



**Spec No.: DS30-2000-321** Effective Date: 11/14/2000

Revision: -

**LITE-ON DCC** 

**RELEASE** 

BNS-OD-FC001/A4

# LITEON

## LITE-ON ELECTRONICS, INC.

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## **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-2801AJD is a 0.28-inch (7.0-mm) digit height single digit seven-segment display. This device utilizes AlInGaP hi.-eff. red LED chips, which are made from AlInGaP on a non-transparent GaAs substrate, and has a gray face and white segments.

This low current seven-segment display is designed to perform under low power consumption. It is tested and selected for it's excellent low current characteristics. It can be driven in low current condition and the segments are matched. This driving current as low as 1mA per segment is applicable.

### **DEVICE**

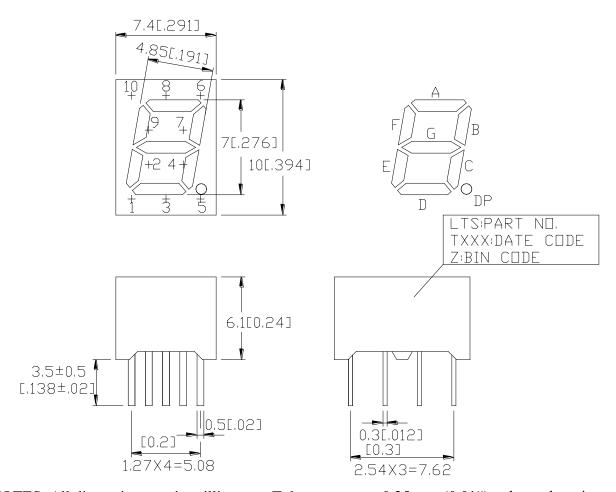
PART NO.	DESCRIPTION		
AlInGaP HIEFF. RED	Common Anode		
LTS-2801AJD	Rt. Hand Decimal		

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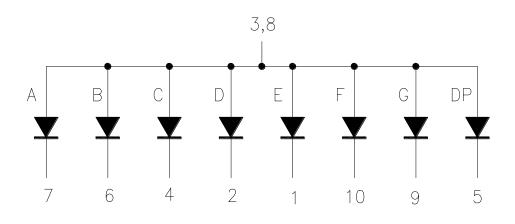
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## **PACKAGE DIMENSIONS**



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 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

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## 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)	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 below seating plane.					

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

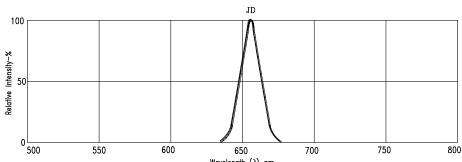
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	Iv	200	600		μcd	I <sub>F</sub> =1mA
Peak Emission Wavelength	λр		656		nm	I <sub>F</sub> =20mA
Spectral Line Half-Width	Δλ		22		nm	I <sub>F</sub> =20mA
Dominant Wavelength	λd		640		nm	I <sub>F</sub> =20mA
Forward Voltage Per Segment	VF		2.1	2.6	V	I <sub>F</sub> =20mA
Reverse Current Per Segment	Ir			100	μΑ	V <sub>R</sub> =5V
Luminous Intensity Matching Ratio	Iv-m			2:1		I <sub>F</sub> =10mA

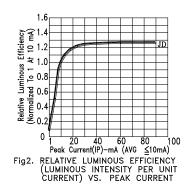
Note: Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commision Internationale De L'Eclariage) eye-response curve.

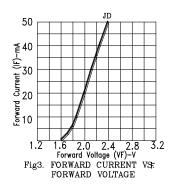
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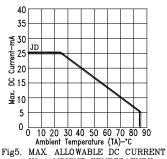
## TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

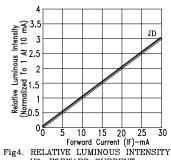








VS. AMBIENT TEMPERATURE.



VS. FORWARD CURRENT

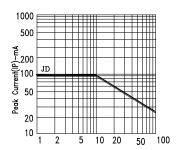


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: JD=AlInGaP HI.-EFF. RED

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