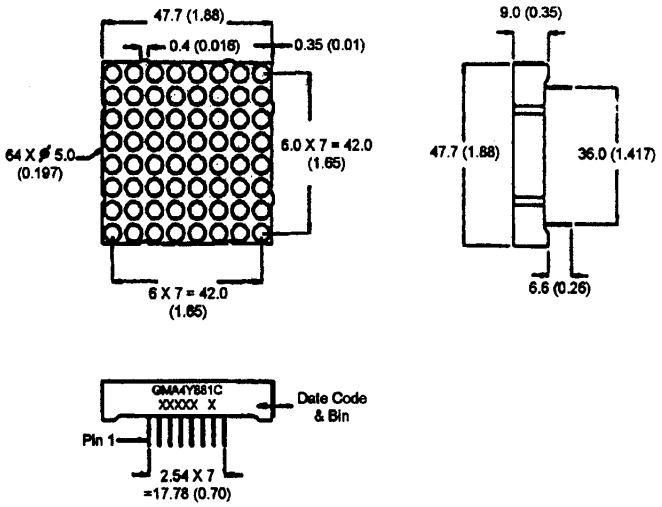
FAIRCHILD
SEMICONDUCTOR™

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

Superbright Yellow GMA4Y881C

PACKAGE DIMENSIONS



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

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.

MODEL NUMBER

Part Number	Colour	Description
GMA4Y881C	Superbright Yellow	Common anode row.

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

FAIRCHILD
SEMICONDUCTOR™

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

ABSOLUTE MAXIMUM RATING (T_A = 25°C unless otherwise specified)

	Superbright Yellow	Units
Peak forward current per segment (Duty cycle 1/10, 10KHz)	90	mA
Continous 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.....3 sec
(1/16" below seating plane)

ELECTRO - OPTICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

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

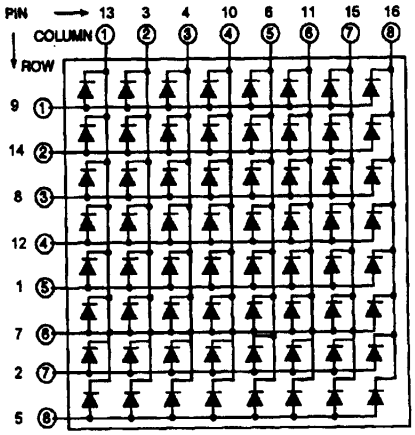
FAIRCHILD
SEMICONDUCTOR™

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		

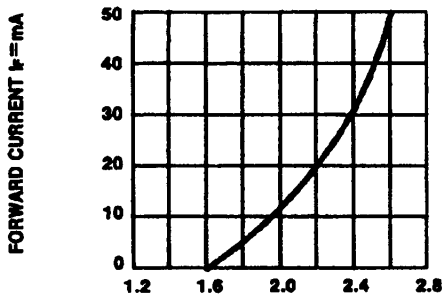
SCHEMATIC: GMA4Y881C



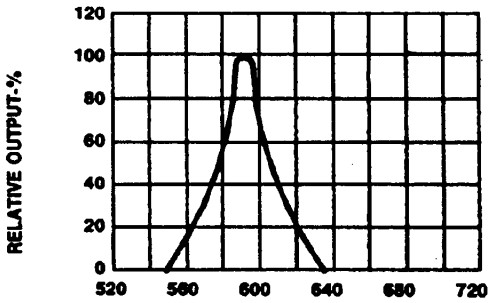
FAIRCHILD
SEMICONDUCTOR™

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

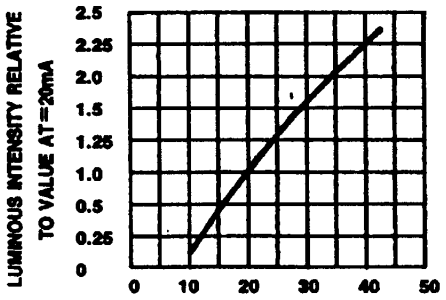
GRAPHICAL DETAIL: Superbright Yellow (T_A = 25°C unless otherwise specified)



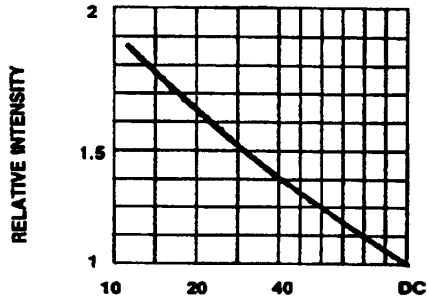
FORWARD VOLTAGE (V_F)-VOLTS
Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE.



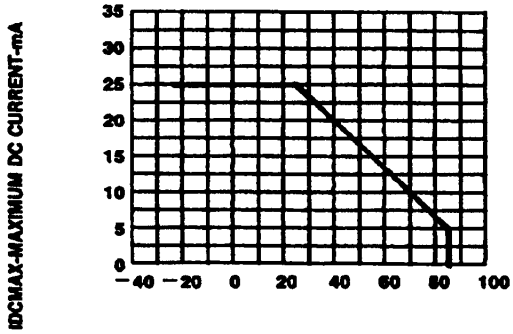
WAVELENGTH (λ)-nm
Fig.2 SPECTRAL RESPONSE



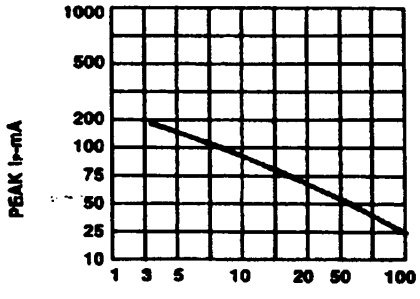
I_F-FORWARD CURRENT-mA
Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



DUTY CYCLE % PER SEGMENT (AVERAGE I_F=10mA)
Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE



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



DUTY CYCLE %
Fig. 6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE f=1 KHz)

FAIRCHILD
SEMICONDUCTOR™

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

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE PRESIDENT OF FAIRCHILD SEMICONDUCTOR CORPORATION. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.
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.