



LED Display
Product Data Sheet
LTS-3861JD

Spec No. :DS30-2001-351
Effective Date: 07/02/2019
Revision: C

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

**LED DISPLAY
LTS-3861JD**

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LTS-3861JD

| <u>Rev</u> | <u>Description</u> | <u>By</u> | <u>Date</u> (DD/MM/YY) |
|---|--------------------------------------|-----------|---------------------------|
| 01 | Preliminary Spec | Meg Huang | 07-05-2002 |
| | | | |
| | | | |
| | | | |
| Above data for PD and Customer tracking only | | | |
| - | NPPR Received and Upload on system | Meg Huang | 07-05-2002 |
| A | Add dimension and recommend PCB hole | Anon B. | 09-05-2019 |
| | | | |

LED DISPLAY LTS-3861JD

1. Description

The LTS-3861JD is a 0.3-inch (7.62-mm) digit height single digit low current seven-segment display. This device uses AlInGaP HYPER RED chips (AlInGaP epi on GaAs substrate). The display has a light gray face and white segments.

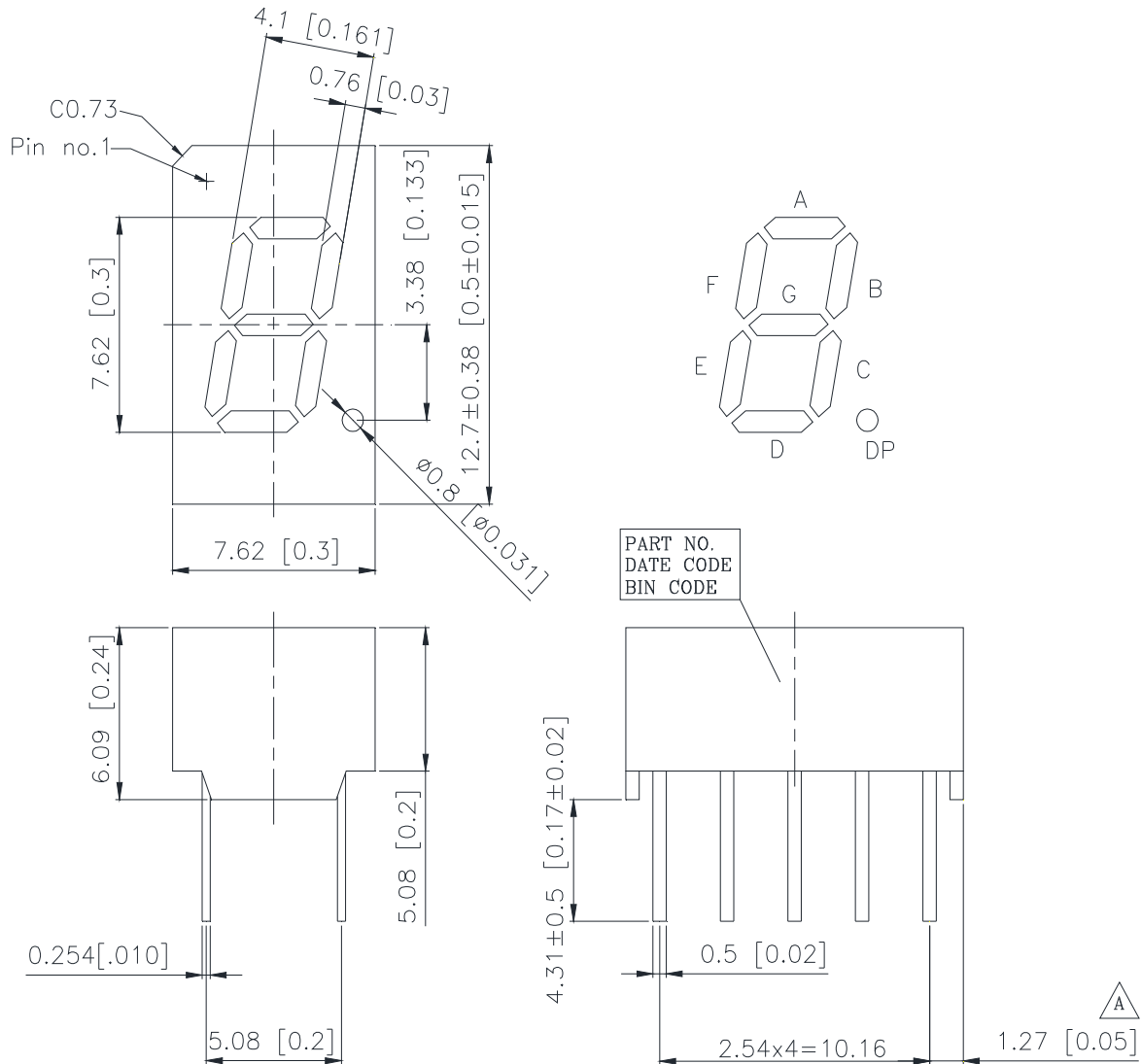
1.1 Features

- 0.30 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
- **LEAD-FREE PACKAGE (ACCORDING TO ROHS)**

1.2 Device

| Part No | Description |
|-------------------|------------------|
| AllnGaP HYPER RED | Common anode |
| LTS-3861JD | Rt. Hand decimal |

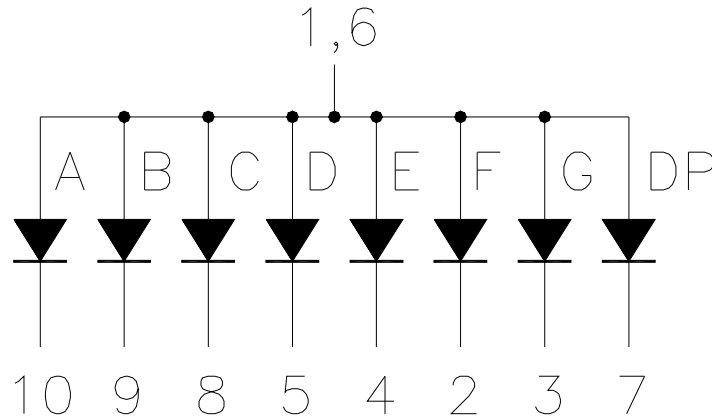
2. Package Dimensions



Notes :

1. All dimensions are in millimeters. Tolerances are $\pm 0.25\text{mm}$ (0.01") unless otherwise noted.
2. Foreign materials on segment $\leq 10\text{mils}$.
3. Bubble in segment $\leq 10\text{mils}$.
4. Bending $\leq 1\%$ of reflector length.
5. Ink contamination (surface) $\leq 20\text{mils}$.
6. Pin tip's shift tolerance is ± 0.40 mm.
7. Recommend the best pcb hole : diameter 1.10 mm

3. Internal Circuit Diagram



4. Pin Connection

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

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5. Rating and Characteristics

5.1. Absolute Maximum Rating at Ta=25°C

| Parameter | Maximum Rating | Unit |
|---|-----------------|-------|
| Power Dissipation Per Segment | 70 | mW |
| Peak Forward Current Per Segment (1/10 Duty Cycle, 0.1ms Pulse Width) | 90 | mA |
| Continuous Forward Current Per Segment | 25 | mA |
| Derating Linear From 25°C Per Segment | 0.28 | mA/°C |
| Operating Temperature Range | -35°C to +105°C | |
| Storage Temperature Range | -35°C to +105°C | |
| Solder Conditions: 1/16 inch below seating plane within 3 seconds at max 260°C or temperature of unit (during assembly) not over max. temperature rating above. | | |

5.2. Electrical / Optical Characteristics at Ta=25°C

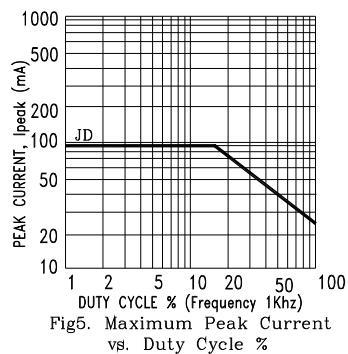
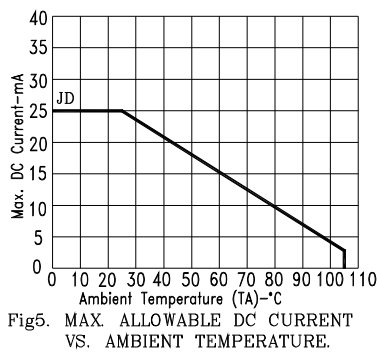
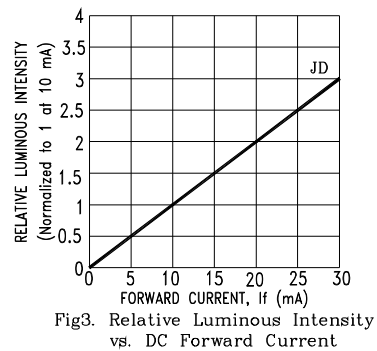
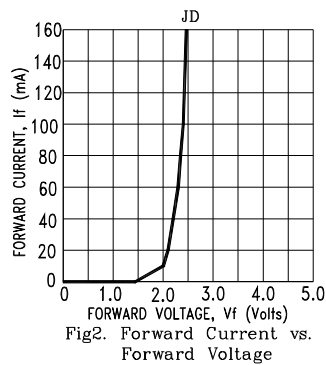
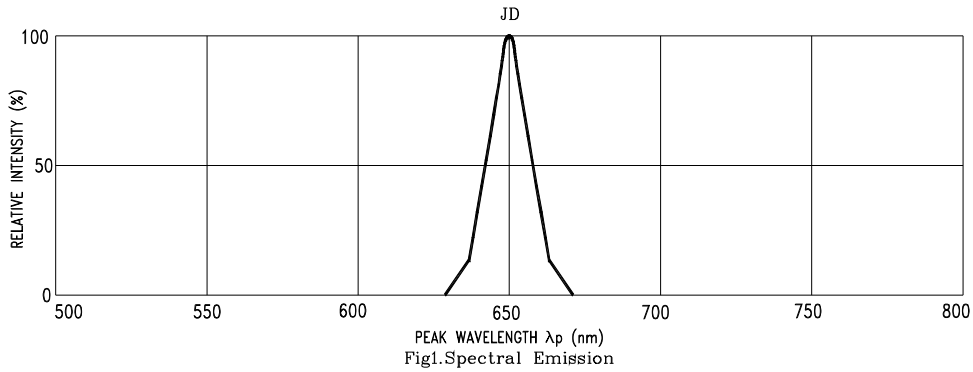
| Parameter | Symbol | MIN. | TYP. | MAX. | Unit | Test Condition |
|---|-----------------|------|------|------|---------|----------------|
| Average Luminous Intensity | IV | 200 | 600 | | ucd | IF=1mA |
| Peak Emission Wavelength | λ_p | | 650 | | nm | IF=20mA |
| Spectral Line Half-Width | $\Delta\lambda$ | | 20 | | nm | IF=20mA |
| Dominant Wavelength | λ_d | | 639 | | nm | IF=20mA |
| Forward Voltage Per Chip | VF | | 2.10 | 2.60 | V | IF=20mA |
| Reverse Current Per Segment ⁽²⁾ | IR | | | 100 | μ A | VR=5V |
| Luminous Intensity Matching Ratio (Similar Light Area) | IV-m | | | 2:1 | | IF=1mA |

Notes :

- Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commission International De L'Eclairage) eye-response curve.
- Reverse voltage is only for IR test. It cannot continue to operate at this situation.
- Cross talk specification \leq 2.5%.

6. Typical Electrical / Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)



NOTE : JD=AlInGaP HYPER RED