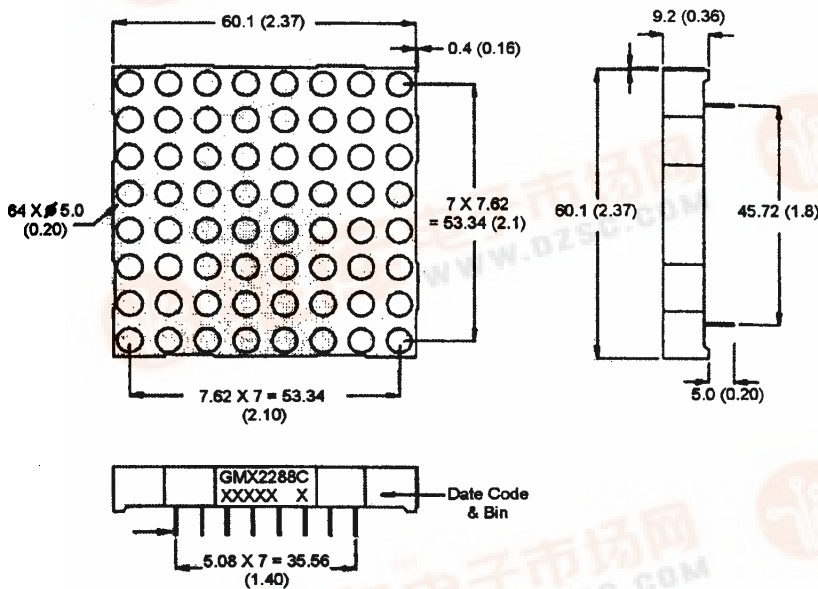


FAIRCHILD
SEMICONDUCTOR™

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

AlGaAs Red GMA2288C
AlGaAs Red GMC2288C

PACKAGE DIMENSIONS



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.

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

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)



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

	AlGaAs Red	Units
Peak forward current per segment (Duty cycle 1/10, 10KHz)	200	mA
Continuous 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..... (1/16" below seating plane)	3 sec	

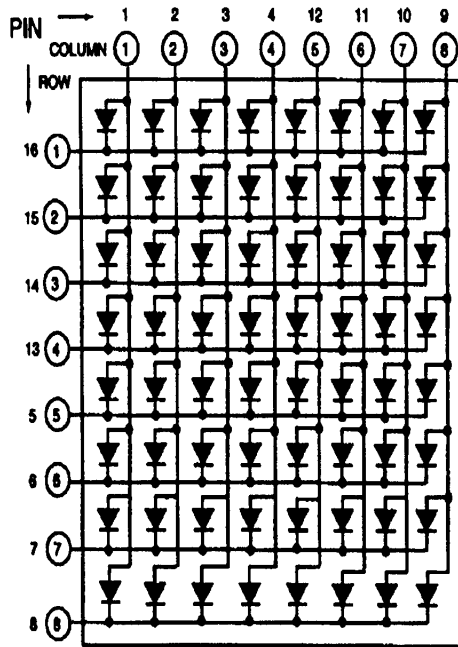
ELECTRO - OPTICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

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

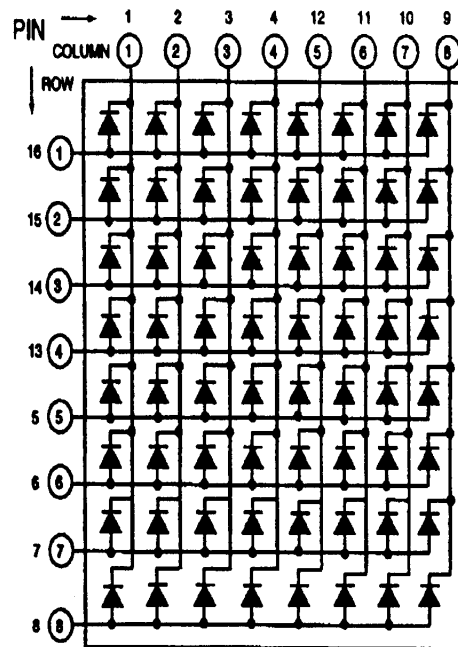
PIN CONNECTION:

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

SCHEMATIC:



GMC2X88C



GMA2X88C

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

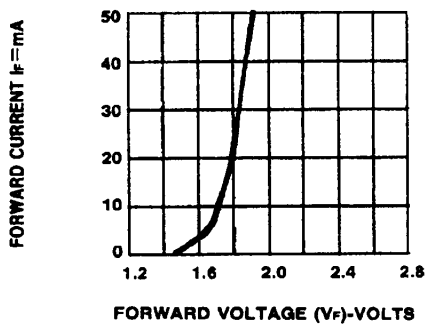


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

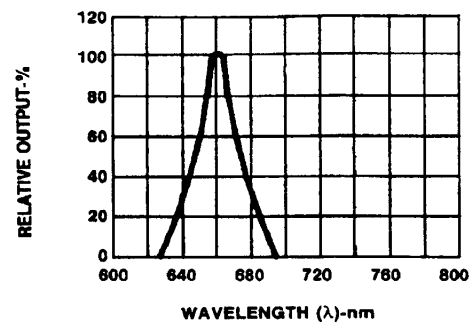


Fig.2 SPECTRAL RESPONSE

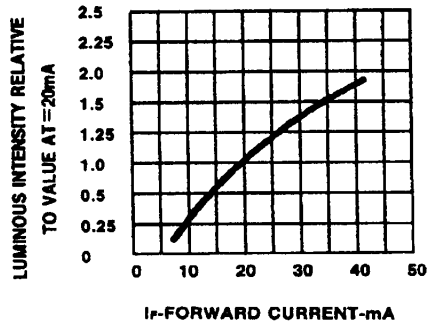


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

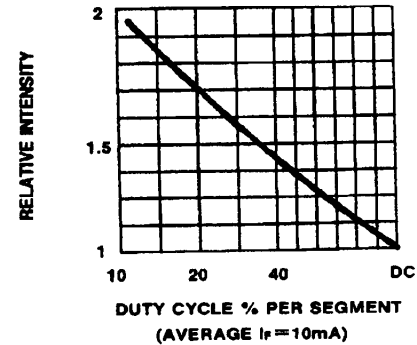


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

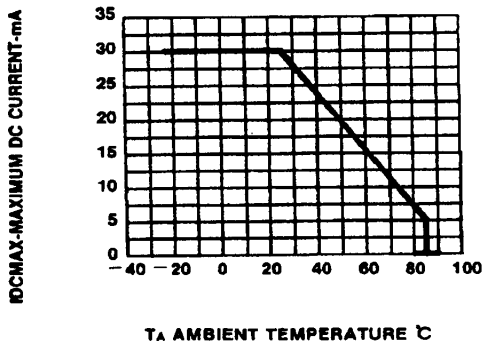


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE.

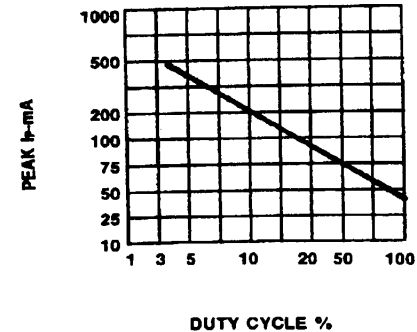


Fig. 6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE $f=1\text{ KHz}$)

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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.