

**FEATURES**

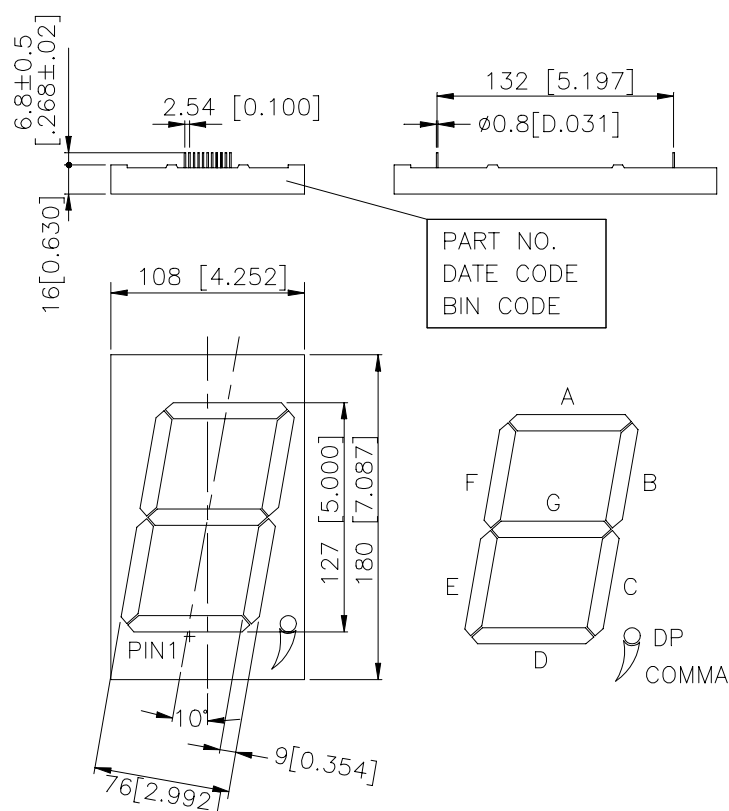
- \* 5 INCH (127.0 mm) DIGIT HEIGHT.
- \* CONTINUOUS UNIFORM SEGMENTS.
- \* LOW POWER REQUIREMENT.
- \* EXCELLENT CHARACTERS APPEARANCE.
- \* HIGH BRIGHTNESS & HIGH CONTRAST.
- \* WIDE VIEWING ANGLE.
- \* SOLID STATE RELIABILITY.
- \* CATEGORIZED FOR LUMINOUS INTENSITY.

**DESCRIPTION**

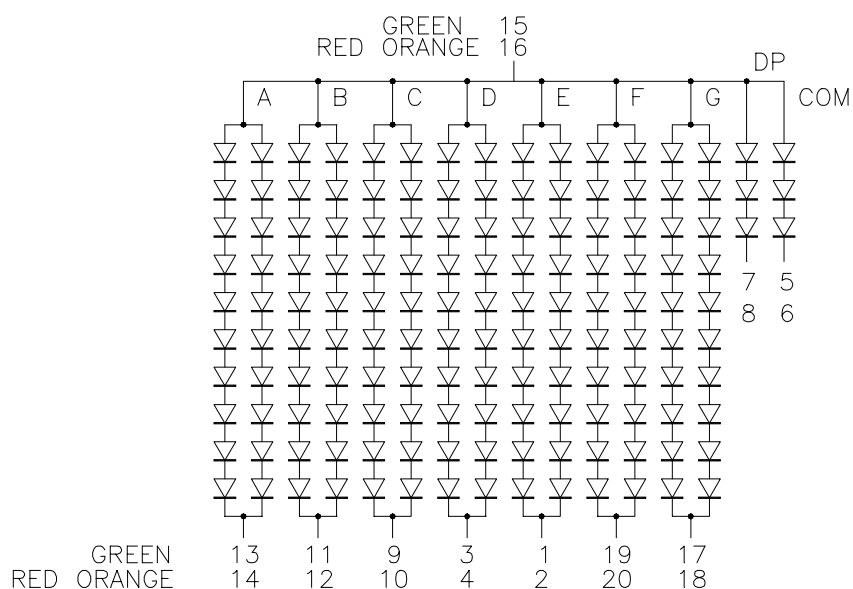
The LTS-50802A is a 5-inch (127.0-mm) digit height single digit seven-segment display. This device are multi-color display, and has a black face and white segments.

**DEVICE**

| PART NO.    | DESCRIPTION  |
|-------------|--------------|
| MULTI-COLOR | Common Anode |
| LTS-50802A  |              |

**PACKAGE DIMENSIONS**


NOTES: All dimensions are in millimeters. Tolerance is  $\pm 0.25$ -mm (0.01") unless otherwise noted.

**INTERNAL CIRCUIT DIAGRAM**


**PIN CONNECTION**

| No. | CONNECTION               | No. | CONNECTION              |
|-----|--------------------------|-----|-------------------------|
| 1   | CATHODE E GREEN          | 11  | CATHODE B GREEN         |
| 2   | CATHODE E RED ORANGE     | 12  | CATHODE B RED ORANGE    |
| 3   | CATHODE D GREEN          | 13  | CATHODE A GREEN         |
| 4   | CATHODE D RED ORANGE     | 14  | CATHODE A RED ORANGE    |
| 5   | CATHODE COMMA GREEN      | 15  | ANODE COMMON GREEN      |
| 6   | CATHODE COMMA RED ORANGE | 16  | ANODE COMMON RED ORANGE |
| 7   | CATHODE DP. GREEN        | 17  | CATHODE G GREEN         |
| 8   | CATHODE DP. RED ORANGE   | 18  | CATHODE G RED ORANGE    |
| 9   | CATHODE C GREEN          | 19  | CATHODE F GREEN         |
| 10  | CATHODE C RED ORANGE     | 20  | CATHODE F RED ORANGE    |

**ABSOLUTE MAXIMUM RATING AT Ta=25°C**

| PARAMETER                                                                            | GREEN                                    | ORED RANGE | UNIT               |
|--------------------------------------------------------------------------------------|------------------------------------------|------------|--------------------|
| Power Dissipation Per Segment                                                        | 900                                      | 900        | mW                 |
| Peak Forward Current Per Segment<br>( 1/10 Duty Cycle, 0.1ms Pulse Width )           | 160                                      | 160        | mA                 |
| Continuous Forward Current Per Segment                                               | 40                                       | 40         | mA                 |
| Derating Linear From 25 <sup>0</sup> C Per Segment                                   | 0.48                                     | 0.48       | mA/ <sup>0</sup> C |
| Reverse Voltage Per Segment                                                          | 50                                       | 50         | V                  |
| Operating Temperature Range                                                          | -35 <sup>0</sup> C to +85 <sup>0</sup> C |            |                    |
| Storage Temperature Range                                                            | -35 <sup>0</sup> C to +85 <sup>0</sup> C |            |                    |
| Solder Temperature 1/16 inch Below Seating Plane for 3 Seconds at 260 <sup>0</sup> C |                                          |            |                    |

**ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C****GREEN**

| PARAMETER                         | SYMBOL            | MIN. | TYP.        | MAX.        | UNIT | TEST CONDITION       |
|-----------------------------------|-------------------|------|-------------|-------------|------|----------------------|
| Average Luminous Intensity        | I <sub>V</sub>    | 13   | 40          |             | mcd  | I <sub>F</sub> =20mA |
| Peak Emission Wavelength          | λ <sub>p</sub>    |      | 565         |             | nm   | I <sub>F</sub> =20mA |
| Spectral Line Half-Width          | Δλ                |      | 30          |             | nm   | I <sub>F</sub> =20mA |
| Dominant Wavelength               | λ <sub>d</sub>    |      | 569         |             | nm   | I <sub>F</sub> =20mA |
| Forward Voltage Per Segment       | V <sub>F</sub>    |      | 21<br>(6.3) | 26<br>(7.8) | V    | I <sub>F</sub> =40mA |
| Reverse Current Per Segment       | I <sub>R</sub>    |      |             | 200         | μA   | V <sub>R</sub> =50V  |
| Luminous Intensity Matching Ratio | I <sub>V</sub> -m |      |             | 2:1         |      | I <sub>F</sub> =10mA |

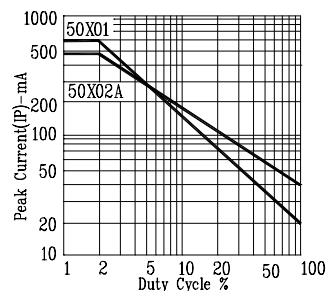
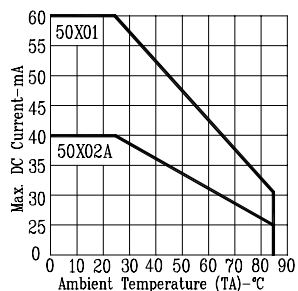
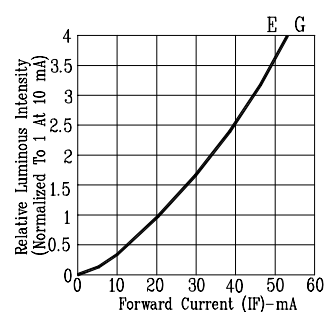
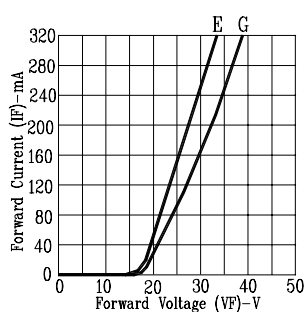
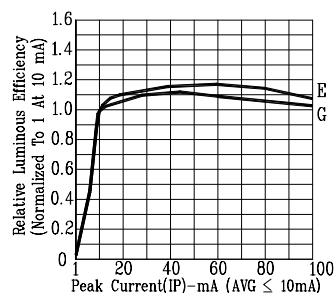
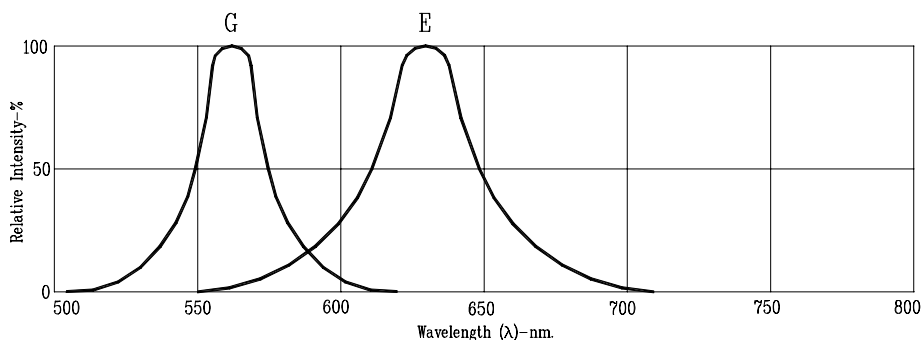
**RED ORANGE**

| PARAMETER                         | SYMBOL            | MIN. | TYP.        | MAX.        | UNIT | TEST CONDITION       |
|-----------------------------------|-------------------|------|-------------|-------------|------|----------------------|
| Average Luminous Intensity        | I <sub>V</sub>    | 13   | 40          |             | mcd  | I <sub>F</sub> =20mA |
| Peak Emission Wavelength          | λ <sub>p</sub>    |      | 630         |             | nm   | I <sub>F</sub> =20mA |
| Spectral Line Half-Width          | Δλ                |      | 40          |             | nm   | I <sub>F</sub> =20mA |
| Dominant Wavelength               | λ <sub>d</sub>    |      | 621         |             | nm   | I <sub>F</sub> =20mA |
| Forward Voltage Per Segment       | V <sub>F</sub>    |      | 20<br>(6.0) | 26<br>(7.8) | V    | I <sub>F</sub> =40mA |
| Reverse Current Per Segment       | I <sub>R</sub>    |      |             | 200         | μA   | V <sub>R</sub> =50V  |
| Luminous Intensity Matching Ratio | I <sub>V</sub> -m |      |             | 2:1         |      | I <sub>F</sub> =10mA |

Note: Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (commision internationale DE L'clariage) eye-response curve.

## TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)



NOTE: G=GREEN E=RED ORANGE