Kingbright®

18mm (0.7 INCH) 5x7 SINGLE COLOR DOT MATRIX DISPLAYS

TA07-11 TC07-11

Features

- 0.7 INCH MATRIX HEIGHT.
- DOT SIZE 2mm.
- LOW CURRENT OPERATION.
- COMPATIBLE WITH USACII AND EBCDIC CODES.
- STACKABLE VERTICALLY AND HORIZONTALLY.
- COLUMN CATHODE AND COLUMN ANODE AVAILABLE.
- EASY MOUNTING ON P.C. BOARDS OR SOCKETS.
- CATEGORIZED FOR LUMINOUS INTENSITY, YELLOW AND GREEN CATEGORIZED FOR COLOR.
- MECHANICALLY RUGGED.
- STANDARD: GRAY FACE, WHITE DOT.

Description

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

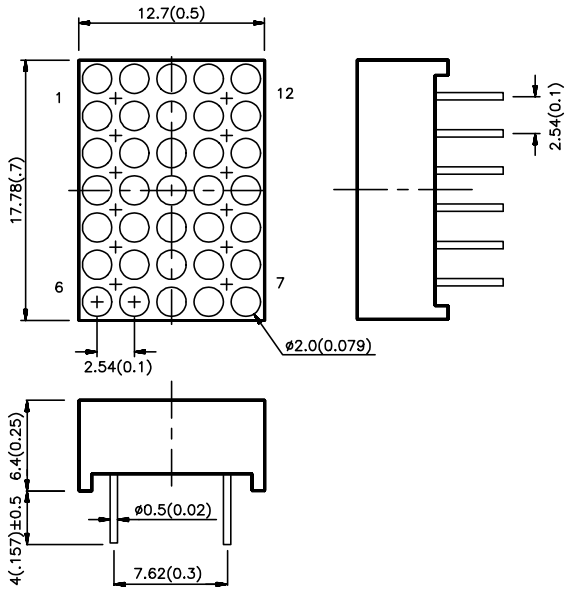
The Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

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

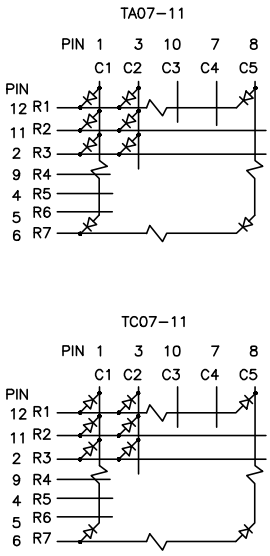
The Yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.

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.	Max.	
TA07-11HWA	BRIGHT RED (GaP)	360	900	Column Anode
TC07-11HWA				Column Cathode
TA07-11EWA	HIGH EFFICIENCY RED (GaAsP/GaP)	2200	5600	Column Anode
TC07-11EWA				Column Cathode
TA07-11GWA	GREEN (GaP)	2200	5600	Column Anode
TC07-11GWA				Column Cathode
TA07-11YWA	YELLOW (GaAsP/GaP)	2200	5600	Column Anode
TC07-11YWA				Column Cathode
TA07-11SRWA	SUPER BRIGHT RED (GaAlAs)	5600	14000	Column Anode
TC07-11SRWA				Column Cathode

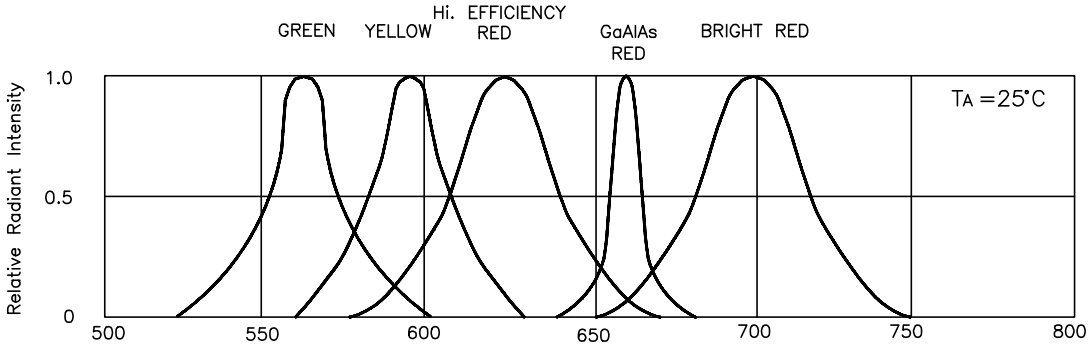
Electrical / Optical Characteristics at T_A=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ_{peak}	Peak Wavelength	Bright Red High Efficiency Red Green Yellow Super Bright Red	700 625 565 590 660		nm	IF=20mA
$\Delta\lambda_{1/2}$	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

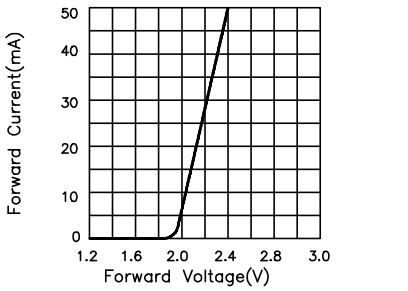
Parameter	Bright Red	High Efficiency Red	Green	Yellow	Super Bright Red	Units
Power dissipation	120	105	105	105	100	mW
DC Forward Current	25	30	25	30	30	mA
Peak Forward Current [1]	150	150	150	150	150	mA
Reverse Voltage	5	5	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C					
Lead Soldering Temperature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

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

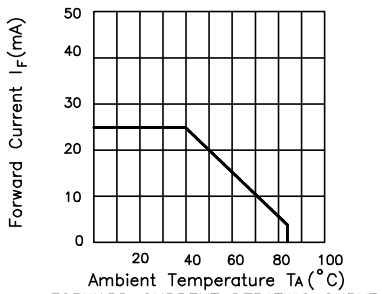


RELATIVE INTENSITY Vs. WAVELENGTH

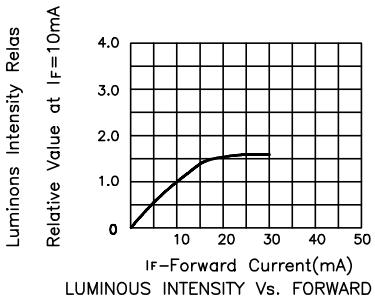
Bright Red



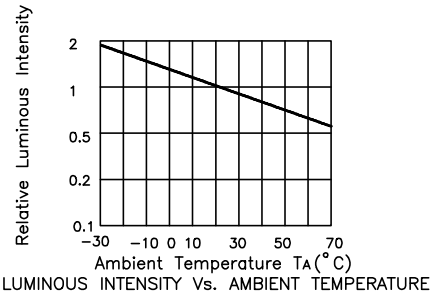
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

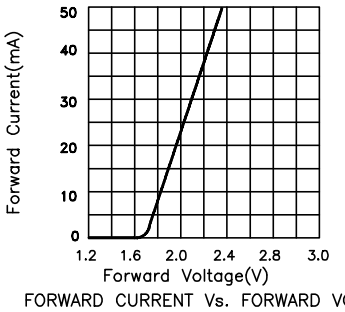


LUMINOUS INTENSITY Vs. FORWARD CURRENT



LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE

High Efficiency Red



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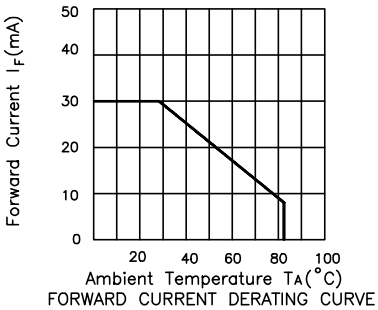

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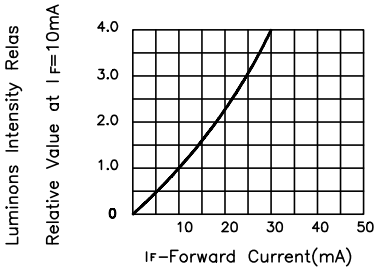

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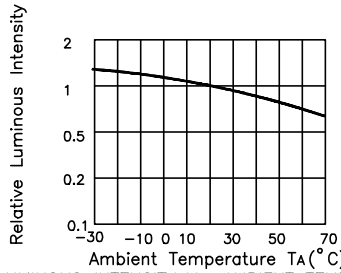
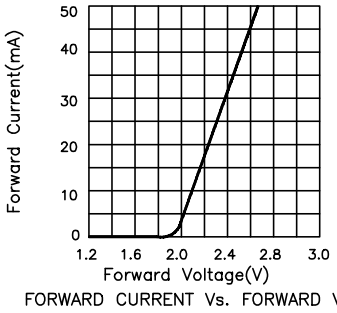


LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE

Green



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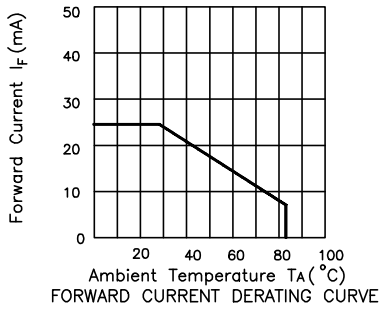

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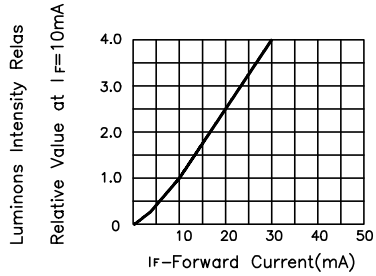

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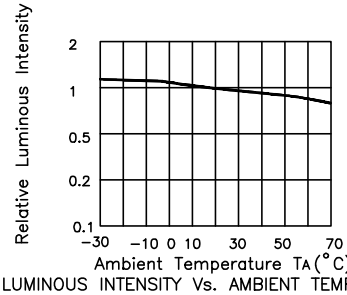
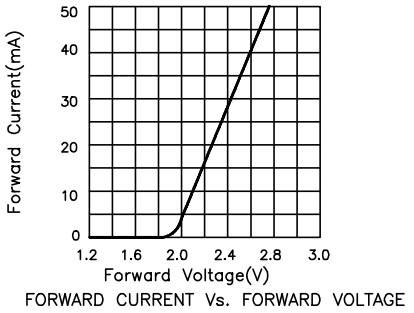


LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE

Yellow



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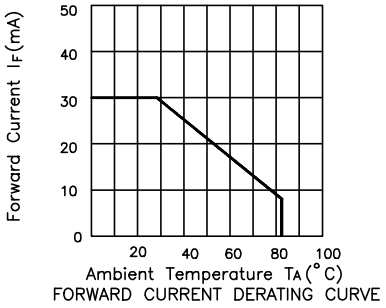

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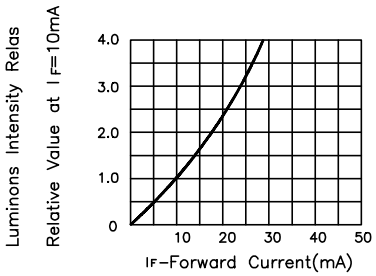

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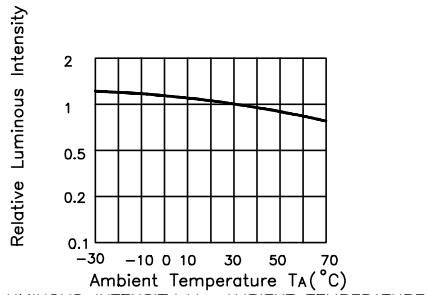
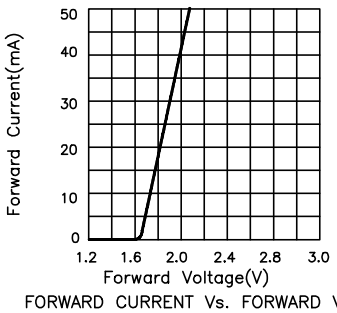


LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE

Super Bright Red



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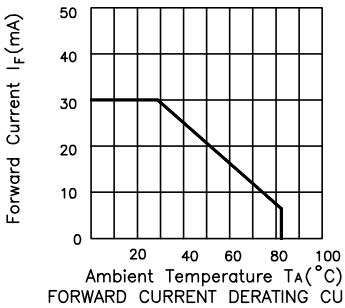

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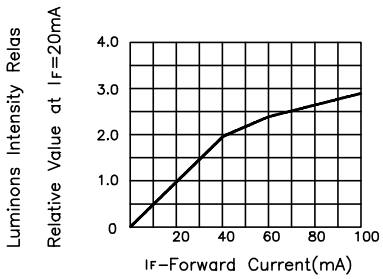

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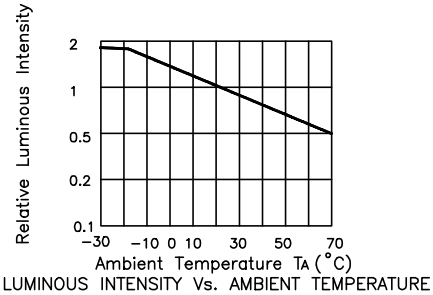

LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE