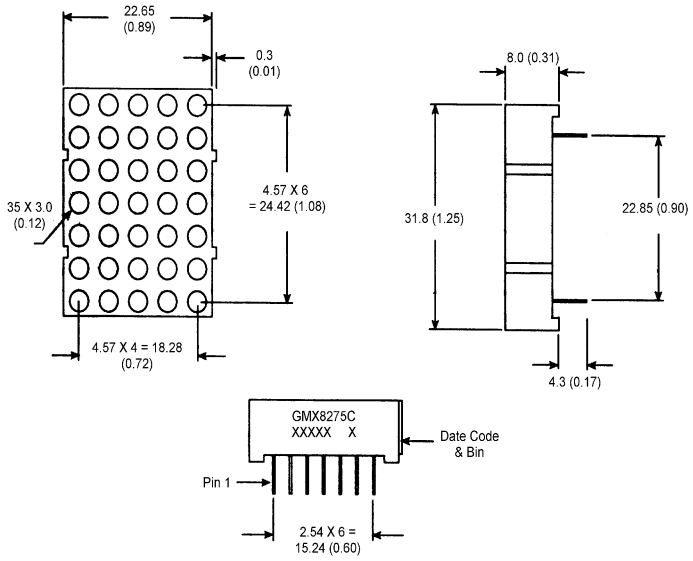
FAIRCHILD
SEMICONDUCTOR™

1.2 INCH (30.5mm) 5 X 7 DOT MATRIX STICK DISPLAY

Superbright Red GMA8275C
Superbright Red GMC8275C

PACKAGE DIMENSIONS



DESCRIPTION

The GMX8275C is a 5 X 7, Superbright red dot matrix display. Populated with GaAlAs/GaAs Single Hetero Junction LEDs, it has a grey face with white segment color.

FEATURES

1.2" (30.5mm) character height.
Low power requirement.
Wide 130 degree viewing angle.
High brightness and contrast
5 X 7 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 NUMBERS

Part Number	Colour	Description
GMA8275C	AlGaAs Red	Common anode row.
GMC8275C	AlGaAs Red	Common cathode row.

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

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

	Superbright 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 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 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

PIN CONNECTION:

GMA8275C

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

GMC8275C

Pin Number	Function	Pin Number	Function
1	Cathode Row 5	8	Cathode Row 3
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6	Anode Column 5	13	Anode Column 1
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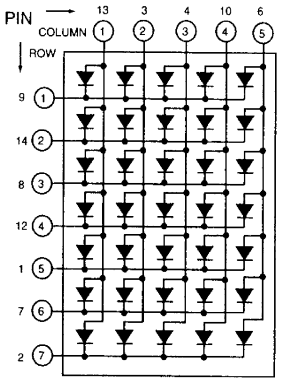
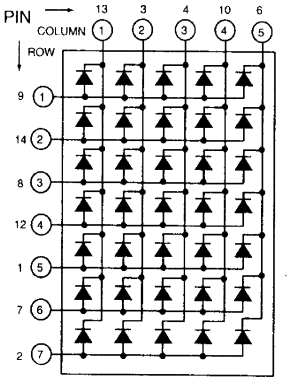
SCHEMATIC:

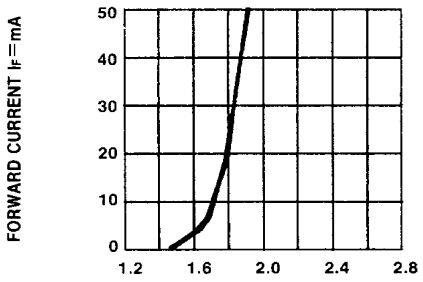


GMC8X75C

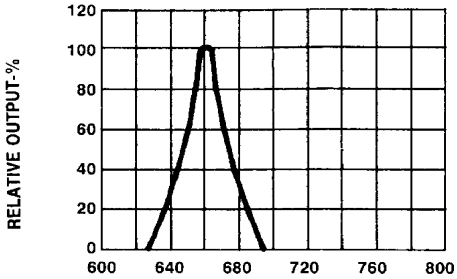


GMA8X75C

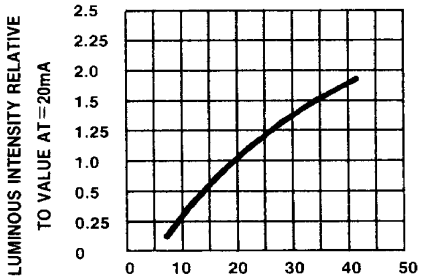
GRAPHICAL DETAIL: AlGaAs Red (T_A = 25°C unless otherwise specified)



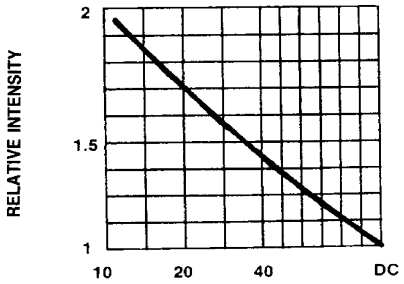
FORWARD VOLTAGE (V_F)-VOLTS
Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE.



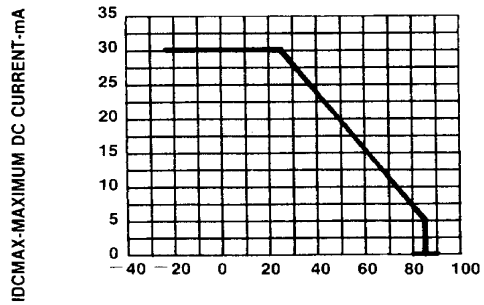
WAVELENGTH (λ)-nm
Fig.2 SPECTRAL RESPONSE



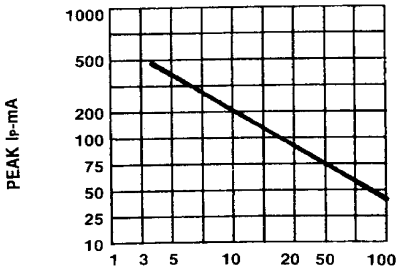
I_F-FORWARD CURRENT-mA
Fig.3 RELATIVE LUMINOUS INTENSITY
VS. FORWARD CURRENT



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)

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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.