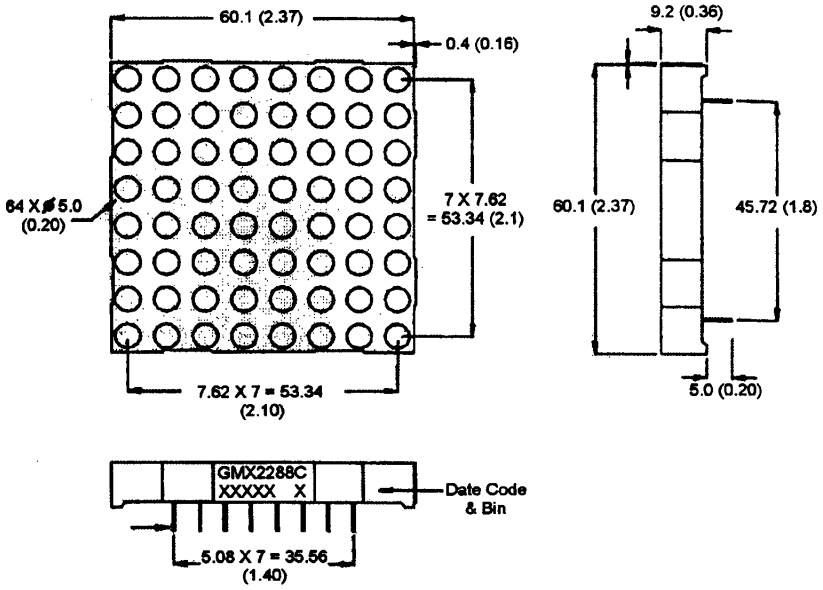
FAIRCHILD
SEMICONDUCTOR™

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

AlGaAs Red GMA2288C
AlGaAs Red GMC2288C

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 GMX2288C 8 X 8, Single Hetero Junction AlGaAs Red dot matrix display. It has a grey face with neutral segment color.

FEATURES

2.3" (58.4mm) 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
GMA2288C	AlGaAs Red	Common anode row.
GMC2288C	AlGaAs Red	Common Cathode row.

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

FAIRCHILD
SEMICONDUCTOR™

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

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

	AlGaAs Red	Units
Peak forward current per segment (Duty cycle 1/10, 10KHz)	200	mA
Continous IF per segment	30	mA
Power dissipation per segment	100*	mW
*Derate linearly from 25°C	0.5	mW/°C
Reverse voltage VR per segments	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)

	AlGaAs Red	Test Condition
Luminous Intensity/Dot Digit average (Typical)	5000ucd	I_F = 20mA
Forward voltage (V_F)		
typical	1.8V	I_F = 20 mA
maximum	2.5V	I_F = 20 mA
Peak wavelength (nm)	660nm	I_F = 20 mA
Spectral line half width (nm)	20nm	I_F = 20mA
Reverse breakdown voltage V_R	5V	I_R = 100uA

FAIRCHILD
SEMICONDUCTOR™

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

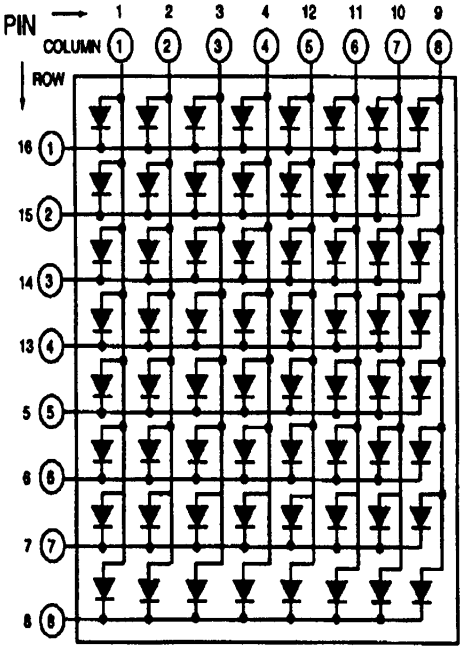
PIN CONNECTION:

GMA2288C		GMC2288C	
Pin Number	Function	Pin Number	Function
1	Cathode Column 1	1	Anode Column 1
2	Cathode Column 2	2	Anode Column 2
3	Cathode Column 3	3	Anode Column 3
4	Cathode Column 4	4	Anode Column 4
5	Anode Row 5	5	Cathode Row 5
6	Anode Row 6	6	Cathode Row 6
7	Anode Row 7	7	Cathode Row 7
8	Anode Row 8	8	Cathode Row 8
9	Cathode Column 8	9	Cathode Column 8
10	Cathode Column 7	10	Cathode Column 7
11	Cathode Column 6	11	Cathode Column 6
12	Cathode Column 5	12	Cathode Column 5
13	Anode Row 4	13	Anode Row 4
14	Anode Row 3	14	Anode Row 3
15	Anode Row 2	15	Anode Row 2
16	Anode Row 1	16	Anode Row 1

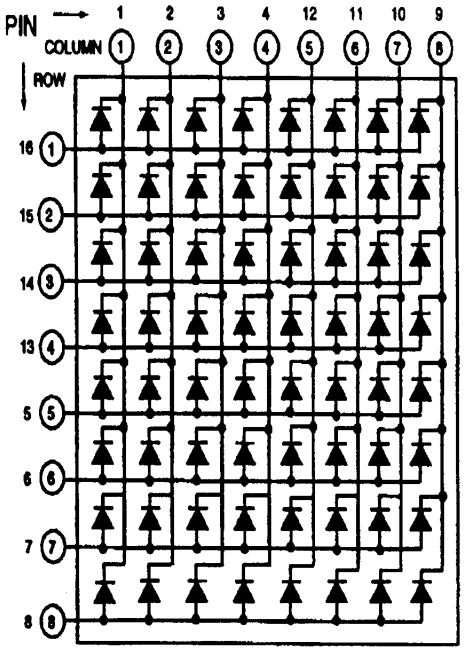
FAIRCHILD
SEMICONDUCTOR™

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

SCHEMATIC:



GMC2X88C

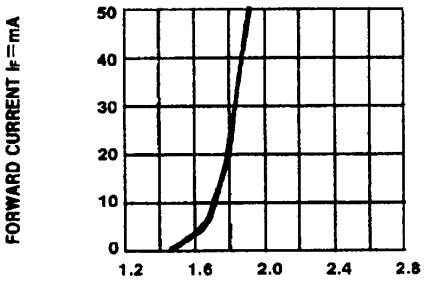


GMA2X88C

FAIRCHILD
SEMICONDUCTOR™

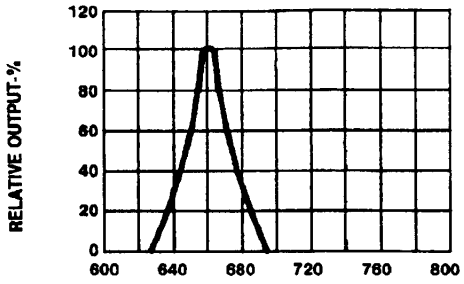
2.3 INCH (58.4 mm) 8 X 8 DOT MATRIX STICK DISPLAY

GRAPHICAL DETAIL: AlGaAs Red (T_A = 25°C unless otherwise specified)



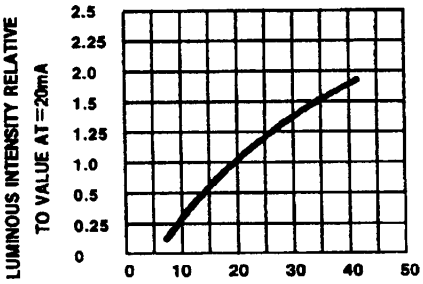
FORWARD VOLTAGE (V_F)-VOLTS

Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE.



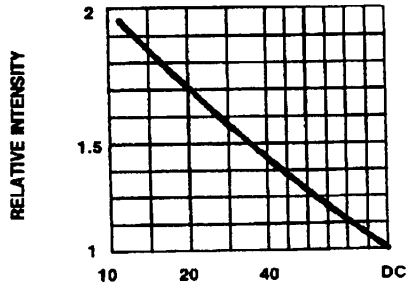
WAVELENGTH (λ)-nm

Fig.2 SPECTRAL RESPONSE



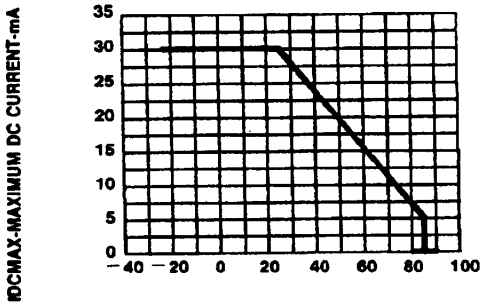
I_F-FORWARD CURRENT-mA

Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



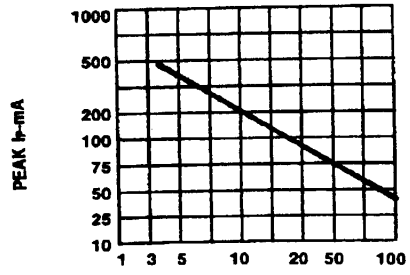
DUTY CYCLE % PER SEGMENT (AVERAGE I_F=10mA)

Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE



T_A AMBIENT TEMPERATURE °C

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™

2.3 INCH (58.4 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.