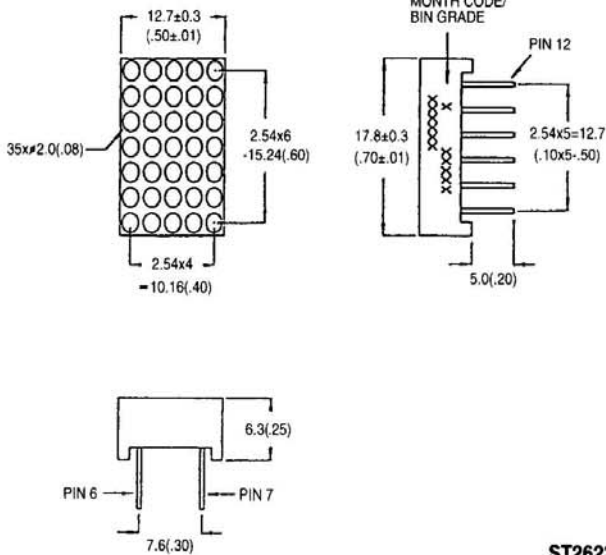




**0.7" 5x7
DOT MATRIX DISPLAYS**

**HER GMA 7175CA GMC 7175CA
YELLOW GMA 7475CA GMC 7475CA
GREEN GMA 7975CA GMC 7975CA**

PACKAGE DIMENSIONS



DESCRIPTION

The GMX7X75CA series are 0.7" (17.2mm) matrix height 5 X 7 dot matrix displays. All these parts are available in grey face and white dot color.

The X in GMX denotes row anode or row cathode.

FEATURES

- 0.7" (17.8mm) matrix height
- Choice of 3 colors — green, yellow and HER
- Low power consumption
- 5 X 7 array with X-Y select
- Stackable vertically and horizontally
- Choice of 2 matrix orientation cathode column or anode column
- Easy mounting on PCB or sockets
- Categorized for luminous intensity

ST2623

- NOTES:
1. ALL PINS ARE $\phi 0.5$ (.02).
 2. DIMENSION IN MILLIMETERS (INCH), TOLERANCE IS 0.25 (.01) UNLESS OTHERWISE NOTED.

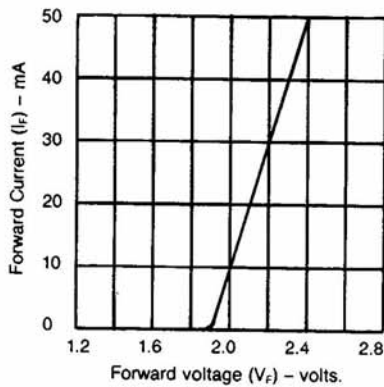
ABSOLUTE MAXIMUM RATING ($T_A = 25^\circ\text{C}$ unless otherwise specified)

	YELLOW	HER	GREEN	UNITS
Power dissipation per dot	60	70	75	mW
Peak forward current per dot	80	100	100	mA
(Duty cycle 1/10, 10KHz)				
Continuous I_f per dot	20	25	25	mA
Reverse voltage per dot	5	5	5	V
Operating and operating temperature range				-25°C to $+85^\circ\text{C}$
Soldering time at 260°C (1/16 inch below seating plane)				3 sec

ELECTRICAL/OPTICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ Unless otherwise specified) GMX7175CA (HER)

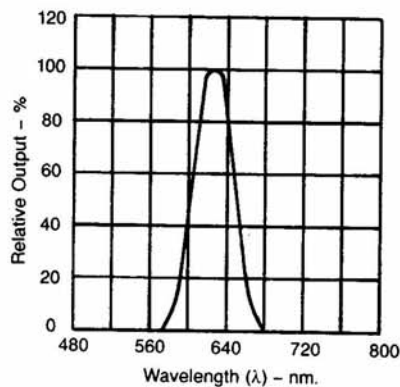
PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Average luminous intensity		3000		μcd	$I_f=20\text{ mA}$
Peak emission wavelength		635		nm	$I_f=20\text{ mA}$
Spectral line half-width		40		nm	$I_f=20\text{ mA}$
Forward voltage, any dot		2.1	2.8	V	$I_f=20\text{ mA}$
Reverse voltage, any dot			100	μA	$V_R=5\text{V}$

TYPICAL ELECTRICAL/OPTICAL CHARACTERISTIC CURVES ($T_A=25^\circ\text{C}$ Unless otherwise specified)



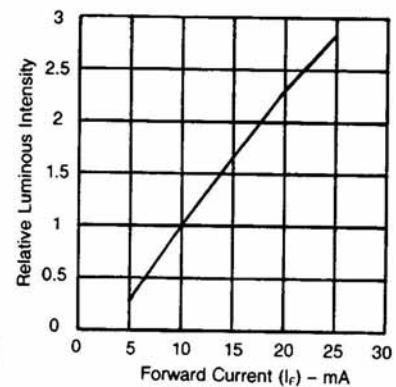
C3031

Fig. 1. Forward Current vs. Forward Voltage



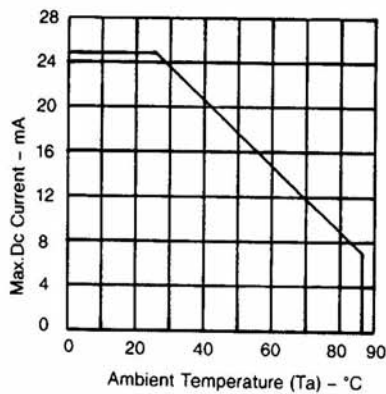
C3032

Fig. 2. Spectral Response



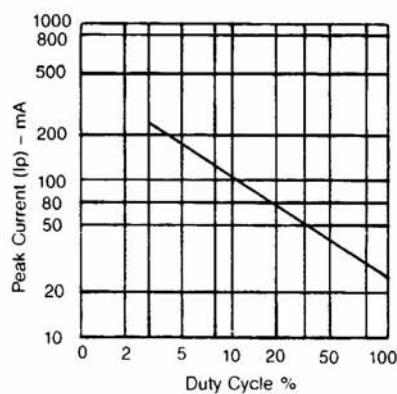
C3033

Fig. 3. Relative Luminous Intensity vs. Forward Current (Per Segment)



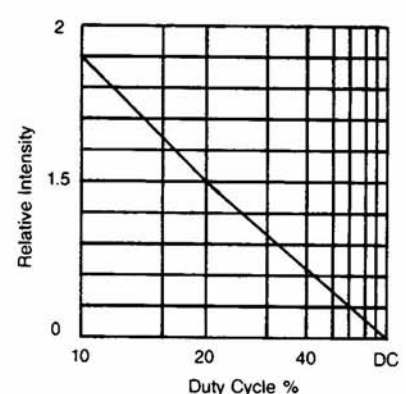
C3034

Fig. 4. Max. Forward Allowable DC Current Per Seg. vs. Ambient Temperature



C3035

Fig. 5. Max. Peak Current vs. Duty Cycle % (Refresh Rate - $F=1\text{ KHz}$)



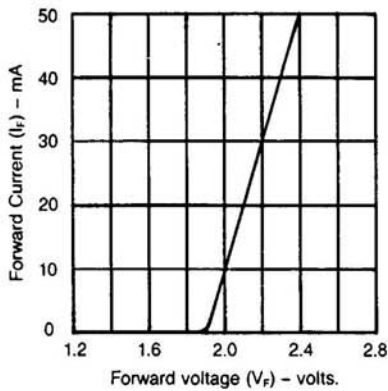
C3036

Fig. 6. Luminous Intensity vs. Duty Cycle % (Average $I=10\text{ mA Per Seg.}$)

ELECTRICAL/OPTICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ Unless otherwise specified) GMX 7475CA (YELLOW)

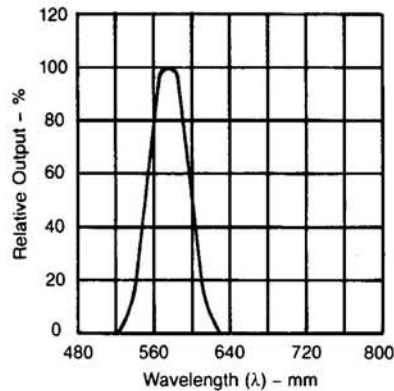
PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Average luminous intensity		3000		μcd	$I_F=20\text{ mA}$
Peak emission wavelength		585		nm	$I_F=20\text{ mA}$
Spectral line half-width		35		nm	$I_F=20\text{ mA}$
Forward voltage, any dot		2.1	2.8	V	$I_F=20\text{ mA}$
Reverse voltage, any dot			100	μA	$V_R=5\text{V}$

TYPICAL ELECTRICAL/OPTICAL CHARACTERISTIC CURVES ($T_A=25^{\circ}\text{C}$ Unless Otherwise Noted)



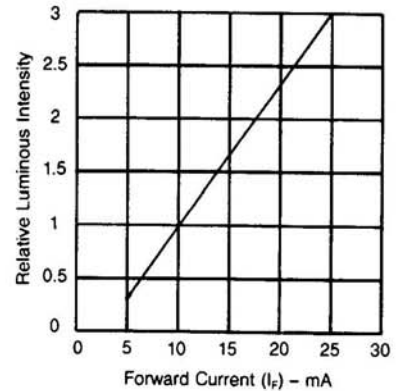
C3037

Fig. 1. Forward Current vs. Forward Voltage



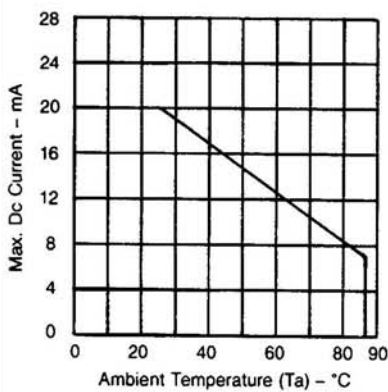
C3038

Fig. 2. Spectral Response



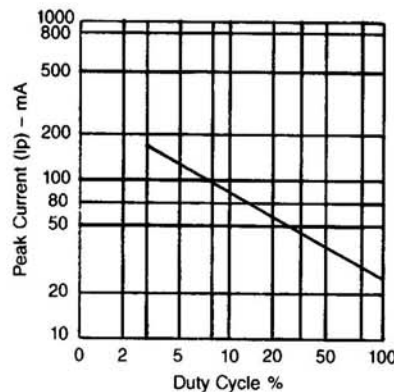
C3039

Fig. 3. Relative Luminous Intensity vs. Forward Current (Per Segment)



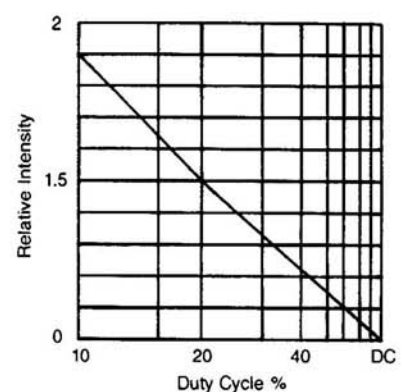
C3040

Fig. 4. Max. Forward Allowable DC Current Per Seg. vs. Ambient Temperature



C3041

Fig. 5. Max. Peak Current vs. Duty Circle % (Refresh Rate - F=1 KHz)



C3042

Fig. 6. Luminous Intensity vs. Duty Cycle % (Average $I=10\text{ mA}$ Per Seg.)

ELECTRICAL/OPTICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ Unless otherwise specified) GMX 7975CA (GREEN)

PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
Average luminous intensity		3000		μcd	$I_f=20\text{ mA}$
Peak emission wavelength		565		nm	$I_f=20\text{ mA}$
Spectral line half-width		30		nm	$I_f=20\text{ mA}$
Forward voltage, any dot		2.1	2.8	V	$I_f=20\text{ mA}$
Reverse voltage, any dot			100	μA	$V_R=5\text{V}$

TYPICAL ELECTRICAL/OPTICAL CHARACTERISTIC CURVES ($T_A=25^{\circ}\text{C}$ Unless otherwise specified)

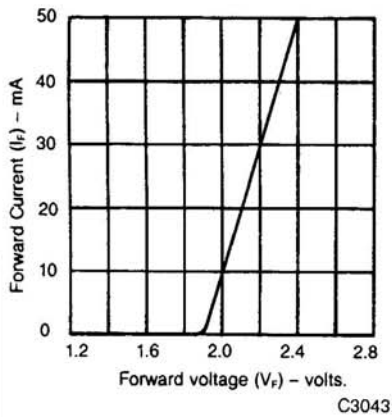


Fig. 1. Forward Current vs. Forward Voltage

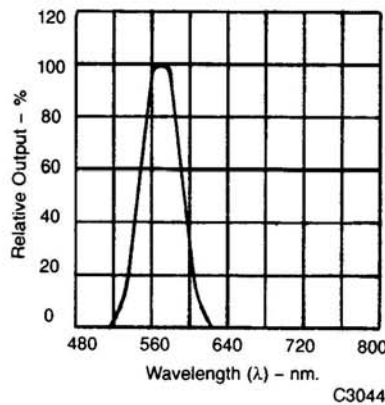


Fig. 2. Spectral Response

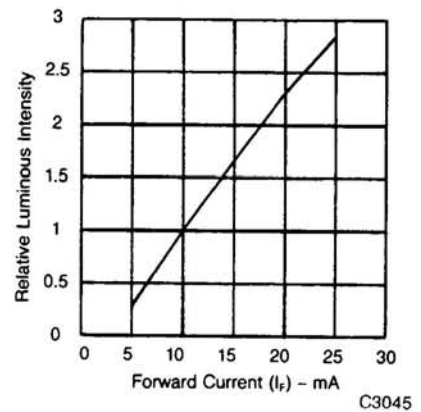


Fig. 3. Relative Luminous Intensity vs. Forward Current (Per Segment)

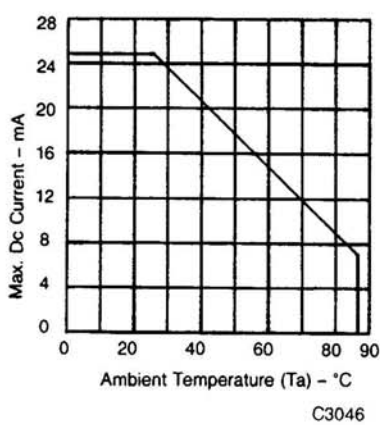


Fig. 4. Max. Forward Allowable DC Current Per Seg. vs. Ambient Temperature

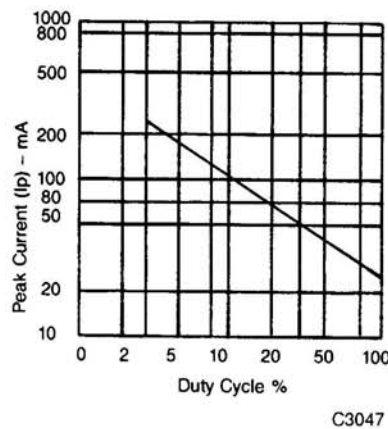


Fig. 5. Max. Peak Current vs. Duty Cycle % (Refresh Rate - $F=1\text{ KHz}$)

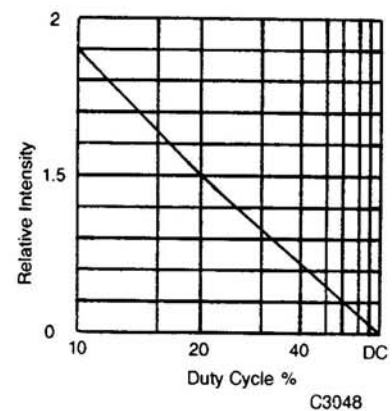
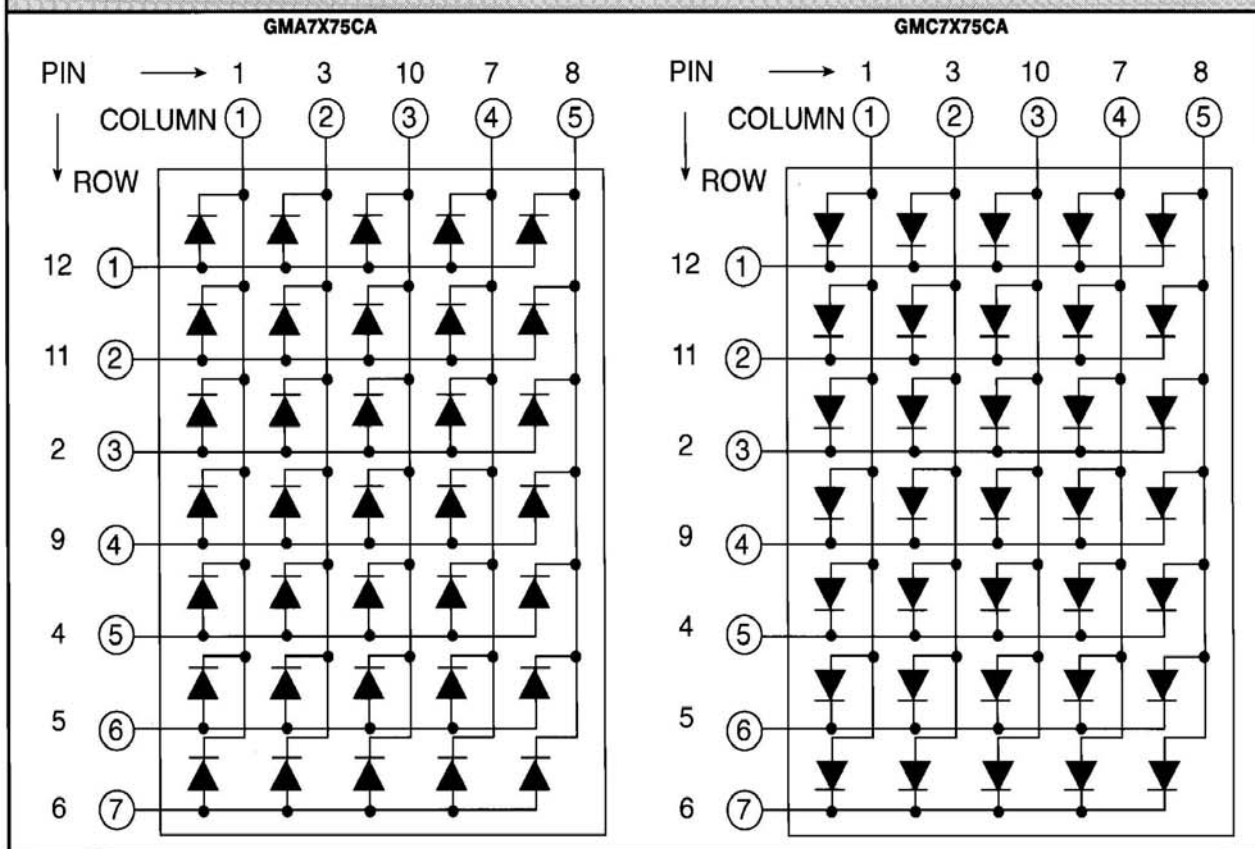


Fig. 6. Luminous Intensity vs. Duty Cycle % (Average $I_f=10\text{ mA}$ Per Seg.)

PIN CONNECTION

PIN NO.	GMA7X75CA	GMC7X75CA
1	Cathode column 1	Anode column 1
2	Anode row 3	Cathode row 3
3	Cathode column 2	Anode column 2
4	Anode row 5	Cathode row 5
5	Anode row 6	Cathode row 6
6	Anode row 7	Cathode row 7
7	Cathode column 4	Anode column 4
8	Cathode column 5	Anode column 5
9	Anode row 4	Cathode row 4
10	Cathode column 3	Anode column 3
11	Anode row 2	Cathode row 2
12	Anode row 1	Cathode row 1

INTERNAL CIRCUIT DIAGRAM





0.7" 5 X 7
DOT MATRIX 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 or (b) reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.