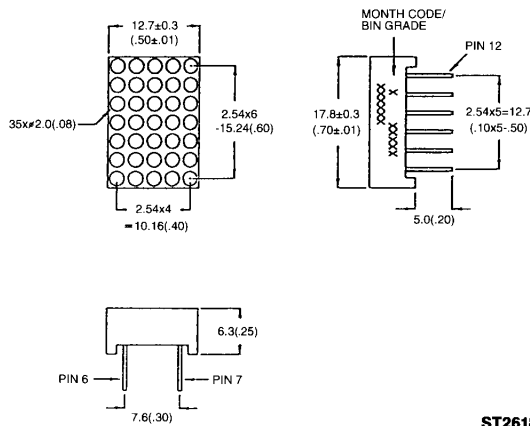


**HER GMA 7175C GMC 7175C
YELLOW GMA 7475C GMC 7475C
GREEN GMA 7975C GMC 7975C**

PACKAGE DIMENSIONS



ST2618

- NOTES:
1. ALL PINS ARE 00.5 (.02).
2. DIMENSION IN MILLIMETERS (INCH), TOLERANCE IS 0.25 (.01) UNLESS OTHERWISE NOTED.

DESCRIPTION

The GMX7X75C 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.

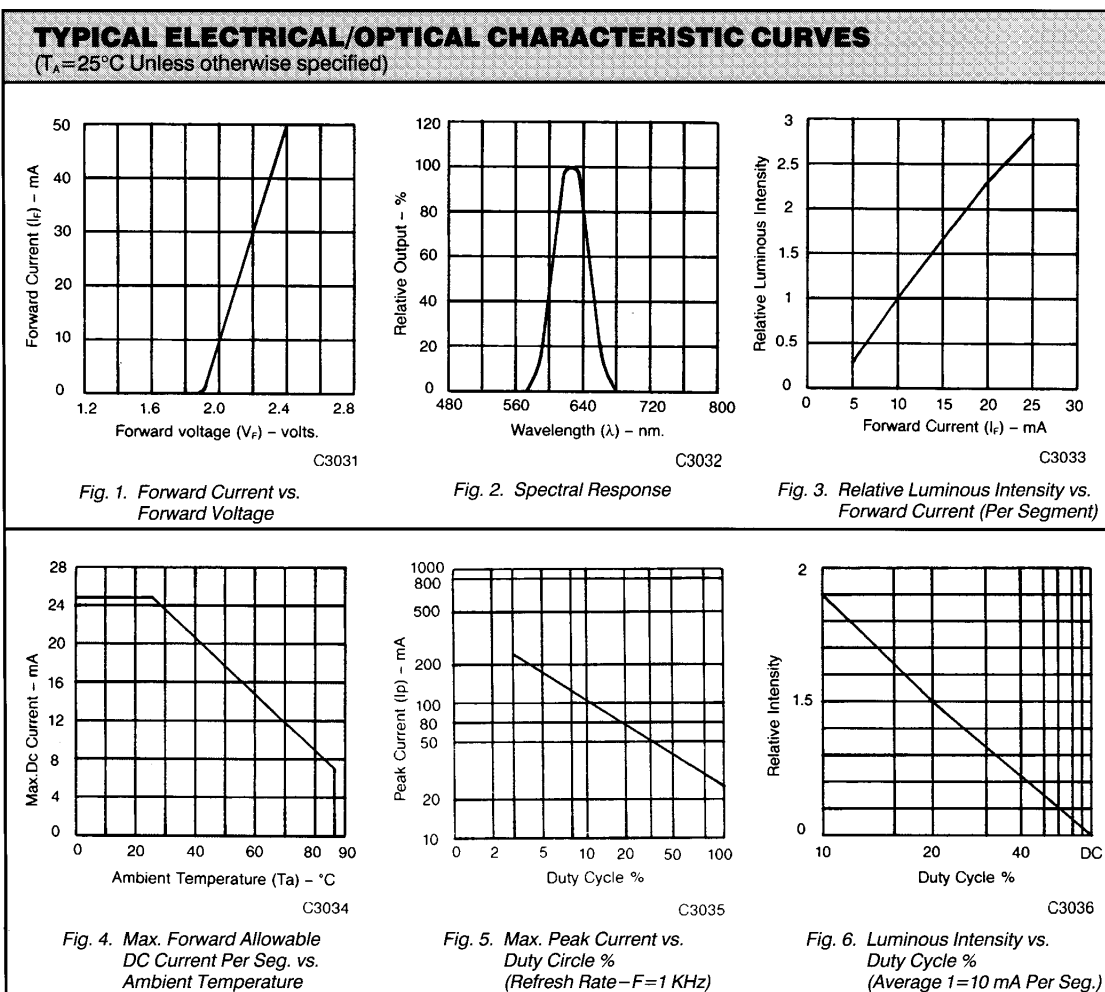
FEATURES

- 0.7" (17.8mm) matrix height
- Choice of 3 colors — green, yellow and HER
- Low power consumption
- 5x7 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

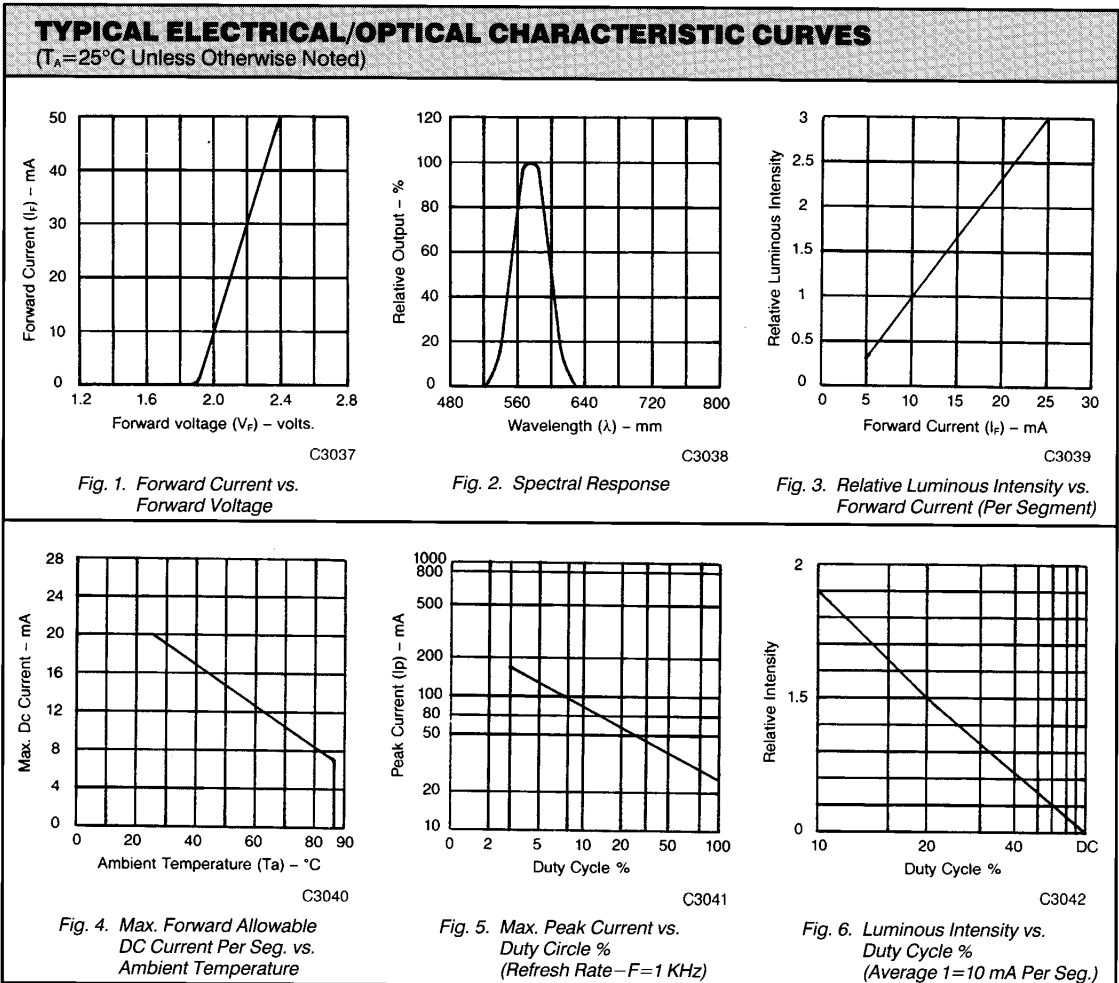
ABSOLUTE MAXIMUM RATING (T_A=25°C unless otherwise specified)

| | 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°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) GMX 7175C (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 | $V_R=5\text{V}$ |



| ELECTRICAL/OPTICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ Unless otherwise specified) GMX 7475C (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 | $V_R=5\text{V}$ |



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

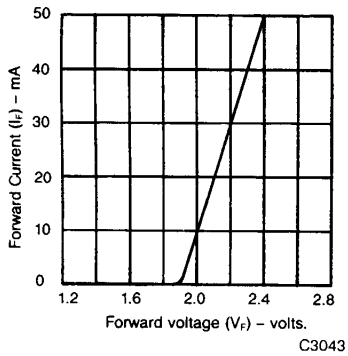


Fig. 1. Forward Current vs. Forward Voltage

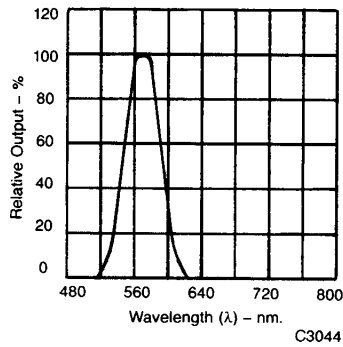


Fig. 2. Spectral Response

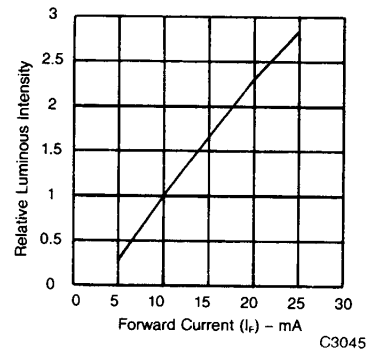


Fig. 3. Relative Luminous Intensity vs. Forward Current (Per Segment)

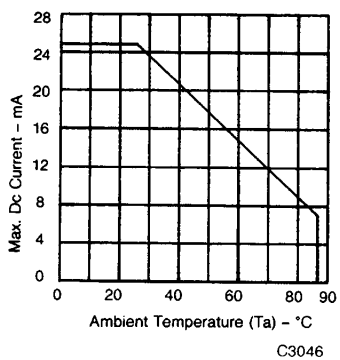


Fig. 4. Max. Forward Allowable DC Current Per Seg. vs. Ambient Temperature

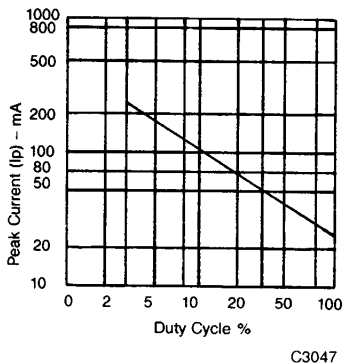


Fig. 5. Max. Peak Current vs. Duty Cycle % (Refresh Rate - $F=1\text{ KHz}$)

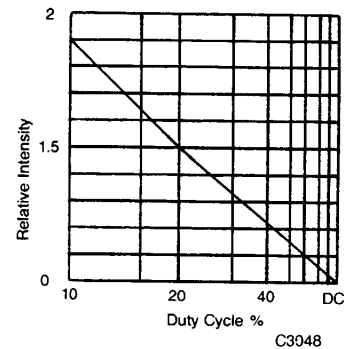
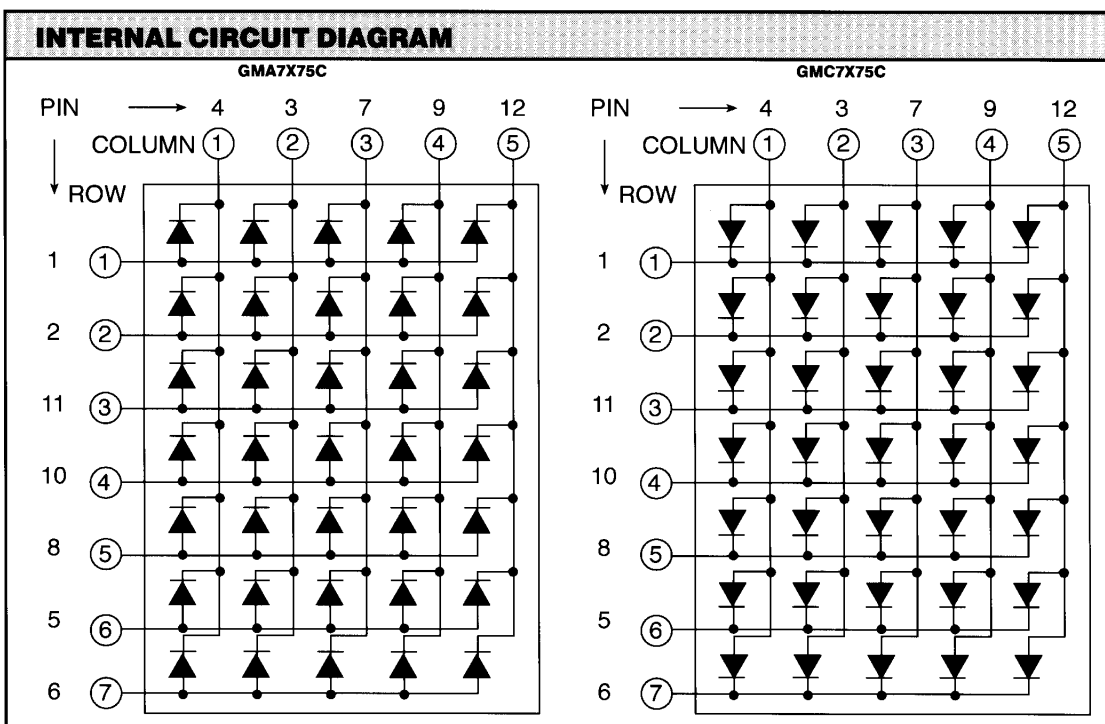


Fig. 6. Luminous Intensity vs. Duty Cycle % (Average $I=10\text{ mA Per Seg.}$)

| PIN CONNECTION | | |
|----------------|------------------|----------------|
| PIN NO. | GMA7X75C | GMC7X75C |
| 1 | Anode row 1 | Cathode row 1 |
| 2 | Anode row 2 | Cathode row 2 |
| 3 | Cathode column 2 | Anode column 2 |
| 4 | Cathode column 1 | Anode column 1 |
| 5 | Anode row 6 | Cathode row 6 |
| 6 | Anode row 7 | Cathode row 7 |
| 7 | Cathode column 3 | Anode column 3 |
| 8 | Anode row 5 | Cathode row 5 |
| 9 | Cathode column 4 | Anode column 4 |
| 10 | Anode row 4 | Cathode row 4 |
| 11 | Cathode row 3 | Anode row 3 |
| 12 | Cathode row 5 | Anode row 5 |





0.7" 5 x 7
DOT MATRIX DISPLAYS

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