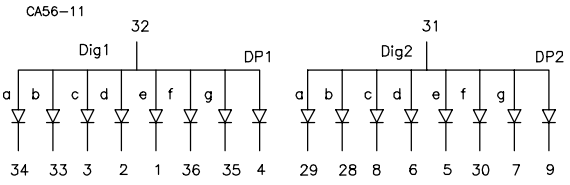
Package Dimensions & Internal Circuit Diagram

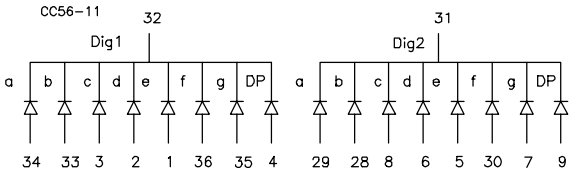


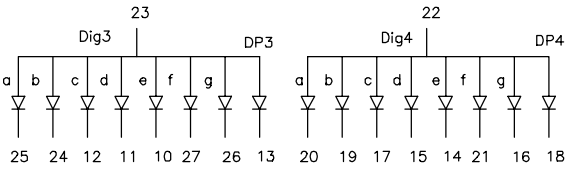


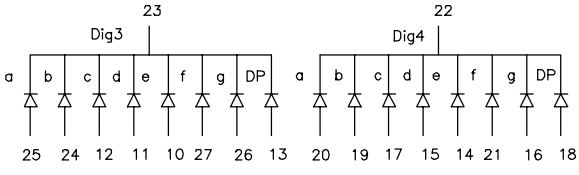












Notes:
1. All dimensions are in millimeters (inches), Tolerance is ±0.25(0.01")unless otherwise noted.
2. Specifications are subjected to change whitout notice.

Kingbright®

Selection Guide

Part No.	Dice	Iv (ucd) @ 10 mA		Description
		Min.	Typ.	
CA56-11HWA CA56-12HWA CA56-21HWA	BRIGHT RED (GaP)	800	1900	Common Anode, Rt Hand Decimal
CC56-11HWA CC56-12HWA CC56-21HWA				Common Cathode, Rt. Hand Decimal
CA56-11EWA CA56-12EWA CA56-21EWA	HIGH EFFICIENCY RED (GaAsP/GaP)	1900	6400	Common Anode, Rt Hand Decimal
CC56-11EWA CC56-12EWA CC56-21EWA				Common Cathode, Rt. Hand Decimal
CA56-11GWA CA56-12GWA CA56-21GWA	GREEN (GaP)	3000	10500	Common Anode, Rt Hand Decimal
CC56-11GWA CC56-12GWA CC56-21GWA				Common Cathode, Rt. Hand Decimal
CA56-11YWA CA56-12YWA CA56-21YWA	YELLOW (GaAsP/GaP)	1900	4700	Common Anode, Rt Hand Decimal
CC56-11YWA CC56-12YWA CC56-21YWA				Common Cathode, Rt. Hand Decimal
CA56-11SRWA CA56-12SRWA CA56-21SRWA	SUPER BRIGHT RED (GaAlAs)	8000	24000	Common Anode, Rt Hand Decimal
CC56-11SRWA CC56-12SRWA CC56-21SRWA				Common Cathode, Rt. Hand Decimal

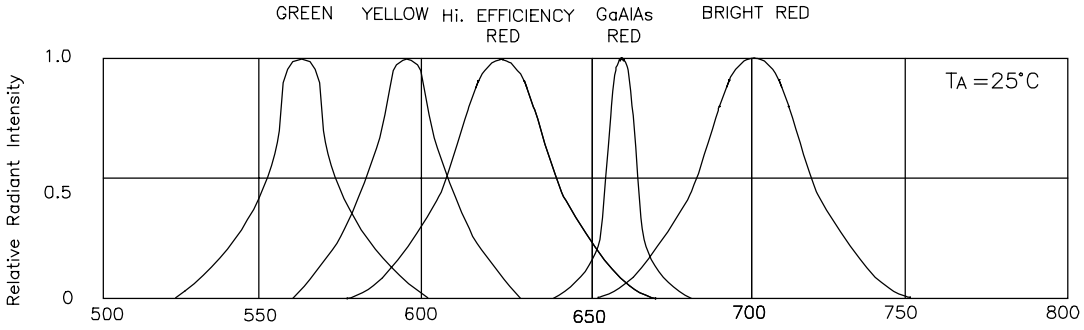
Electrical / Optical Characteristics at T_A=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Bright Red High Efficiency Red Green Yellow Super Bright Red	700 625 565 590 660		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 12 45 10 95		pF	VF=0V;f=1MHz
V_F	Forward Voltage	Bright Red High Efficiency Red Green Yellow Super Bright Red	2.0 2.0 2.2 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

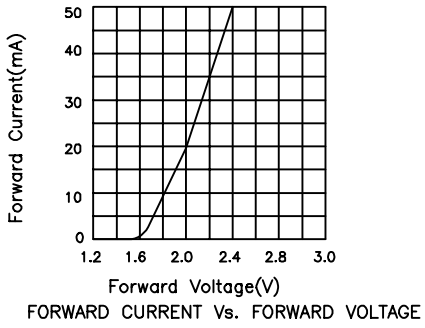
Parameter	Bright Red	High Efficiency Red	Green	Yellow	Super Bright Red	Units
Power dissipation	120	105	105	105	100	mW
DC Forward Current	25	30	25	30	30	mA
Peak Forward Current [1]	150	150	150	150	150	mA
Reverse Voltage	5	5	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C					
Lead Soldering Temperature [2]	260°C For 5 Seconds					

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

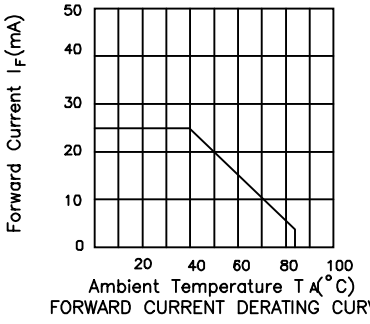


RELATIVE INTENSITY Vs. WAVELENGTH

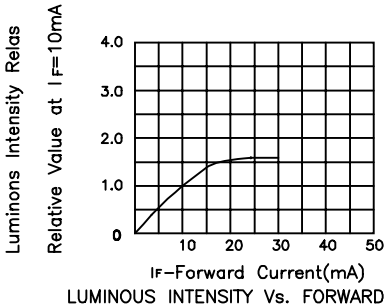
Bright Red



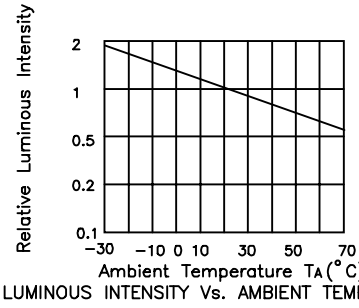
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

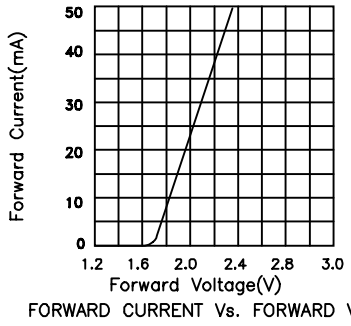


LUMINOUS INTENSITY Vs. FORWARD CURRENT



LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE

High Efficiency Red



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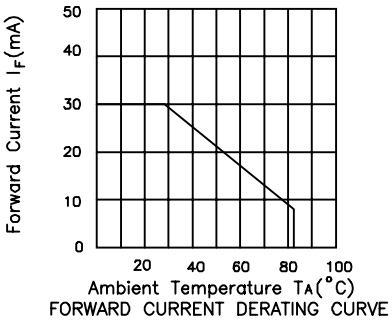

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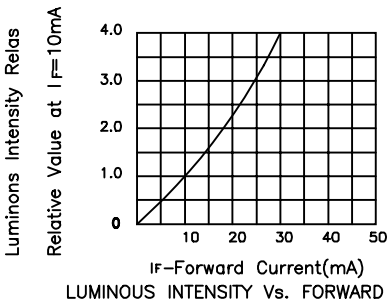

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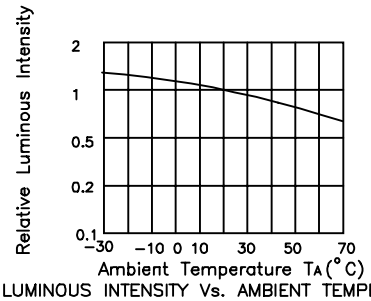
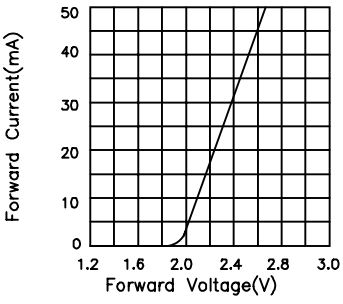
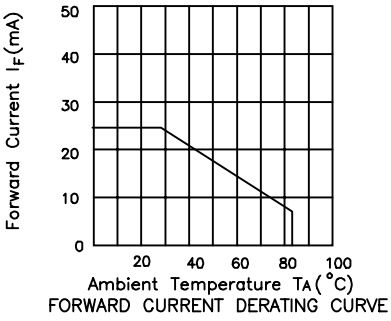


LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE

Green





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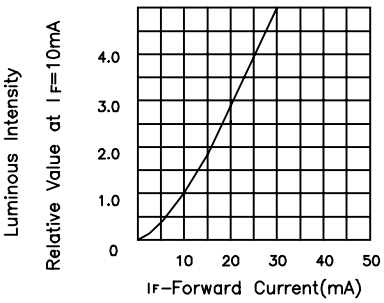
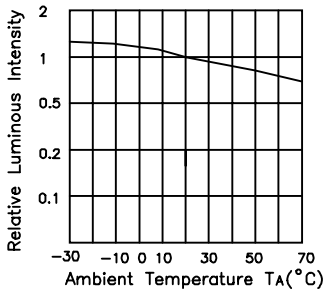
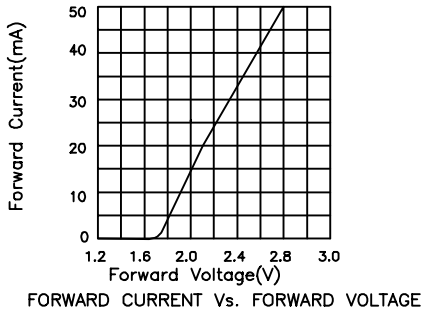


LUMINOUS INTENSITY Vs. FORWARD CURRENT



LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE

Yellow



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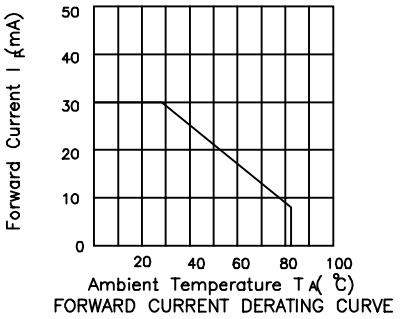

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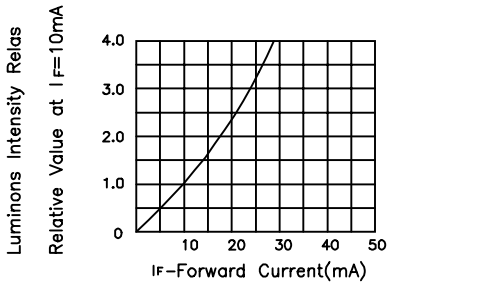
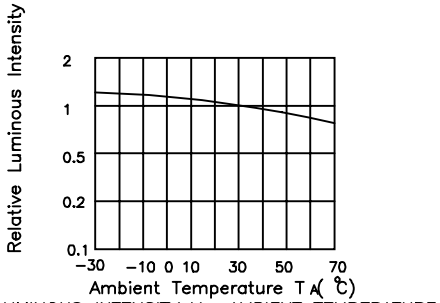
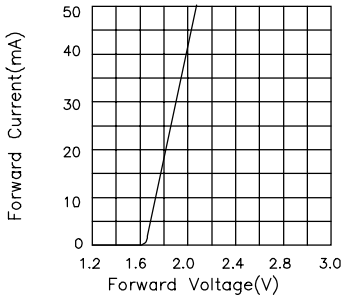


LUMINOUS INTENSITY Vs. FORWARD CURRENT



LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE

Super Bright Red



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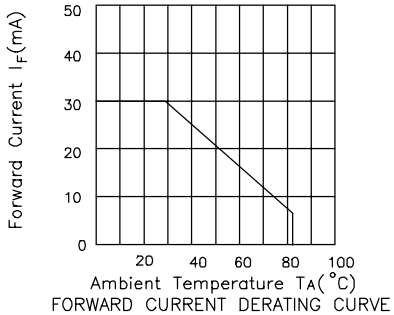

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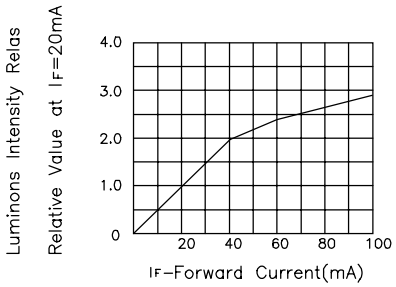

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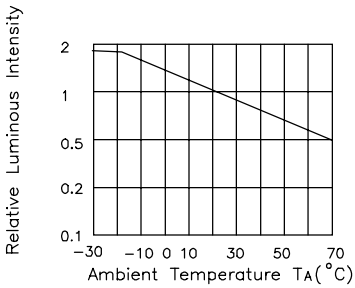

LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE