LITEON®
OPTOELECTRONICS

LED Display

Product Data Sheet

LTD-4608JR-07

Spec No.: DS30-2008-0177

Effective Date: 03/20/2009

Revision: A

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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LED DISPLAY

LTD-4608JR-07
DATA SHEET

Rev	Description	By
01	RDR Original Spec	Phanomkorn J. September 18' 2008
-	NPPR Original Spec	Phanomkorn J. December 11' 2008
A	Change pin out length from 3.9mm to 2.4mm Add reflector's seating plan supporting for spacer	Phanomkorn J. February 26' 2009

SPEC. NO.: DS30-2008-0177

D A T E : February 26' 2009

REV. NO. : A

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FEATURES

∗0.394 inch (10 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).**

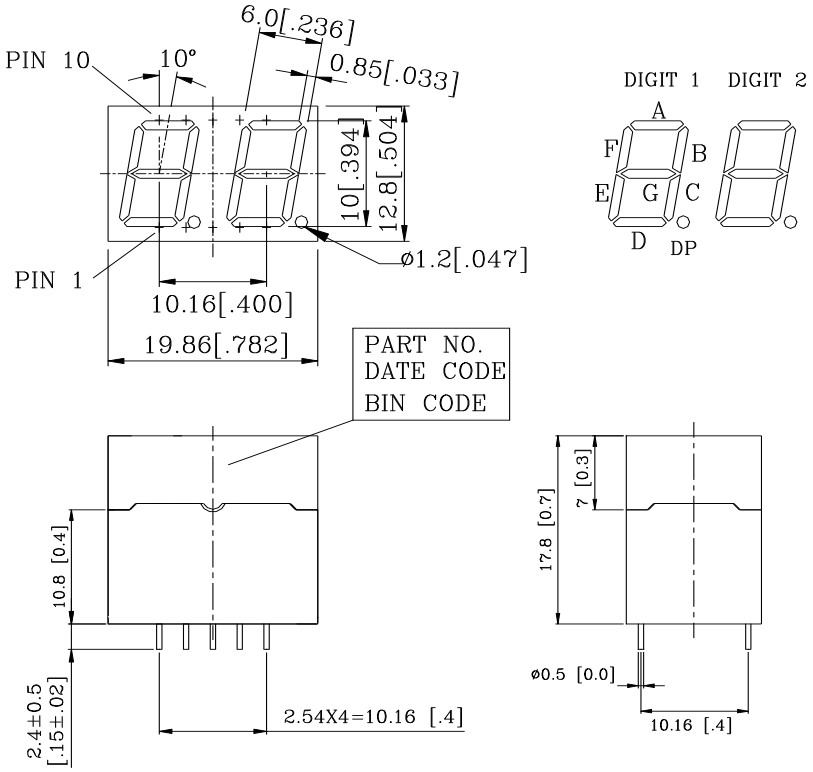
DESCRIPTION

The LTD-4608JR-07 is a 0.394 inch (10 mm) digit height dual digit seven-segment display. This device utilizes AlInGaP Super Red LED chips, which are made from AlInGaP on a non-transparent GaAs substrate, and has a gray face and white segments.

DEVICE

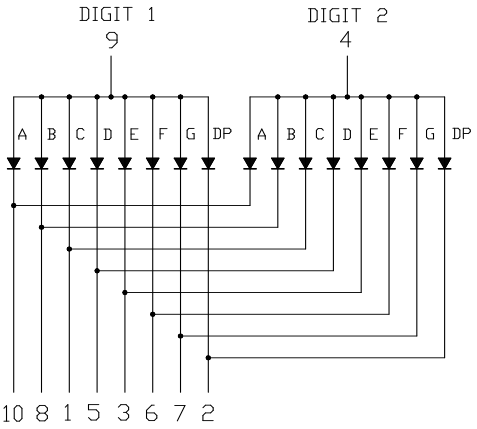
PART NO.	DESCRIPTION
AlInGaP Super Red	Duplex Common Anode
LTD-4608JR-07	Rt. Hand Decimal

PACKAGE DIMENSIONS



NOTES: 1. All dimensions are in millimeters. Tolerances are ± 0.25 mm (0.01“) unless otherwise noted.
2. Pin tip’s shift tolerance is ± 0.4 mm.
3. Foreign material on segment ≦10mils
4. Ink contamination (surface) ≦20mils
5. Bending≦1/100
6. Bubble in segment ≦10mils

INTERNAL CIRCUIT DIAGRAM



PIN CONNECTION

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

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 Derating Linear From 25℃ Per Segment	25 0.28	mA mA/℃
Reverse Voltage Per Segment	5	V
Operating Temperature Range	-35℃ to +105℃	
Storage Temperature Range	-35℃ to +105℃	
Soldering Conditions : 1/16 inch below seating plane for 3 seconds at 260°C or temperature of unit (during assembly) not over max. temperature rating above.		

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	500	1300		μcd	I_F=1mA
Peak Emission Wavelength	λp		639		nm	I_F=20mA
Spectral Line Half-Width	Δλ		20		nm	I_F=20mA
Dominant Wavelength	λd		631		nm	I_F=20mA
Forward Voltage Per Segment	V_F		2.0	2.6	V	I_F=20mA
Reverse Current Per Segment	I_R			100	μA	V_R=5V
Luminous Intensity Matching Ratio (Similar Light Area)	I_V-m			2:1		I_F=1mA

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

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

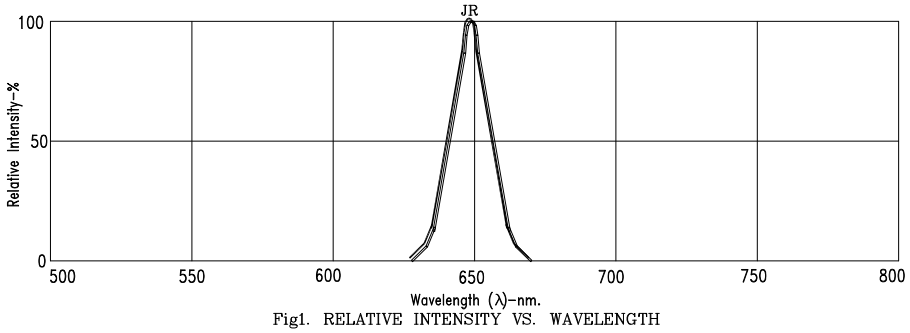


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

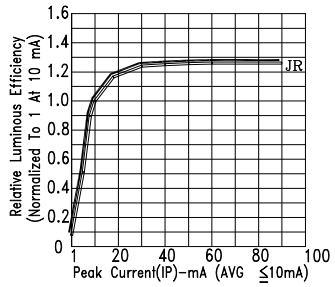


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT

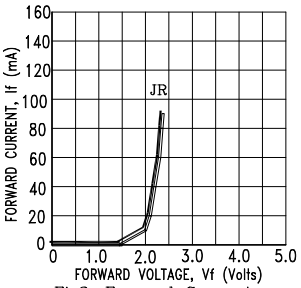


Fig3. Forward Current vs. Forward Voltage

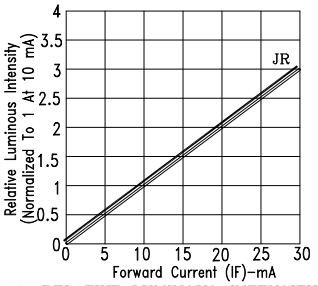


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

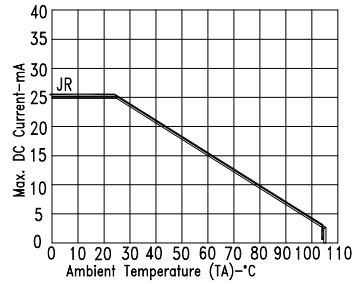


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

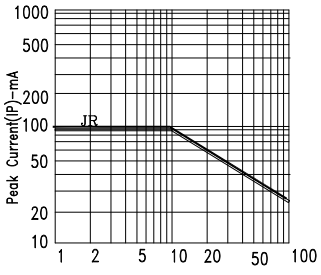


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE : JR=AlInGaP SUPER RED (REFRESH RATE 1KHz)