

# LITEON LITE-ON TECHNOLOGY CORPORATION

Property of Lite-On Only

#### **FEATURES**

- \* 0.56 inch (14.2 mm) DIGIT HEIGHT
- \* CONTINUOUS UNIFORM SEGMENTS
- \*LOW POWER REQUIREMENT
- \* EXCELLENT CHARACTERS APPEARANCE
- \* HIGH BRIGHTNESS & HIGH CONTRAST
- \* WIDE VIEWING ANGLE
- \* SOLID STATE RELIABILITY

## **DESCRIPTION**

The LTC-5630G-03 is a 0.56 inch (14.2 mm) digit height quadruple digit seven-segment display. This device uses GREEN LED chips ( GaP epi on GaP substrate). The display has gray face and white segments.

#### **DEVICE**

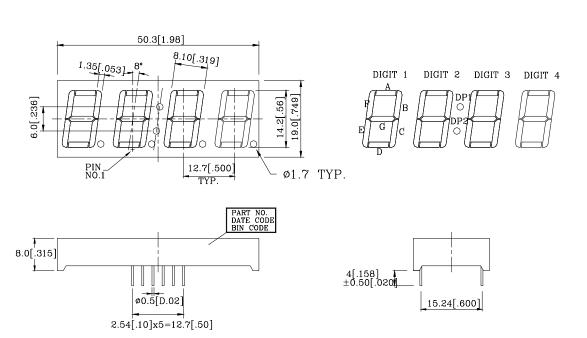
| PART NO.     | DESCRIPTION            |  |  |  |
|--------------|------------------------|--|--|--|
| GREEN        | Multiplex Common Anode |  |  |  |
| LTC-5630G-03 |                        |  |  |  |

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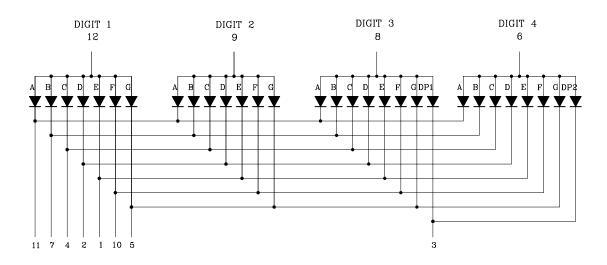
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### **PACKAGE DIMENSIONS**



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

### INTERNAL CIRCUIT DIAGRAM



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# PIN CONNECTION

| No. | CONNECTION             |  |  |  |  |
|-----|------------------------|--|--|--|--|
| 1   | CATHODE E              |  |  |  |  |
| 2   | CATHODE D              |  |  |  |  |
| 3   | CATHODE D.P.1 & D.P.2  |  |  |  |  |
| 4   | CATHODE C              |  |  |  |  |
| 5   | CATHODE G              |  |  |  |  |
| 6   | COMMON ANODE (DIGIT 4) |  |  |  |  |
| 7   | CATHODE B              |  |  |  |  |
| 8   | COMMON ANODE (DIGIT 3) |  |  |  |  |
| 9   | COMMON ANODE (DIGIT 2) |  |  |  |  |
| 10  | CATHODE F              |  |  |  |  |
| 11  | CATHODE A              |  |  |  |  |
| 12  | COMMON ANODE (DIGIT 1) |  |  |  |  |

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### ABSOLUTE MAXIMUM RATING

| PARAMETER   | MAXIMUM RATING | UNIT |  |  |  |
|---|----------------|------|--|--|--|
| Power Dissipation Per Segment   | 75             | mW   |  |  |  |
| Peak Forward Current Per Segment (Frequency 1Khz,10% duty cycle)                        | 100*           | mA   |  |  |  |
| Continuous Forward Current Per Segment  | 25             | mA   |  |  |  |
| Forward Current Derating from 25°C  | 0.33           | mA/  |  |  |  |
| Reverse Voltage Per Segment   | 8              | V    |  |  |  |
| Operating Temperature Range   | -35 to +85     |      |  |  |  |
| Storage Temperature Range   | -35 to +85     |      |  |  |  |
| Soldering Conditions: 1/16 inch below eating plane for 3 seconds at 260 <sup>o</sup> C. |                |      |  |  |  |

<sup>\*</sup>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        | Iv     | 800  | 2400 |      | μcd  | I <sub>F</sub> =10mA |
| Peak Emission Wavelength          | λр     |      | 565  |      | nm   | I <sub>F</sub> =20mA |
| Spectral Line Half-Width          | Δλ     |      | 30   |      | nm   | I <sub>F</sub> =20mA |
| Dominant Wavelength               | λd     |      | 569  |      | nm   | I <sub>F</sub> =20mA |
| Forward Voltage Per Segment       | VF     |      | 2.1  | 2.6  | V    | I <sub>F</sub> =20mA |
| Reverse Current Per Segment       | Ir     |      |      | 2    | μΑ   | V <sub>R</sub> =8V   |
| 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.

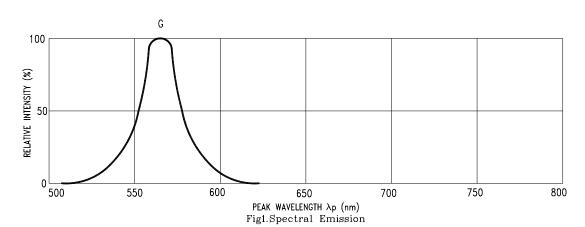
 $(V_R=8V, I_R=2\mu A \text{ is based on basic load})$ 

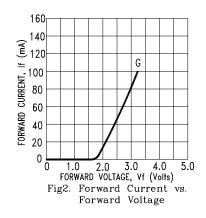
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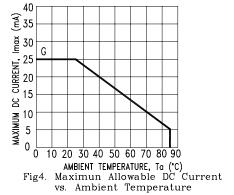
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#### TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)







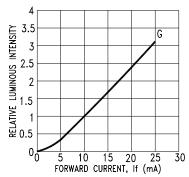
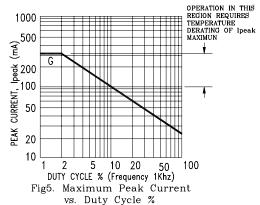


Fig3. Relative Luminous Intensity vs. DC Forward Current



NOTE: G=GREEN.

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