

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.

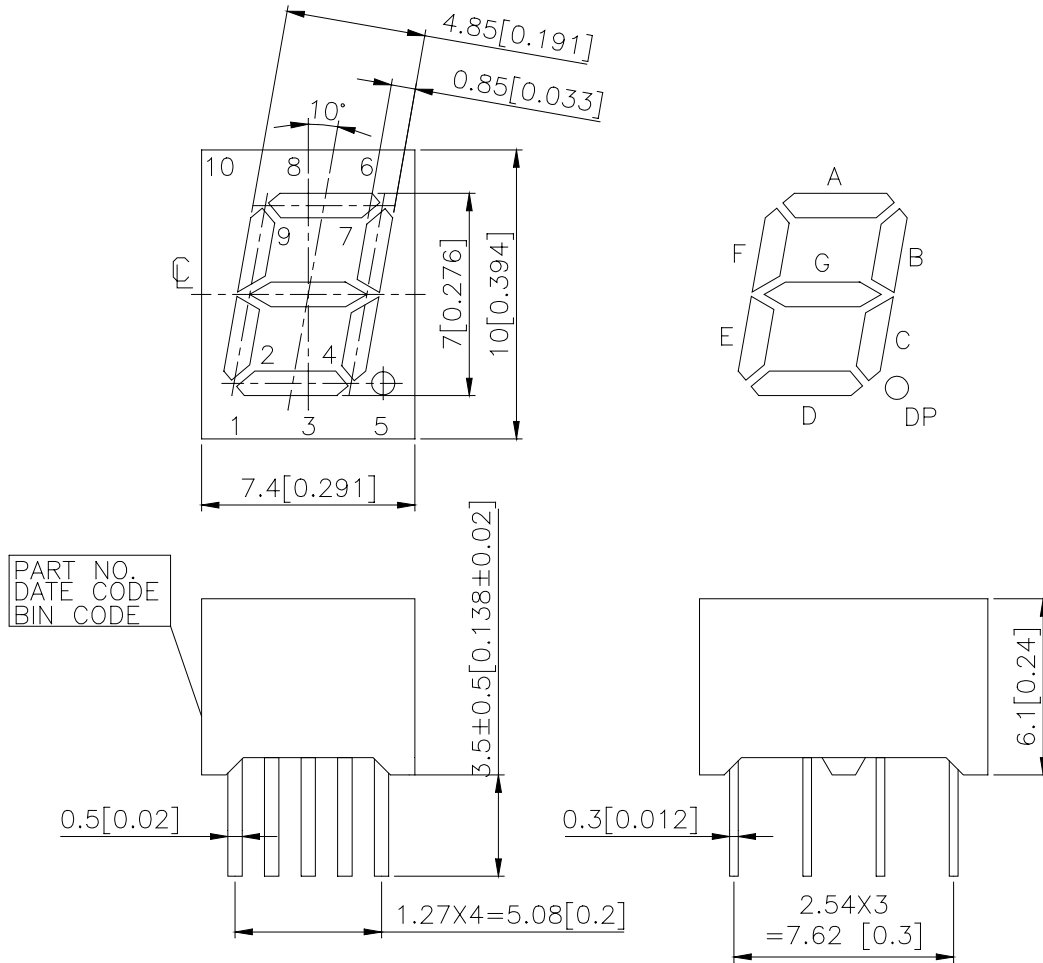
DESCRIPTION

The LTS-2301AB is a 0.28-inch (7.0-mm) digit height single digit seven-segment display. This device utilizes blue LED chips, which are made from GaN on a SiC substrate, and has a gray face and white segments.

DEVICE

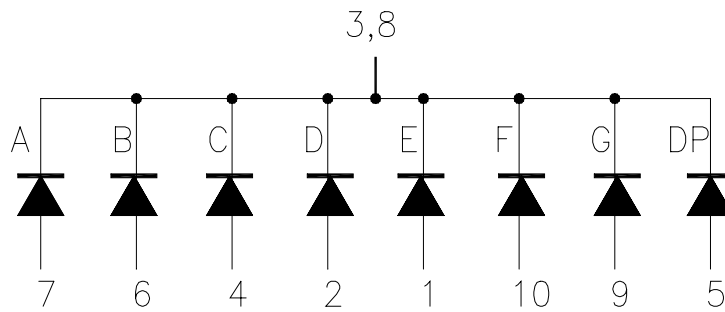
| PART NO. | DESCRIPTION |
|-----------------|--------------------|
| BLUE | Common Cathode |
| LTS-2301AB | Rt. Hand Decimal |

PACKAGE DIMENSIONS



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

INTERNAL CIRCUIT DIAGRAM



PIN CONNECTION

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

ABSOLUTE MAXIMUM RATING AT Ta=25°C

| PARAMETER | MAXIMUM RATING | UNIT |
|----------------------------------------------------------------------------|----------------|-------|
| Power Dissipation Per Segment | 115 | mW |
| Peak Forward Current Per Segment (1/10 Duty Cycle, 0.1ms Pulse Width) | 60 | 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 Ta=25°C

| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT | TEST CONDITION |
|-----------------------------------|-------------------|------|------|------|------|----------------------|
| Average Luminous Intensity | I _v | 1000 | 3000 | | μcd | I _F =10mA |
| Peak Emission Wavelength | λ _p | | 428 | | nm | I _F =20mA |
| Spectral Line Half-Width | Δλ | | 65 | | nm | I _F =20mA |
| Dominant Wavelength | λ _d | | 466 | | nm | I _F =20mA |
| Forward Voltage Per Segment | V _F | | 3.8 | 4.5 | V | I _F =20mA |
| Reverse Current Per Segment | I _R | | | 100 | μA | V _R =5V |
| Luminous Intensity Matching Ratio | I _v -m | | | 2:1 | | I _F =10mA |

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

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

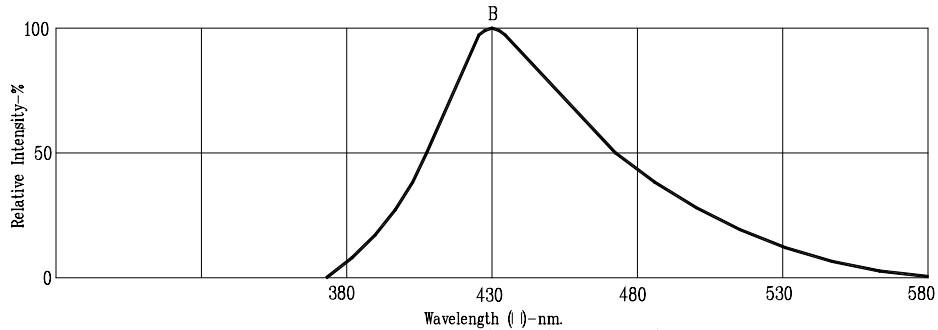


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

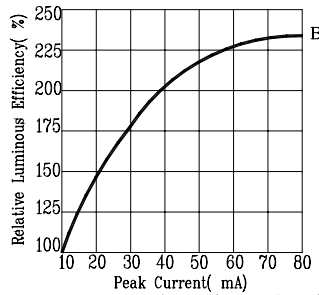


Fig2. RELATIVE LUMINOUS EFFICIENCY VS. PEAK FORWARD CURRENT (250us pulse width; 2ms period)

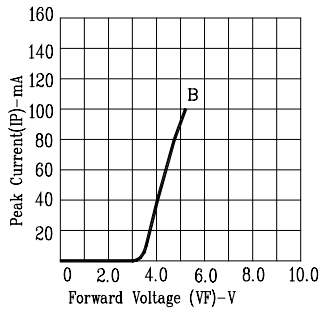


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

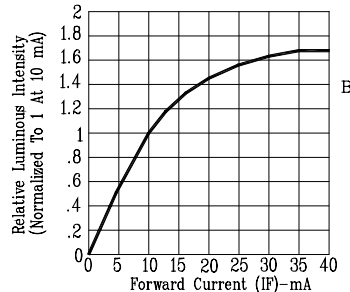


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

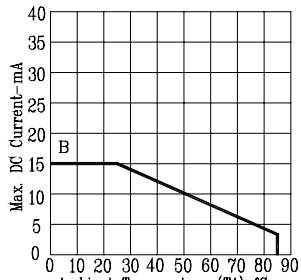


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

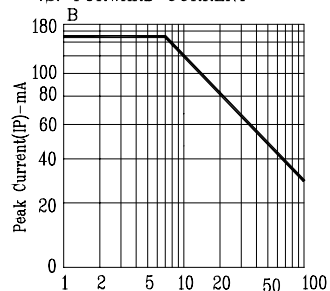


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)