



**Spec No.: DS30-2001-321** Effective Date: 05/07/2002

Revision: -

**LITE-ON DCC** 

**RELEASE** 

BNS-OD-FC001/A4

## LITEON

## LITE-ON ELECTRONICS, INC.

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### **FEATURES**

- \*0.4-INCH (10.0-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 LTD-4708JF is a 0.4-inch (10.0-mm) digit height dual digit seven-segment display. This device utilizes AlInGaP Yellow Orange LED chips, which are made from AlInGaP on a non-transparent GaAs substrate, and has a gray face and white segments.

## **DEVICE**

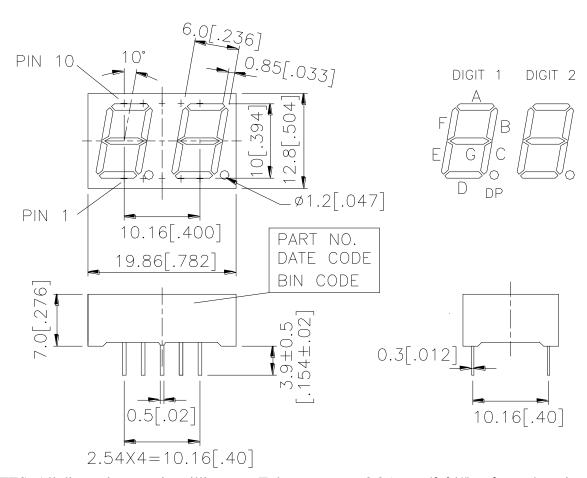
PART NO.	DESCRIPTION			
AlInGaP Yellow Orange	Duplex Common Cathode			
LTD-4708JF	Rt. Hand Decimal			

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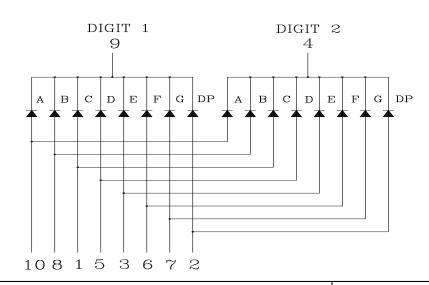
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### PACKAGE DIMENSIONS



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	ANODE C					
2	ANODE D.P.					
3	ANODE E					
4	COMMON CATHODE (DIGIT 2)					
5	ANODE D					
6	ANODE F					
7	ANODE G					
8	ANODE B					
9	COMMON CATHODE (DIGIT 1)					
10	ANODE A					

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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 )	60	mA			
Continuous Forward Current Per Segment	25	mA			
Derating Linear From 25 <sup>o</sup> C Per Segment	0.33	mA/ <sup>0</sup> C			
Reverse Voltage Per Segment	5	V			
Operating Temperature Range	$-35^{\circ}$ C to $+85^{\circ}$ C				
Storage Temperature Range	$-35^{\circ}$ C to $+85^{\circ}$ C				
Solder Temperature 1/16 inch Below Seating Plane for 3 Seconds at 260 <sup>o</sup> C					

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

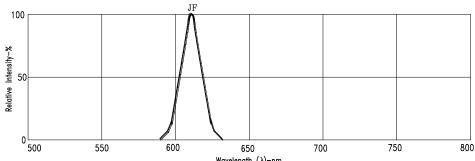
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	Iv	320	850		μcd	I <sub>F</sub> =1mA
Peak Emission Wavelength	λρ		611		nm	I=20mA
Spectral Line Half-Width	Δλ		17		nm	I=20mA
Dominant Wavelength	λd		605		nm	I=20mA
Forward Voltage Per Segment	VF		2.05	2.6	V	I <sub>F</sub> =1mA
Reverse Current Per Segment	IR			100	μΑ	V <sub>R</sub> =5V
Luminous Intensity Matching Ratio	Iv-m			2:1		I <sub>F</sub> =1mA

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

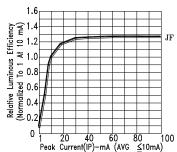
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## TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

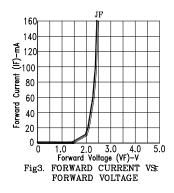
(25°C Ambient Temperature Unless Otherwise Noted)



 $\label{eq:wavelength} \mbox{Wavelength ($\lambda$)-nm.} \\ \mbox{Fig1. RELATIVE INTENSITY VS. WAVELENGTH}$ 



7 1 20 40 60 80 100 Peak Current(IP)—mA (AVG ≦10mA) Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT



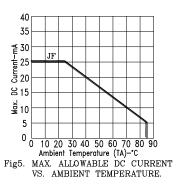


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

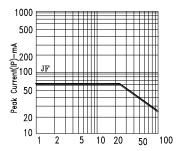


Fig6. MAX. PEAK CURRENT VS.
DUTY CYCLE %
(REFRESH RATE 1KHz)

NOTE : JF=AlInGaP YELLOW ORANGE

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1624 LTC-2621JD LTC-2623WC LTC-4627JD LTD-322G LTD-482PC LTP-1057AHR LTP-1457AKR LTP-3784G-01 LTS-313AP LTS4812SKR-P LTS-547AE LTS-6780P 446010401-3 HV-7W30-6829 DA43-11GWA LDD-A516RI-17 LDD-E305RI LDQ-N3402RI LDQN3606RI LDT-M2804RI 86004CB830 LTP-3862JD LTP-2088AKD LTD-6740P LTS-6880Y LDS-SMC3002RISUGTR LTC-2623E
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