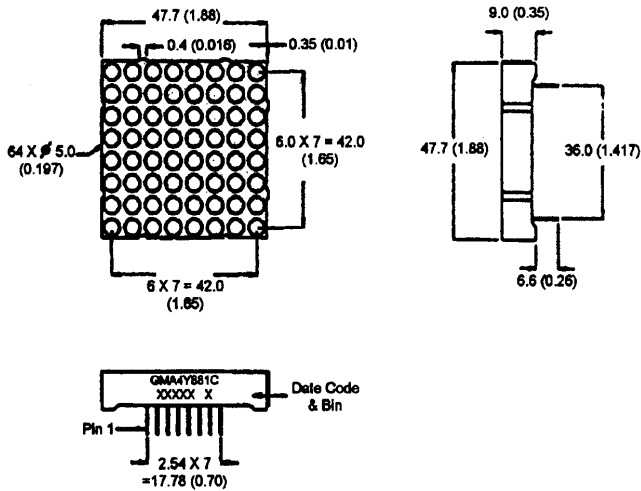


FAIRCHILD
SEMICONDUCTOR™

1.88 INCH (47.7)mm 8 X 8 DOT MATRIX STICK DISPLAY

Superbright Yellow GMA4Y881C

PACKAGE DIMENSIONS



DESCRIPTION

The GMA4Y881C is a 8 X 8 populated with super bright AlInGaP yellow LEDs. It has a grey face with neutral diffused segment color.

FEATURES

- 1.88" (47.7mm) character height.
- Low power requirement.
- Wide 130° viewing angle.
- High brightness and contrast
- 8 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>
GMA4Y881C	Superbright Yellow	Common anode row.
(For other color options, contact your local area Sales Office)		



**1.88 INCH (47.7)mm) 8 X 8
DOT MATRIX STICK DISPLAY**

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

	Superbright Yellow	Units
Peak forward current per segment (Duty cycle 1/10, 10KHz)	90	mA
Continuous IF per segment	25	mA
Power dissipation per segment	70*	mW
*Derate linearly from 25°C	0.33	mW/°C
Reverse voltage VR per segment	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)

	Superbright Yellow	Test Condition
Luminous Intensity/Dot Digit average (Typical)	5000ucd	$I_F = 20\text{mA}$
Forward voltage (V_F) typical	2.1V	$I_F = 20\text{mA}$
maximum	2.8V	$I_F = 20\text{mA}$
Peak wavelength (nm)	592nm	$I_F = 20\text{mA}$
Spectral line half width (nm)	17nm	$I_F = 20\text{mA}$
Reverse breakdown voltage V_R	5V	$I_R = 100\mu\text{A}$

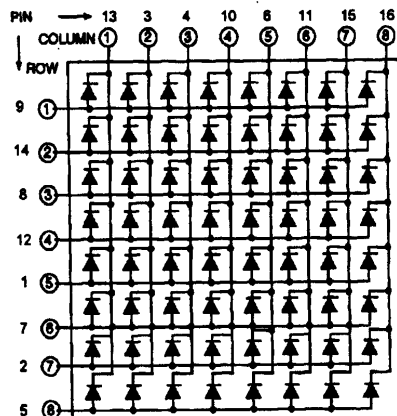
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**1.88 INCH (47.7)mm) 8 X 8
DOT MATRIX STICK DISPLAY**

PIN CONNECTION: GMA4Y881C

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

SCHEMATIC: GMA4Y881C



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**1.88 INCH (47.7)mm) 8 X 8
DOT MATRIX STICK DISPLAY**

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

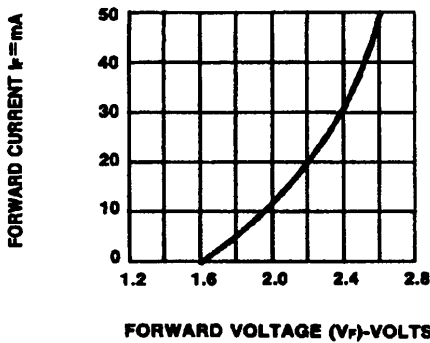


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

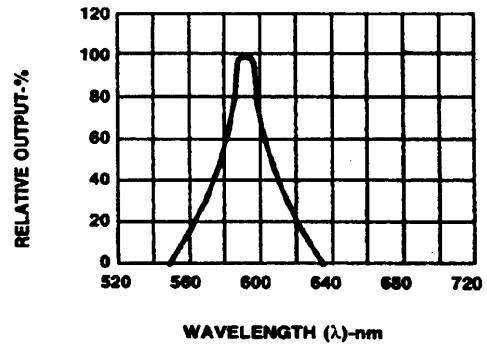


Fig.2 SPECTRAL RESPONSE

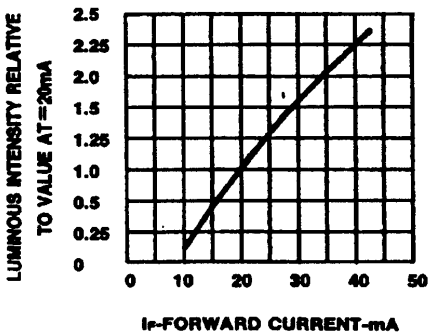


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

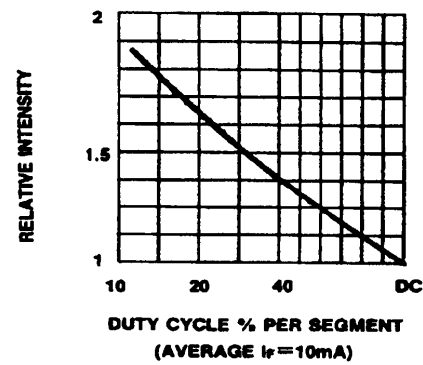


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

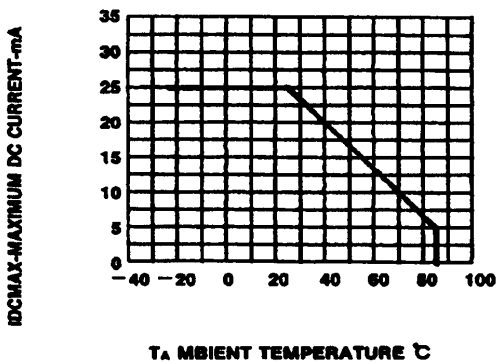


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE.

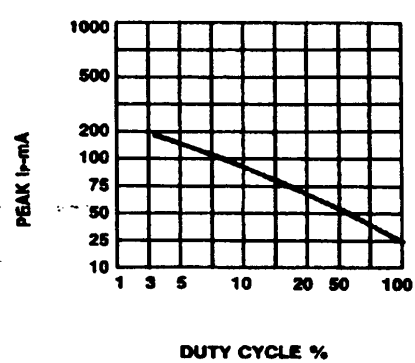


Fig.6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE $f = 1 \text{ KHz}$)



1.88 INCH (47.7 mm) 8 X 8 DOT MATRIX STICK DISPLAY

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2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.