## 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.

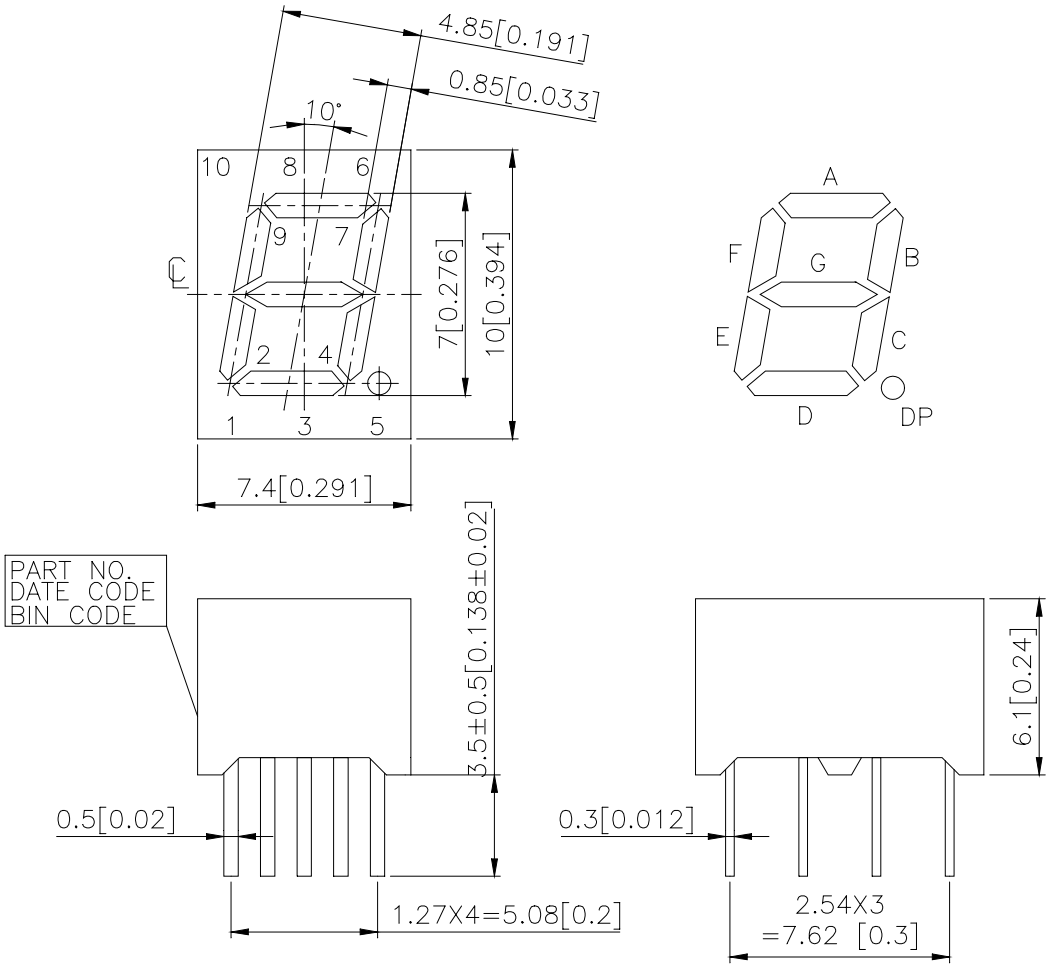
## DESCRIPTION

The LTS-2801AB 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

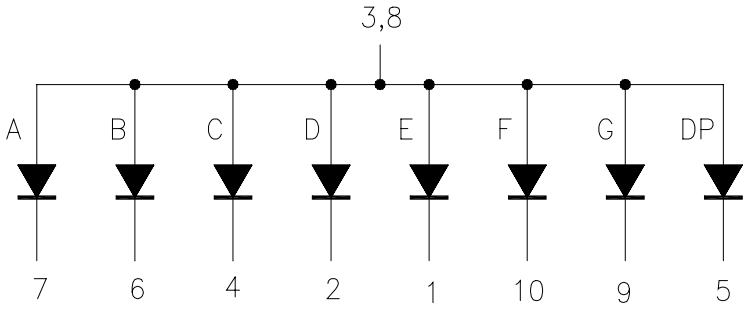
| PART NO. | DESCRIPTION |
|---|---|
| BLUE | Common Anode |
| LTS-2801AB | Rt. Hand Decimal |

## 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 | 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 Ta=25°C

| PARAMETER | MAXIMUM RATING | UNIT |
|---|---|---|
| Power Dissipation Per Segment | 115 | mW |
| Peak Forward Current Per Segment<br>( 1/10 Duty Cycle, 0.1ms Pulse Width ) | 60 | mA |
| Continuous Forward Current Per Segment<br>Derating Linear From 25 Per Segment | 25<br>0.33 | mA<br>mA/ |
| Reverse Voltage Per Segment | 5 | V |
| Operating Temperature Range | -35 to +85 | |
| Storage Temperature Range | -35 to +85 | |
| Solder Temperature: max 260 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 | λp | | 428 | | nm | $I_F$=20mA |
| Spectral Line Half-Width | Δλ | | 65 | | nm | $I_F$=20mA |
| Dominant Wavelength | λd | | 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 (Commision Internationale De L'Eclariage) eye-response curve.

## TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

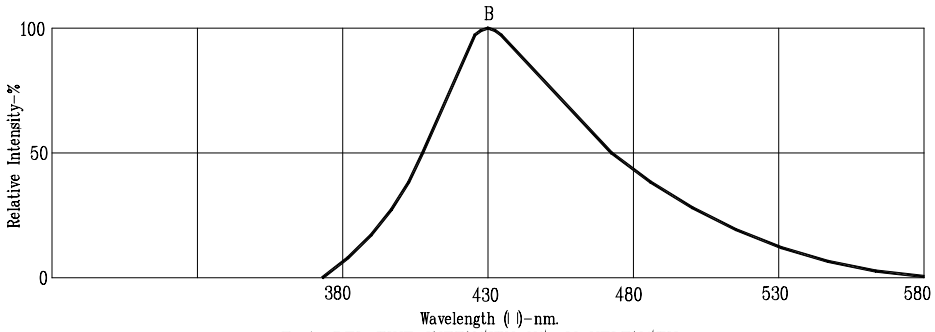


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

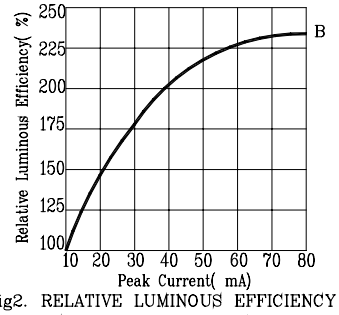


Fig2. RELATIVE LUMINOUS EFFICIENCY VS. PEAK FORWARD CURRENT
(250us pulse width; 2ms period)

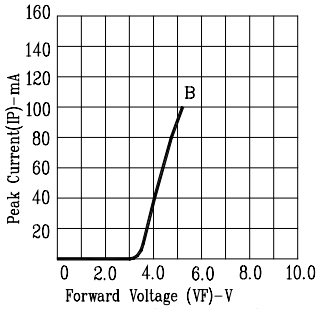


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

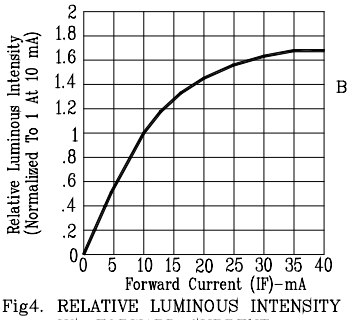


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

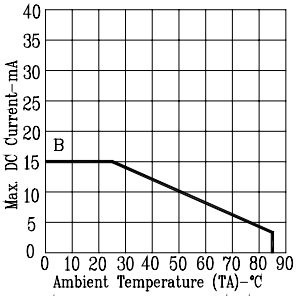


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

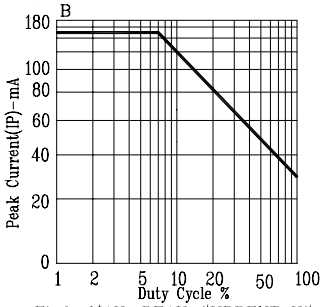


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE %
(REFRESH RATE 1KHz)