



**Spec No.: DS-30-96-086** Effective Date: 05/23/2000

Revision: -

**LITE-ON DCC** 

**RELEASE** 

BNS-OD-FC001/A4

## LITEON

## LITE-ON ELECTRONICS, INC.

### Property of Lite-On Only

### **FEATURES**

- \*0.54 inch (13.8 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 LTP-3786E is a 0.54 inch (13.6 mm) digit height dual digit seven-segment display. This device utilizes red orange LED chips, which are made from GaAsP on a transparent GaP substrate, and has gray face and white segments.

### **DEVICE**

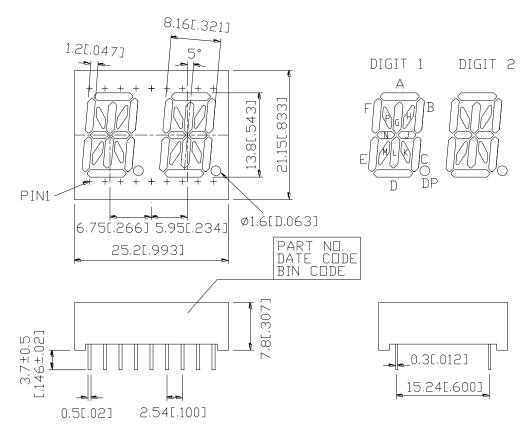
| PART NO.   | DESCRIPTION      |  |  |
|------------|------------------|--|--|
| RED ORANGE | Common Anode     |  |  |
| LTP-3786E  | Rt. Hand Decimal |  |  |

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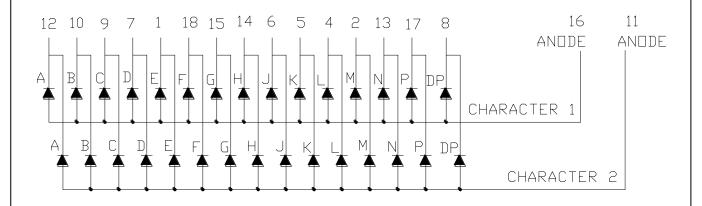
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### **PACKAGE DIMENSIONS**



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

### INTERNAL CIRCUIT DIAGRAM



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### PIN CONNECTION

| No. | CONNECTION                |  |  |  |  |
|-----|---------------------------|--|--|--|--|
| 1   | CATHODE E                 |  |  |  |  |
| 2   | CATHODE M                 |  |  |  |  |
| 3   | NO CONNECTION             |  |  |  |  |
| 4   | CATHODE L                 |  |  |  |  |
| 5   | CATHODE K                 |  |  |  |  |
| 6   | CATHODE J                 |  |  |  |  |
| 7   | CATHODE D                 |  |  |  |  |
| 8   | CATHODE D.P.              |  |  |  |  |
| 9   | CATHODE C                 |  |  |  |  |
| 10  | CATHODE B                 |  |  |  |  |
| 11  | COMMON ANODE, CHARACTER 2 |  |  |  |  |
| 12  | CATHODE A                 |  |  |  |  |
| 13  | CATHODE N                 |  |  |  |  |
| 14  | CATHODE H                 |  |  |  |  |
| 15  | CATHODE G                 |  |  |  |  |
| 16  | COMMON ANODE, CHARACTER 1 |  |  |  |  |
| 17  | CATHODE P                 |  |  |  |  |
| 18  | CATHODE F                 |  |  |  |  |

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

| PARAMETER  | MAXIMUM RATING | UNIT  |  |  |  |
|--|----------------|-------|--|--|--|
| Power Dissipation Per Segment  | 75             | mW    |  |  |  |
| Peak Forward Current Per Segment ( 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[1/16inch] below seating plane. |                |       |  |  |  |

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

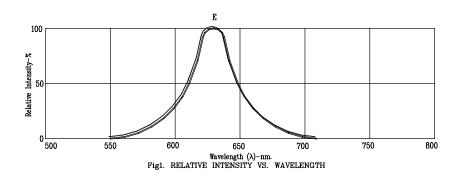
| PARAMETER                         | SYMBOL | MIN. | TYP. | MAX. | UNIT | TEST CONDITION       |
|-----------------------------------|--------|------|------|------|------|----------------------|
| Average Luminous Intensity        | Iv     | 800  | 2300 |      | μcd  | I <sub>F</sub> =10mA |
| Peak Emission Wavelength          | λр     |      | 630  |      | nm   | IF=20mA              |
| Spectral Line Half-Width          | Δλ     |      | 40   |      | nm   | I <sub>F</sub> =20mA |
| Dominant Wavelength               | λd     |      | 621  |      | nm   | I <sub>F</sub> =20mA |
| Forward Voltage Per Segment       | VF     |      | 2.0  | 2.6  | V    | I <sub>F</sub> =20mA |
| Reverse Current Per Segment       | Ir     |      |      | 100  | μΑ   | V <sub>R</sub> =5V   |
| Luminous Intensity Matching Ratio | Iv-m   |      |      | 2:1  |      | I <sub>F</sub> =10mA |

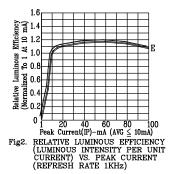
Note: Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commision Internationale De L'Eclairage) eye-response curve.

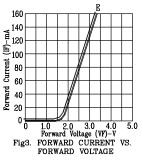
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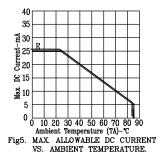
### TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

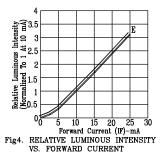
(25°C Ambient Temperature Unless Otherwise Noted)

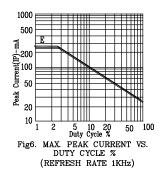












NOTE: E=RED ORANGE

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