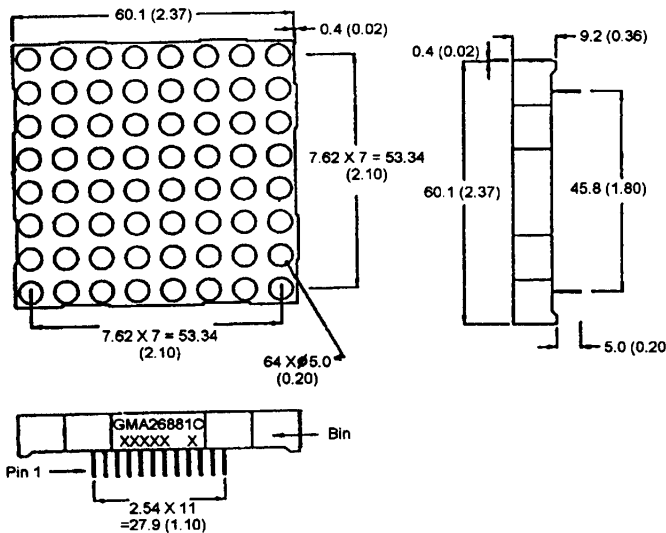


**HER Red / Green GMA26881C  
(BI-COLOR)**

**PACKAGE DIMENSIONS**



**DESCRIPTION**

The GMA26881C a common cathode column 8 X 8, bicolor High Efficiency Red / Green 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**

| <u>Part Number</u>  | <u>Colour</u> | <u>Description</u> |
|---|---------------|--------------------|
| GMA26881C   | HER Red/Green | Common anode row.  |
| (For other color options, contact your local area Sales Office) |               |                    |

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

|  | HER            | Green | Units |
|--|----------------|-------|-------|
| Peak forward current per segment<br>(Duty cycle 1/10, 10KHz) | 90             | 90    | mA    |
| Continuous IF per segment                                    | 25             | 25    | mA    |
| Power dissipation per segment                                | 70*            | 70*   | mW    |
| *Derate linearly from 25°C                                   | 0.33           | 0.33  | mW/°C |
| Reverse voltage VR per segment                               | 5              | 5     | Volts |
| Operating and storage temperature range.....                 | -25°C to +85°C |       |       |
| Soldering time at 260°C.....<br>(1/16" below seating plane)  | 3 sec          |       |       |

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

|   | HER     | Green   | Test Condition       |
|---|---------|---------|----------------------|
| Luminous Intensity/Dot<br>Digit average (Typical) | 3000ucd | 3000ucd | $I_F = 20\text{mA}$  |
| Forward voltage ( $V_F$ )<br>typical              | 2.0V    | 2.1V    | $I_F = 20\text{ mA}$ |
| maximum   | 2.8V    | 2.8V    | $I_F = 20\text{ mA}$ |
| Peak wavelength (nm)                              | 635nm   | 570nm   | $I_F = 20\text{ mA}$ |
| Spectral line half width (nm)                     | 45nm    | 30nm    | $I_F = 20\text{mA}$  |
| Reverse breakdown voltage $V_R$                   | 5V      | 5V      | $I_R = 100\text{uA}$ |

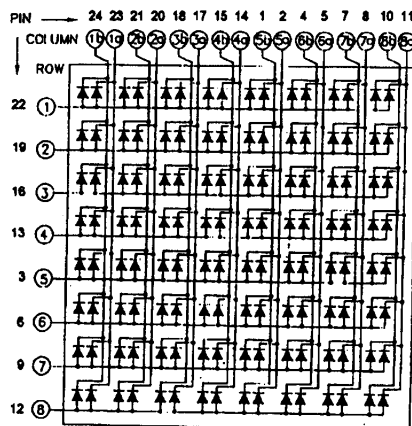
**PIN CONNECTION:**

**GMA26881C**

| Pin Number | Function          | Pin Number | Function          |
|------------|-------------------|------------|-------------------|
| 1          | Cathode Column 5b | 13         | Anode Row 4       |
| 2          | Cathode Column 5a | 14         | Cathode Column 4a |
| 3          | Anode Row 5       | 15         | Cathode Column 4b |
| 4          | Cathode Column 6b | 16         | Anode Row 3       |
| 5          | Cathode Column 6a | 17         | Cathode Column 3a |
| 6          | Anode Row 6       | 18         | Cathode Column 3b |
| 7          | Cathode Column 7b | 19         | Anode Row 2       |
| 8          | Cathode Column 7a | 20         | Cathode Column 2a |
| 9          | Anode Row 7       | 21         | Cathode Column 2b |
| 10         | Cathode Column 8b | 22         | Anode Row 1       |
| 11         | Cathode Column 8a | 23         | Cathode Column 1a |
| 12         | Anode Row 8       | 24         | Cathode Column 1b |

Note "a" = High Efficiency Red LED  
"b" = Green LED

**SCHEMATIC:**



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

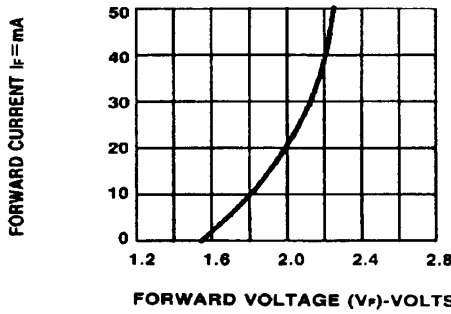


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

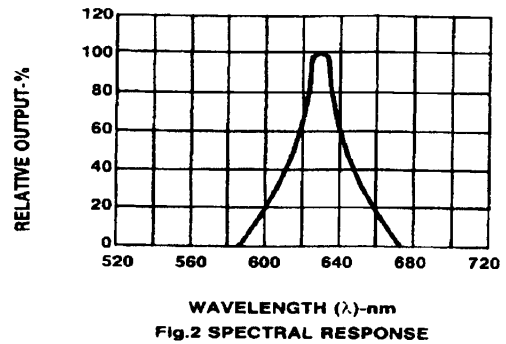


Fig.2 SPECTRAL RESPONSE

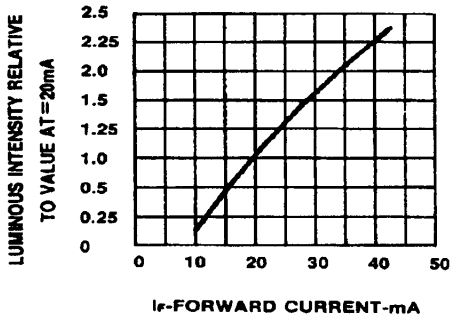


Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

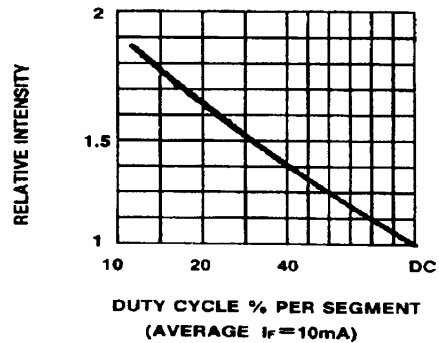


Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE

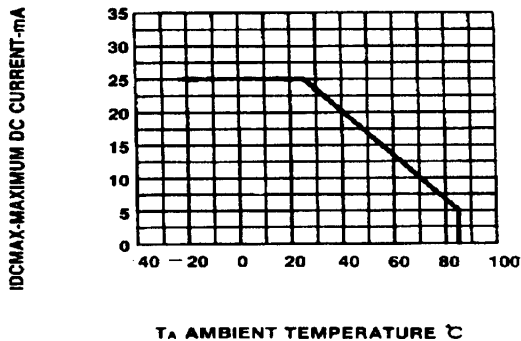


Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT VS. A FUNCTION OF AMBIENT TEMPERATURE.

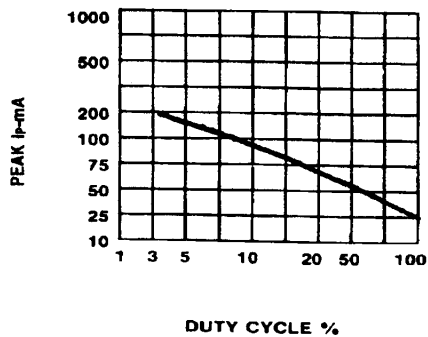
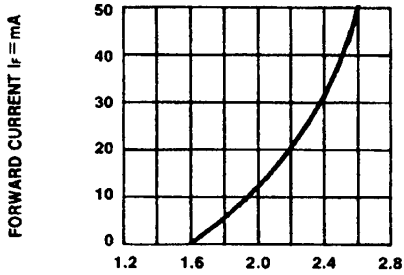
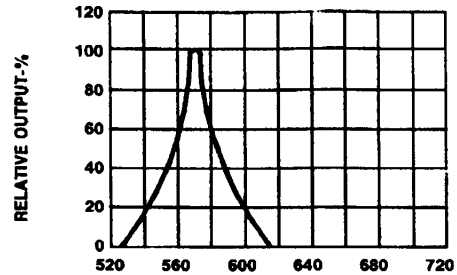


Fig. 6 MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE  $f=1\text{ KHz}$ )

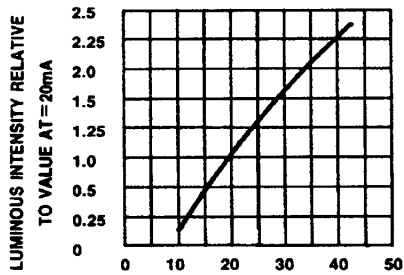
**GRAPHICAL DETAIL: Green** ( $T_A = 25^\circ\text{C}$  unless otherwise specified)



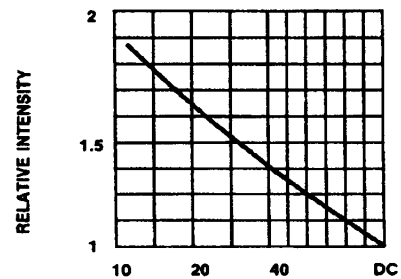
**Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE.**



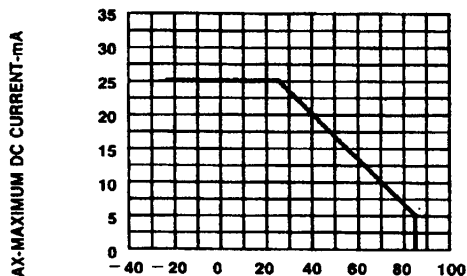
**Fig.2 SPECTRAL RESPONSE**



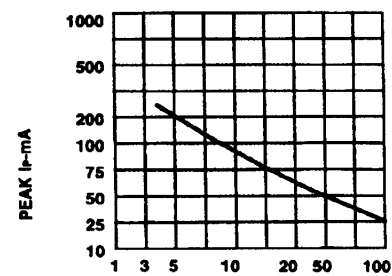
**Fig.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT**



**Fig.5 LUMINOUS INTENSITY VS. DUTY CYCLE**



**Fig.4 MAXIMUM ALLOWABLE DC CURRENT PER SEGMENT CS. 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.