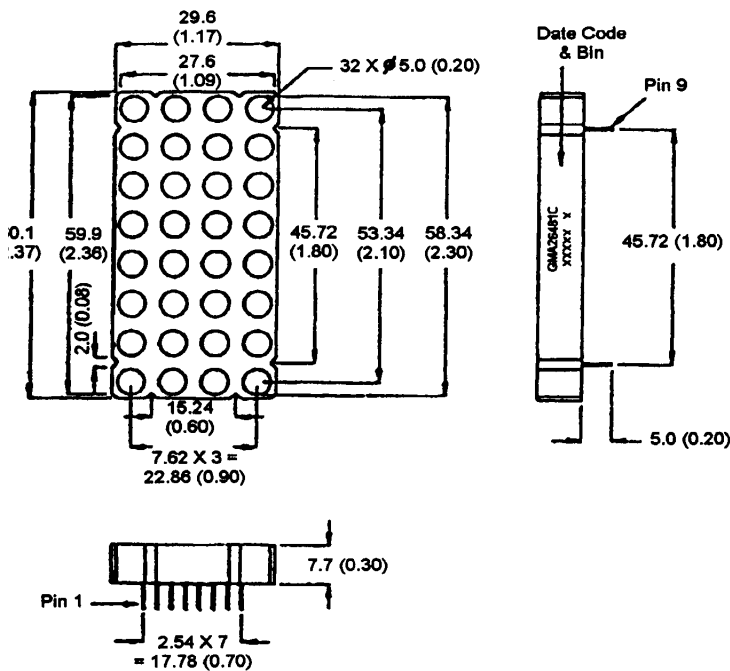




# 2.3 INCH (58.4 mm) 4 X 8 DOT MATRIX STICK DISPLAY

**HER Red / Green GMA26481C  
(BI-COLOR)**

## PACKAGE DIMENSIONS



## DESCRIPTION

The GMA26481C is a common cathode column 4 X 8, bicolor High Efficiency Red / green dot matrix display. It has a black face with neutral segment color.

## FEATURES

- 2.3" ( 58.4mm) character height.
- Low power requirement.
- Wide 130° viewing angle.
- High brightness and contrast
- 4 X 8 array with X-Y select.
- X-Y stackable.
- Easy mounting on P.C. board.

**NOTE:** Dimensions are in mm (inch).  
Tolerances are ± 0.25 (0.1) unless otherwise noted.  
All pins are 0.5 (.02).

## MODEL NUMBER

<u>Part Number</u>	<u>Colour</u>	<u>Description</u>
GMA26481C	HER Red/Green	Common anode row.

(For other color options, contact your local area Sales Office)



## 2.3 INCH (58.4 mm) 4 X 8 DOT MATRIX STICK DISPLAY

### ABSOLUTE MAXIMUM RATING ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

	HER	Green	Units
Peak forward current per segment (Duty cycle 1/10, 10KHz)	90	90	mA
Continuous IF per segment	25	25	mA
Power dissipation per segment	70*	70	mW
*Derate linearly from 25°C	0.33	0.33	mW/°C
Reverse voltage VR per segment	5	5	Volts
Operating and storage temperature range.....	-25°C to +85°C		
Soldering time at 260°C..... (1/16" below seating plane)	3 sec		

### ELECTRO - OPTICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

	HER	Green	Test Condition
Luminous Intensity/Dot Digit average (Typical)	2200ucd	1600ucd	$I_F = 20\text{mA}$
Forward voltage ( $V_F$ ) typical	2.0V	2.1V	$I_F = 20\text{ mA}$
maximum	2.8V	2.8V	$I_F = 20\text{ mA}$
Peak wavelength (nm)	635nm	570nm	$I_F = 20\text{ mA}$
Spectral line half width (nm)	45nm	30nm	$I_F = 20\text{mA}$
Reverse breakdown voltage $V_R$	5V	5V	$I_R = 100\text{uA}$



# 2.3 INCH (58.4 mm) 4 X 8 DOT MATRIX STICK DISPLAY

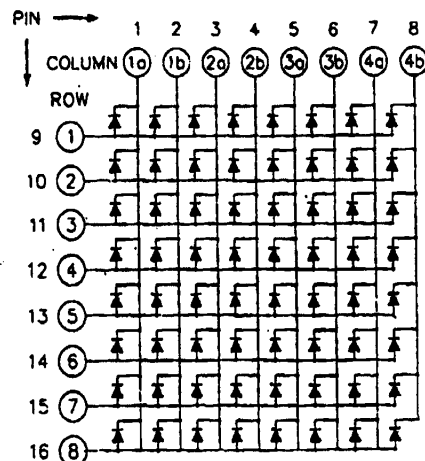
## PIN CONNECTION:

### GMA3688C

Pin Number	Function	Pin Number	Function
1	Cathode Column 1a	9	Anode Row 1
2	Cathode Column 1b	10	Anode Row 2
3	Cathode Column 2a	11	Anode Row 3
4	Cathode Column 2b	12	Anode Row 4
5	Cathode Column 3a	13	Anode Row 5
6	Cathode Column 3b	14	Anode Row 6
7	Cathode Column 4a	15	Anode Row 7
8	Cathode Column 4b	16	Anode Row 8

Note "a" = High Efficiency Red LED  
"b" = Green LED

## SCHEMATIC:



## GRAPHICAL DETAIL: High Efficiency Red ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

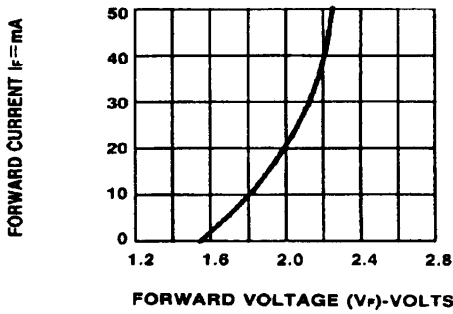


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

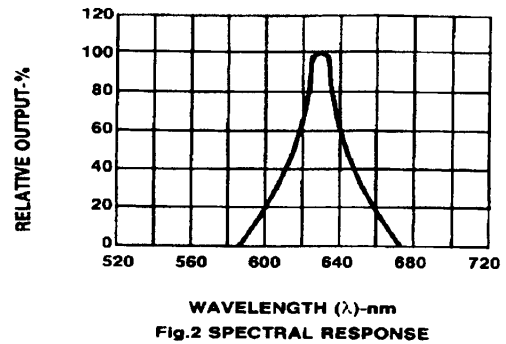


Fig.2 SPECTRAL RESPONSE

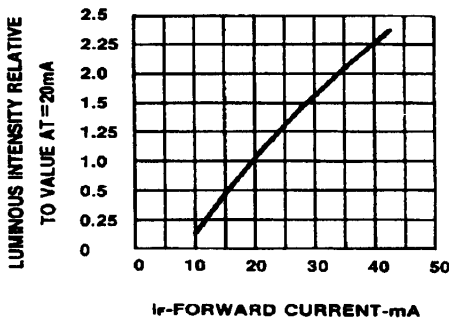


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

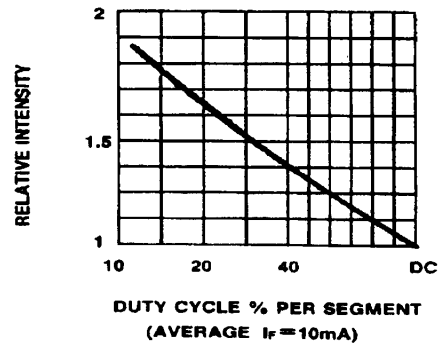


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

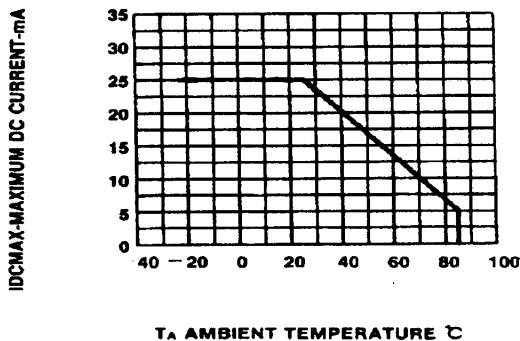


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE.

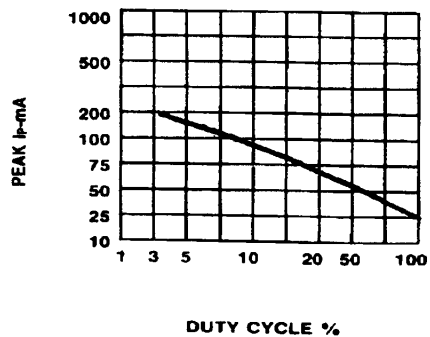


Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE  $f = 1\text{ kHz}$ )



# 2.3 INCH (58.4 mm) 4 X 8 DOT MATRIX STICK DISPLAY

## GRAPHICAL DETAIL: Green ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

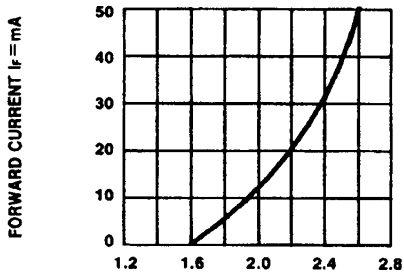


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

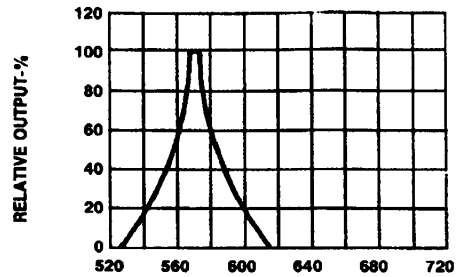


Fig.2 SPECTRAL RESPONSE

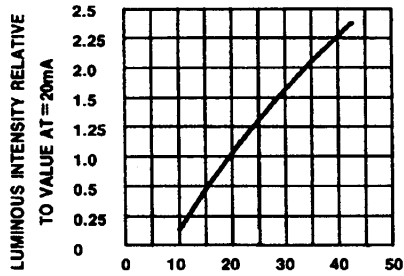


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

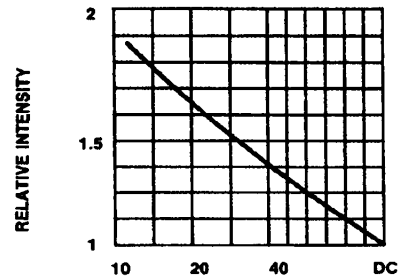


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

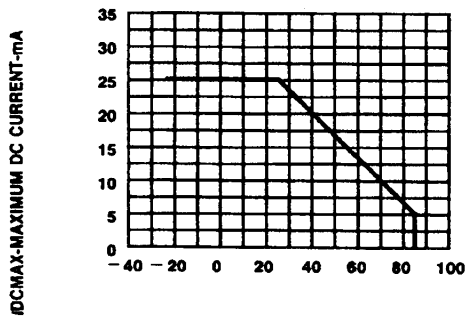


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT CS. A FUNCTION OF AMBIENT TEMPERATURE.

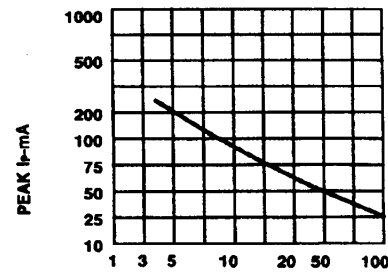


Fig. 6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE  $f = 1\text{ KHz}$ )