

Kingbright®

48mm (1.85 INCH) 8x8 MULTICOLOR DOT MATRIX DISPLAYS

TBA18-81

TBC18-81

Features

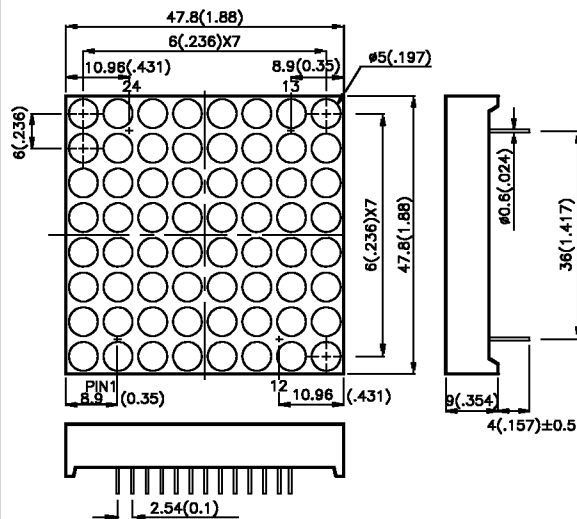
- 1.8 INCH MATRIX HEIGHT.
- DOT SIZE 5mm.
- LOW CURRENT OPERATION.
- HIGH CONTRAST AND LIGHT OUTPUT.
- COMPATIBLE WITH USACII AND EBCDIC CODES.
- STACKABLE HORIZONTALLY.
- COLUMN CATHODE AND COLUMN ANODE AVAILABLE.
- EASY MOUNTING ON P.C. BOARDS OR SOCKETS.
- MULTICOLOR AVAILABLE.
- CATEGORIZED FOR LUMINOUS INTENSITY, YELLOW AND GREEN CATEGORIZED FOR COLOR.
- MECHANICALLY RUGGED.
- STANDARD : BLACK FACE, WHITE DOT.

Description

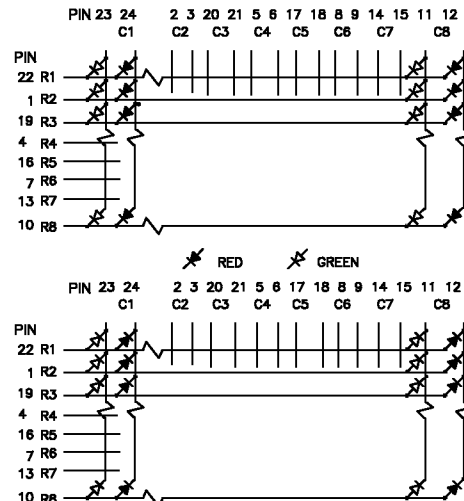
The Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

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

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 subjected to change without notice.

Selection Guide

Part No.	Dice	Iv (ucd) @ 10 mA		Description
		Min.	Max.	
TBA18-81EGWB	HIGH EFFICIENCY RED (GaAsP/GaP)	5600	9000	Column Anode
	GREEN (GaP)	5600	9000	
TBC18-81EGWB	HIGH EFFICIENCY RED (GaAsP/GaP)	5600	9000	Column Cathode
	GREEN (GaP)	5600	9000	

Electrical / Optical Characteristics at T_A=25°C

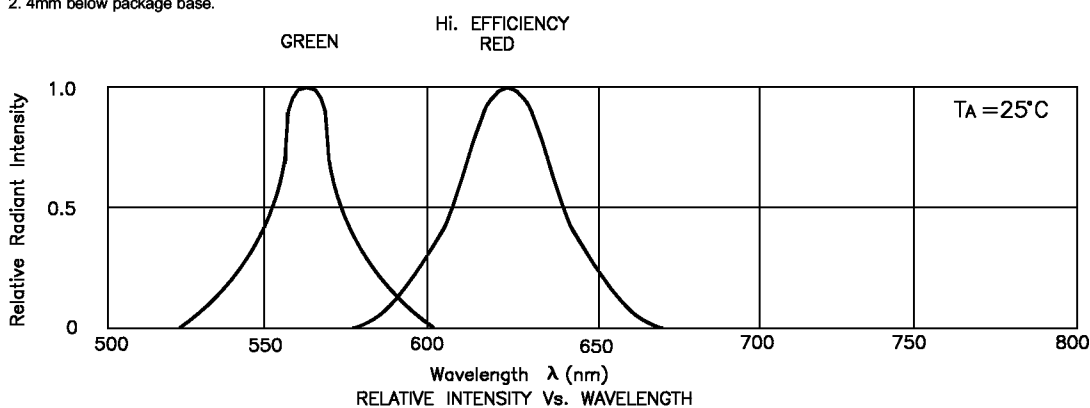
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ_{peak}	Peak Wavelength	High Efficiency Red Green	625 565		nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Line Halfwidth	High Efficiency Red Green	45 30		nm	IF=20mA
C	Capacitance	High Efficiency Red Green	12 45		pF	VF=0V;f=1MHz
V _F	Forward Voltage	High Efficiency Red Green	2.0 2.2	2.5 2.5	V	IF=20mA
I _R	Reverse Current	All	10		uA	VR = 5V

Absolute Maximum Ratings at T_A=25°C

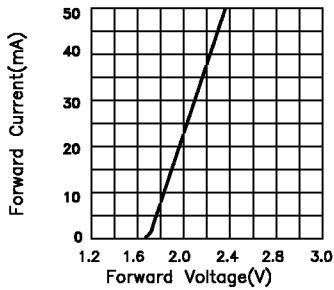
Parameter	High Efficiency Red	Green	Units
Power dissipation	105	105	mW
DC Forward Current	30	25	mA
Peak Forward Current [1]	150	150	mA
Reverse Voltage	5	5	V
Operating/Storage Temperature	-40 °C To +85 °C		
Lead Soldering Temperature [2]	260 °C For 5 Seconds		

Notes:

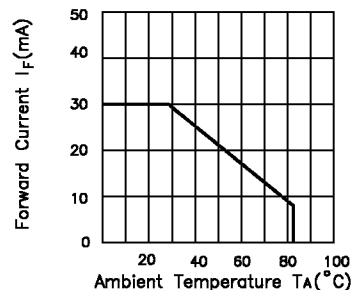
- 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 4mm below package base.



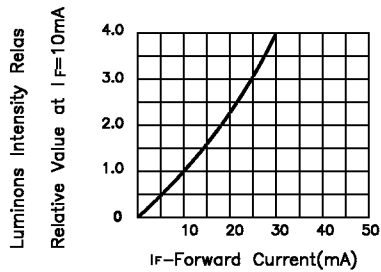
High Efficiency Red



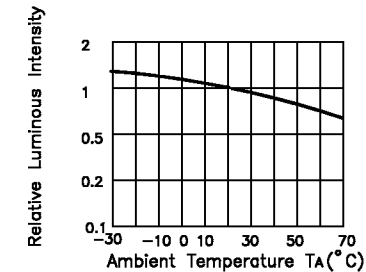
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

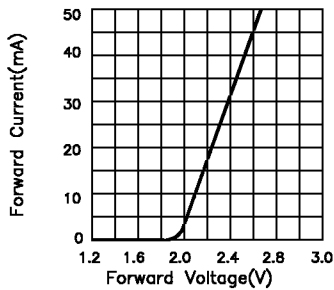


LUMINOUS INTENSITY Vs. FORWARD CURRENT

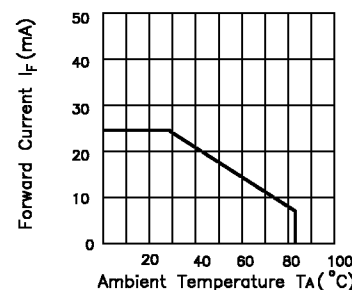


LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE

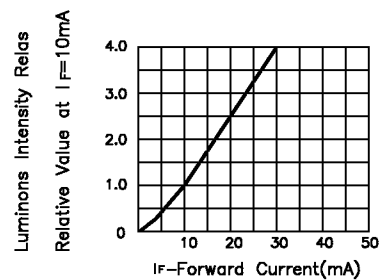
Green



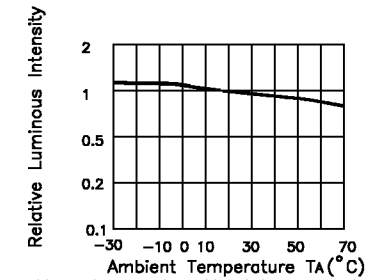
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



LUMINOUS INTENSITY Vs. FORWARD CURRENT



LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE