



# **LED Display**

## **Product Data Sheet**

### **LTS-2801AE**

Spec No.: DS-30-99-658

Effective Date: 06/09/2010

Revision: A

**LITE-ON DCC**

**RELEASE**

**BNS-OD-FC001/A4**

**LITE-ON Technology Corp. / Optoelectronics**

No.90,Chien 1 Road, Chung Ho, New Taipei City 23585, Taiwan, R.O.C.

Tel: 886-2-2222-6181 Fax: 886-2-2221-1948 / 886-2-2221-0660

<http://www.liteon.com/opto>

## **FEATURES**

- \* 0.28-inch (7.0-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.

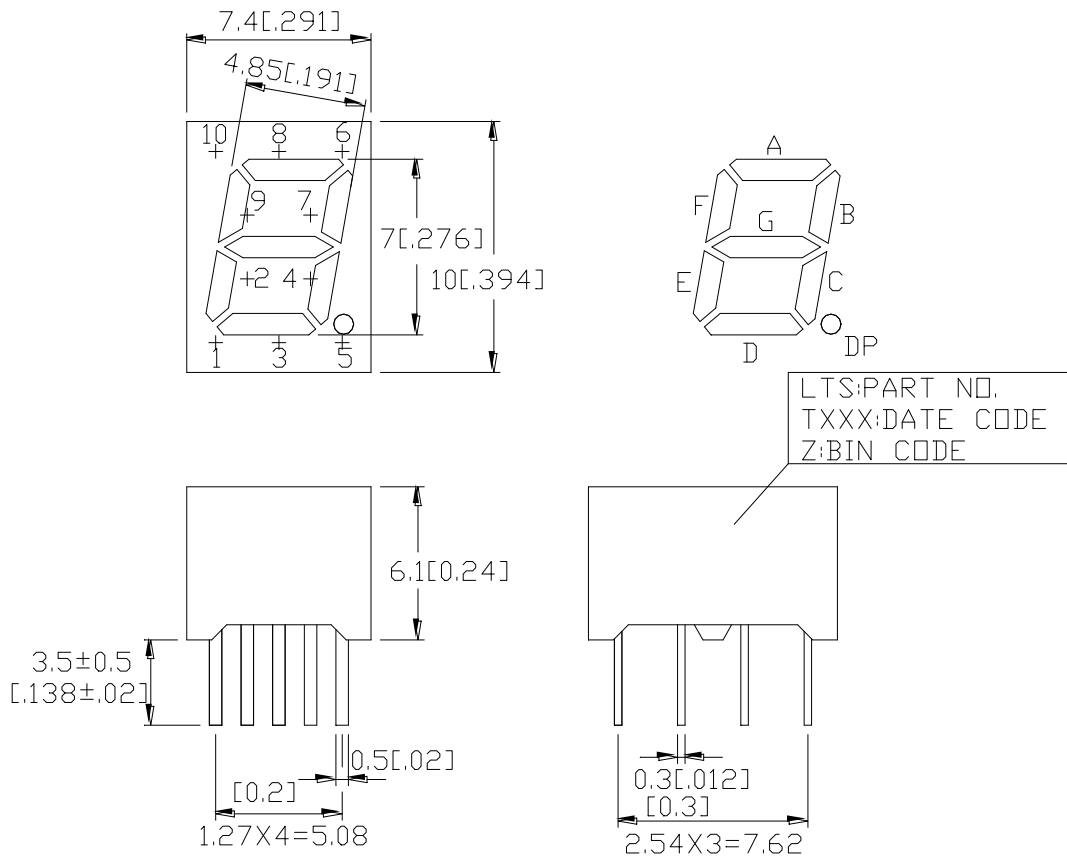
## **DESCRIPTION**

The LTS-2801AE is a 0.28-inch (7.0-mm) digit height single digit seven-segment display. This device utilizes red orange LED chips, which are made from GaAsP on a transparent GaP substrate, and has a gray face and white segments.

## **DEVICE**

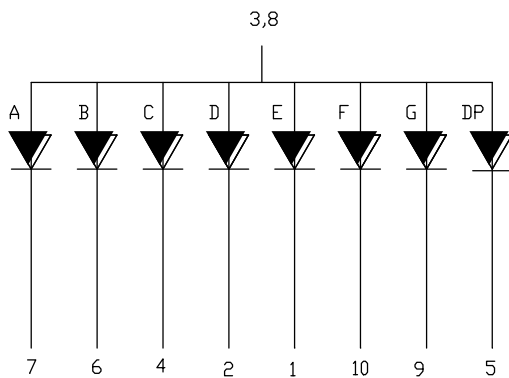
| PART NO.   | DESCRIPTION      |
|------------|------------------|
| RED ORANGE | Common Anode     |
| LTS-2801AE | Rt. Hand Decimal |

## PACKAGE DIMENSIONS



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

## INTERNAL CIRCUIT DIAGRAM



**PIN CONNECTION**

| <b>No.</b> | <b>CONNECTION</b> |
|------------|-------------------|
| 1          | CATHODE E         |
| 2          | CATHODE D         |
| 3          | COMMON ANODE      |
| 4          | CATHODE C         |
| 5          | CATHODE D.P.      |
| 6          | CATHODE B         |
| 7          | CATHODE A         |
| 8          | COMMON ANODE      |
| 9          | CATHODE G         |
| 10         | CATHODE F         |

**ABSOLUTE MAXIMUM RATING AT T<sub>A</sub>=25°C**

| PARAMETER                                                                  | MAXIMUM RATING | UNIT  |
|----------------------------------------------------------------------------|----------------|-------|
| Power Dissipation Per Segment                                              | 75             | mW    |
| Peak Forward Current Per Segment<br>( 1/10 Duty Cycle, 0.1ms Pulse Width ) | 100            | mA    |
| Continuous Forward Current Per Segment                                     | 25             | mA    |
| Derating Linear From 25°C Per Segment                                      | 0.33           | 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.   |                |       |

**ELECTRICAL / OPTICAL CHARACTERISTICS AT T<sub>A</sub>=25°C**

| PARAMETER                         | SYMBOL            | MIN. | TYP. | MAX. | UNIT | TEST CONDITION       |
|-----------------------------------|-------------------|------|------|------|------|----------------------|
| Average Luminous Intensity        | I <sub>V</sub>    | 800  | 2000 |      | μcd  | I <sub>F</sub> =10mA |
| 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>    |      | 2.0  | 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</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 (commission international DE L'clairage) eye-response curve.

## TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

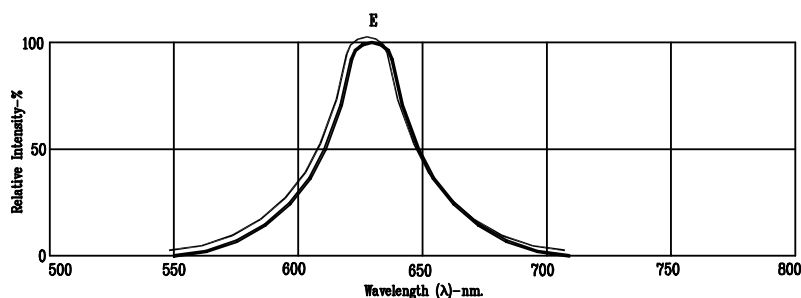


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

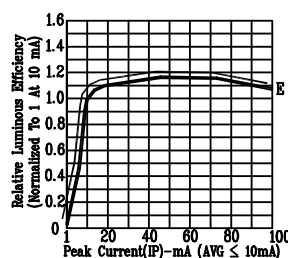


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT (REFRESH RATE 1KHz)

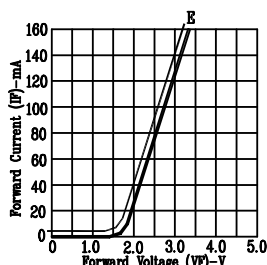


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

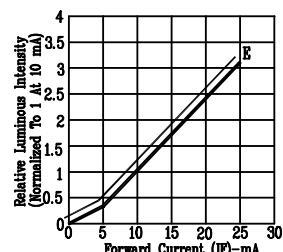


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

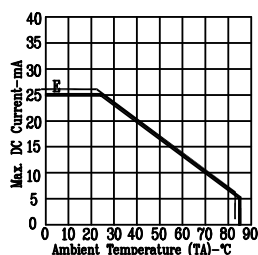


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE

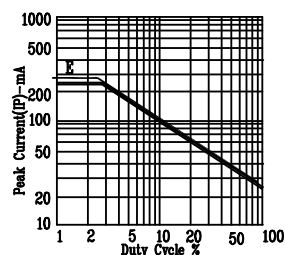


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: E=RED ORANGE

# AMEYA360

## Components Supply Platform

### Authorized Distribution Brand :



### Website :

Welcome to visit [www.ameya360.com](http://www.ameya360.com)

### Contact Us :

#### ➤ Address :

401 Building No.5, JiuGe Business Center, Lane 2301, Yishan Rd  
Minhang District, Shanghai , China

#### ➤ Sales :

Direct +86 (21) 6401-6692

Email [amall@ameya360.com](mailto:amall@ameya360.com)

QQ 800077892

Skype ameyasales1 ameyasales2

#### ➤ Customer Service :

Email [service@ameya360.com](mailto:service@ameya360.com)

#### ➤ Partnership :

Tel +86 (21) 64016692-8333

Email [mkt@ameya360.com](mailto:mkt@ameya360.com)