

**FEATURES**

- \* 0.3 inch (7.62 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

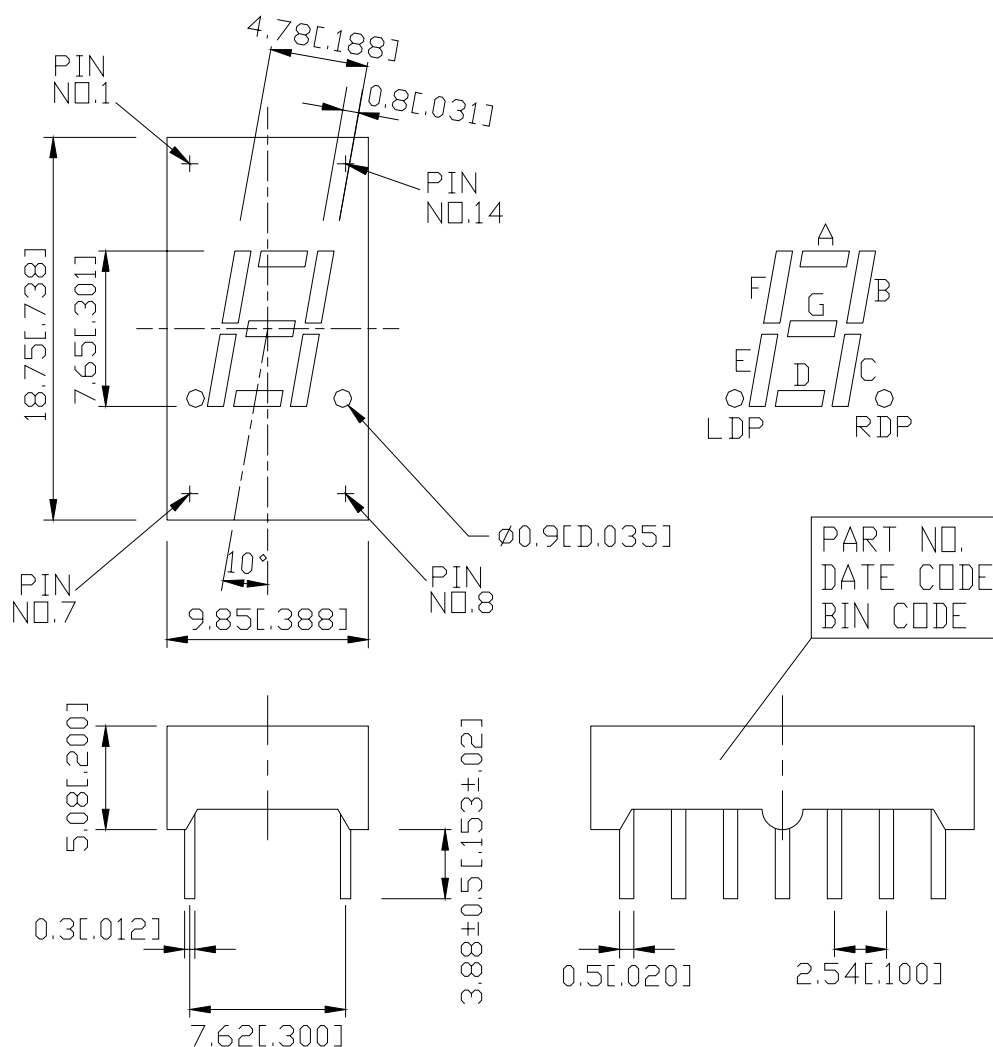
**DESCRIPTION**

The LTS-312AP is a 0.3 inch (7.62 mm) digit height single digit seven-segment display. This device uses BRIGHT RED LED chips (GaP epi on GaP substrate). The display has a black face and red segments.

**DEVICE**

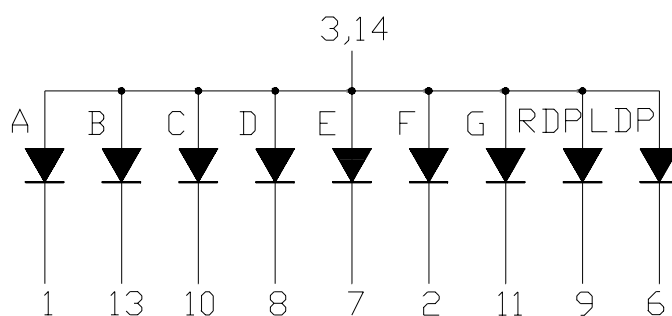
| PART NO.   | DESCRIPTION                            |
|------------|----------------------------------------|
| Bright Red | Common Anode<br>Rt. & Lt. Hand Decimal |
| LTS-312AP  |                                        |

## PACKAGE DIMENSIONS



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

## INTERNAL CIRCUIT DIAGRAM



**PIN CONNECTION**

| <b>No.</b> | <b>CONNECTION</b> |
|------------|-------------------|
| 1          | CATHODE A         |
| 2          | CATHODE F         |
| 3          | COMMON ANODE      |
| 4          | NO PIN            |
| 5          | NO PIN            |
| 6          | CATHODE LDP       |
| 7          | CATHODE E         |
| 8          | CATHODE D         |
| 9          | CATHODE RDP       |
| 10         | CATHODE C         |
| 11         | CATHODE G         |
| 12         | NO PIN            |
| 13         | CATHODE B         |
| 14         | COMMON ANODE      |

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

| PARAMETER                                                                | MAXIMUM RATING | UNIT  |
|--------------------------------------------------------------------------|----------------|-------|
| Power Dissipation Per Segment                                            | 40             | mW    |
| Peak Forward Current Per Segment<br>( Frequency 1Khz, 10% duty cycle)    | 60*            | mA    |
| Continuous Forward Current Per Segment                                   | 15             | mA    |
| Derating Linear From 25°C Per Segment                                    | 0.2            | mA/°C |
| Reverse Voltage Per Segment                                              | 5              | V     |
| Operating Temperature Range                                              | -35°C to +85°C |       |
| Storage Temperature Range                                                | -35°C to +85°C |       |
| Solder Temperature: max 260°C for max 3sec at 1.6mm below seating plane. |                |       |

\* see figure 5 to establish pulsed condition

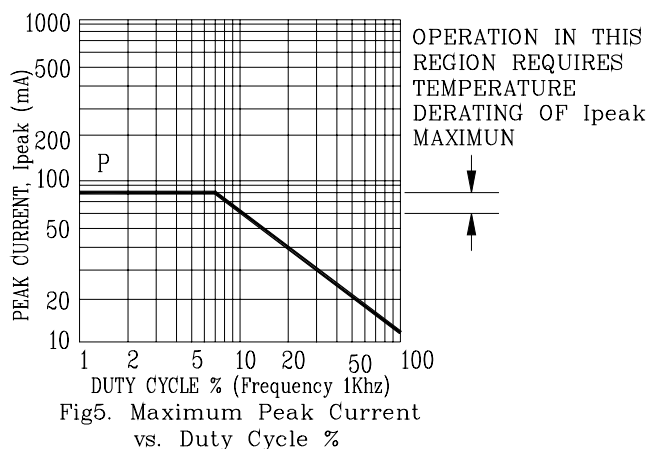
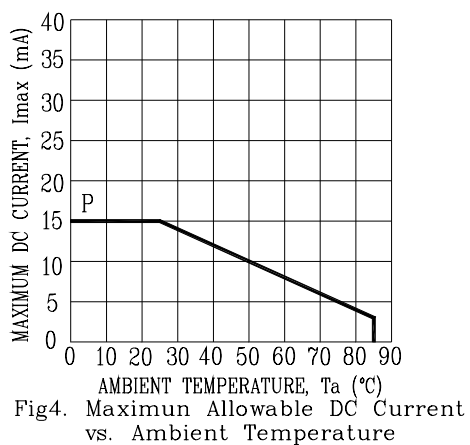
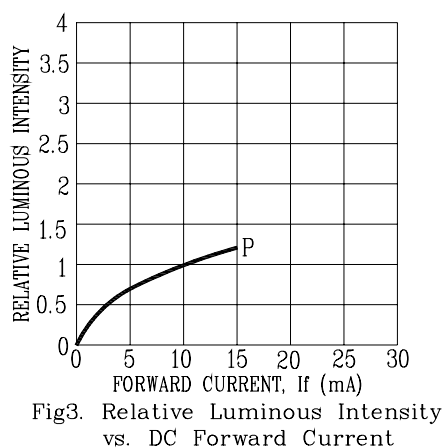
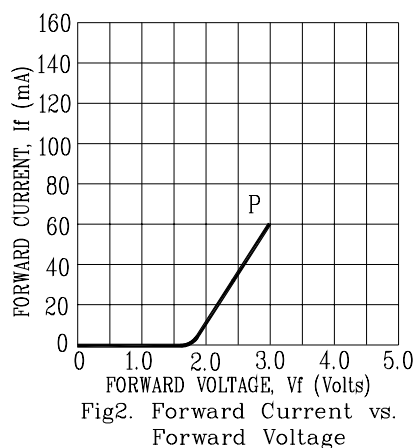
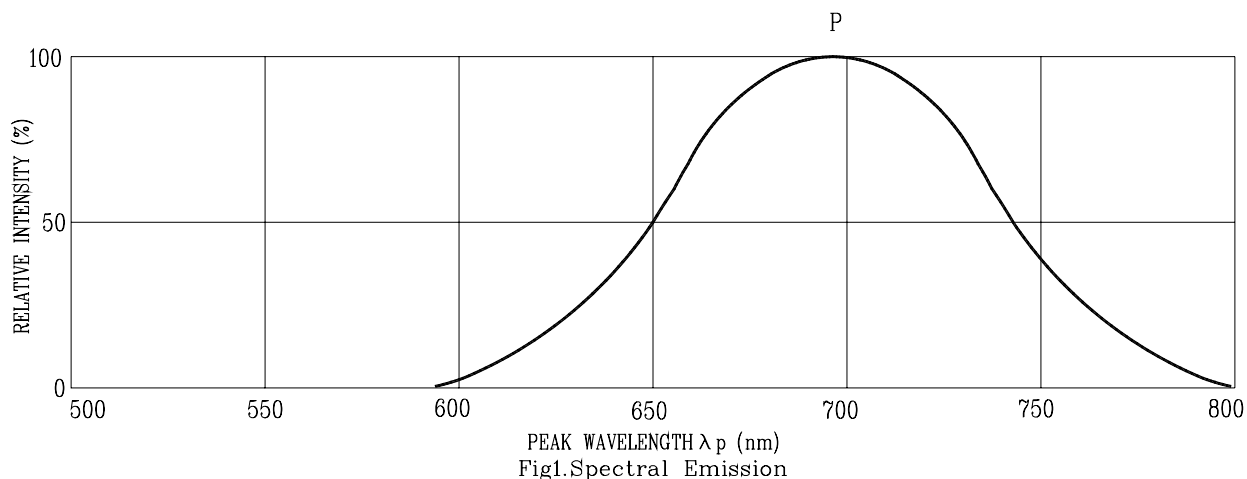
**ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C**

| PARAMETER                         | SYMBOL           | MIN. | TYP. | MAX. | UNIT | TEST CONDITION       |
|-----------------------------------|------------------|------|------|------|------|----------------------|
| Average Luminous Intensity        | I <sub>V</sub>   | 340  | 750  |      | μcd  | I <sub>F</sub> =10mA |
| Peak Emission Wavelength          | λ <sub>p</sub>   |      | 697  |      | nm   | I <sub>F</sub> =20mA |
| Spectral Line Half-Width          | Δλ               |      | 90   |      | nm   | I <sub>F</sub> =20mA |
| Dominant Wavelength               | λ <sub>d</sub>   |      | 657  |      | nm   | I <sub>F</sub> =20mA |
| Forward Voltage Per Segment       | V <sub>F</sub>   |      | 2.1  | 2.6  | V    | I <sub>F</sub> =20mA |
| Reverse Current Per Segment       | I <sub>R</sub>   |      |      | 100  | μA   | V <sub>R</sub> =5V   |
| Luminous Intensity Matching Ratio | I <sub>v-m</sub> |      |      | 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'Eclairage) eye-response curve.

## TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)



NOTE : P=BRIGHT RED