LITEON®
OPTOELECTRONICS

LED Display

Product Data Sheet

LTC-561JD

Spec No.: DS30-2000-404

Effective Date: 07/16/2011

Revision: D

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

LITE-ON Technology Corp. / Optoelectronics
No.90,Chien 1 Road, Chung Ho, New Taipei City 23585, Taiwan, R.O.C.
Tel: 886-2-2222-6181 Fax: 886-2-2221-1948 / 886-2-2221-0660
http://www.liteon.com/opto

LED DISPLAY

LTC-561JD
DATA SHEET

ITEM	DESCRIPTION	ISSUER	DATE
1.	New Spec.	Reo Lin	03/24/2011
2.	Revise messure Average Luminous Intensity current is 1 mA ,not 10 mA	Reo Lin	05/18/2011
3.	Revise Pin 6 should be No Pin	Reo Lin	07/11/2011

FEATURES

- 0.56 inch (14.2 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

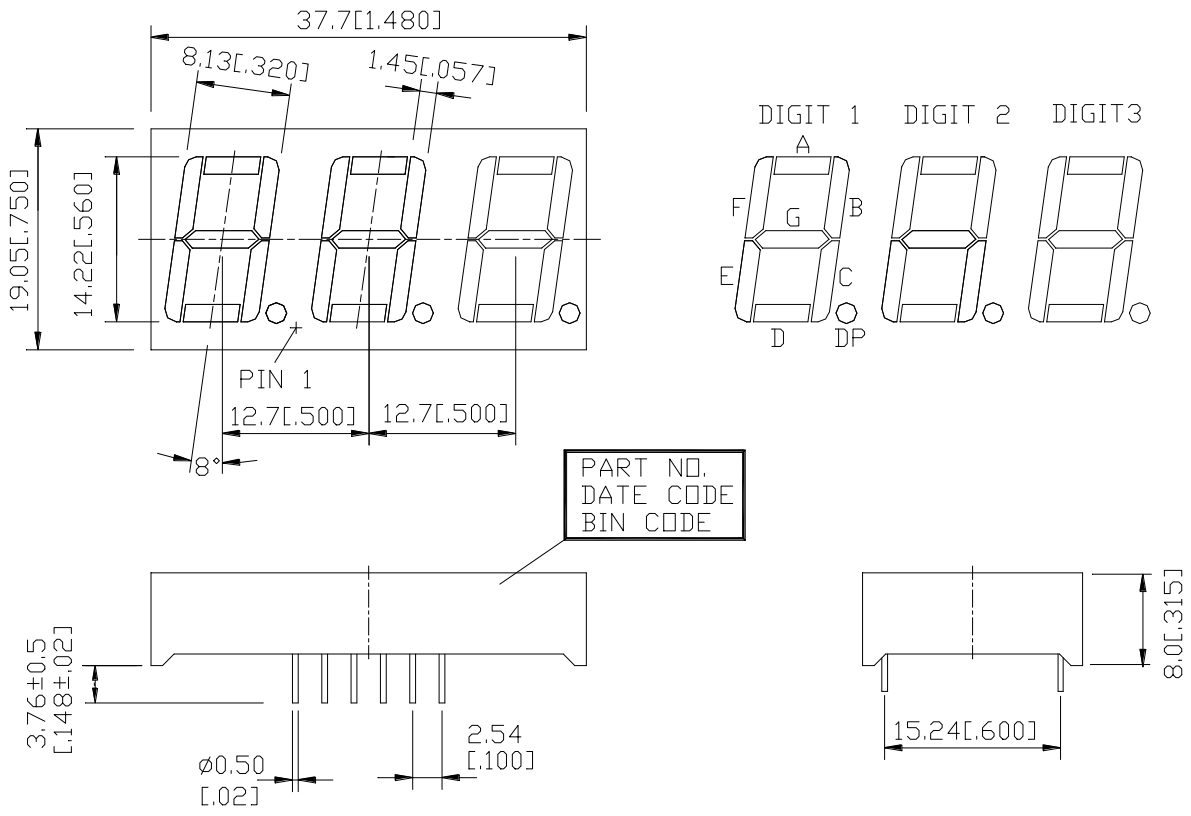
The LTC-561JD is a 0.56 inch (14.2 mm) digit height triple digit seven-segment display. This device utilizes AlInGaP hi-eff. red LED chips, which are made from AlInGaP on a non-transparent GaAs substrate, and has a gray face and white segments.

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

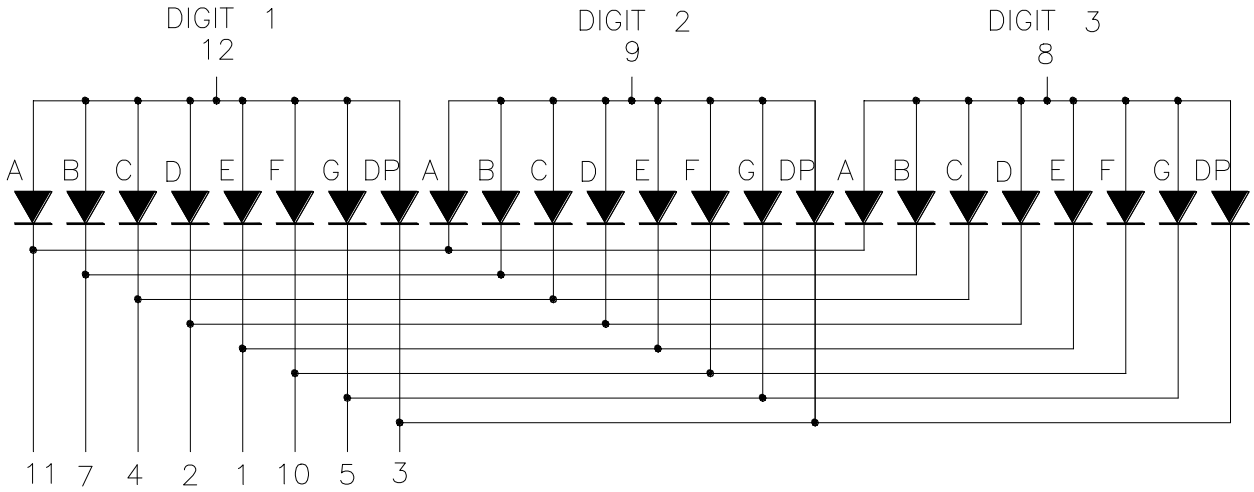
PART NO.	DESCRIPTION
AlInGaP HI-EFF. RED	Multiplex Common Anode
LTC-561JD	Rt. Hand Decimal

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.(suggest mother board pin hole ψ1.0 mm)

INTERNAL CIRCUIT DIAGRAM



PIN CONNECTION

NO.	CONNECTION
1	CATHODE E
2	CATHODE D
3	CATHODE D.P.
4	CATHODE C
5	CATHODE G
6	NO Pin
7	CATHODE B
8	COMMON ANODE, DIGIT 3
9	COMMON ANODE, DIGIT 2
10	CATHODE F
11	CATHODE A
12	COMMON ANODE , DIGIT 1

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 0.33	mA mA/℃
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	320	700		μcd	I_F=1mA
Peak Emission Wavelength	λp		656		nm	I_F=20mA
Spectral Line Half-Width	Δλ		22		nm	I_F=20mA
Dominant Wavelength	λd		640		nm	I_F=20mA
Forward Voltage Per Segment	V_F		2.1	2.6	V	I_F=20mA
Reverse Current Per Segment(2)	I_R			100	μA	V_R=5V
Luminous Intensity Matching Ratio	Iv-m			2:1		I_F=10mA

Note:

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

2. Reverse voltage is only for IR test. It can not continue to operate at this situation.

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

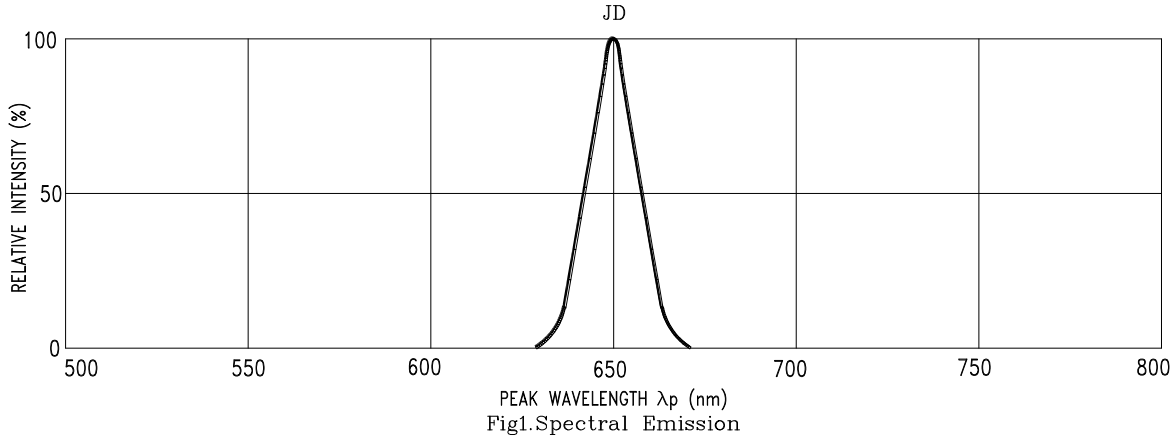


Fig1.Spectral Emission

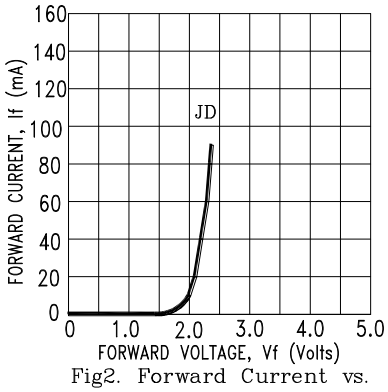


Fig2. Forward Current vs. Forward Voltage

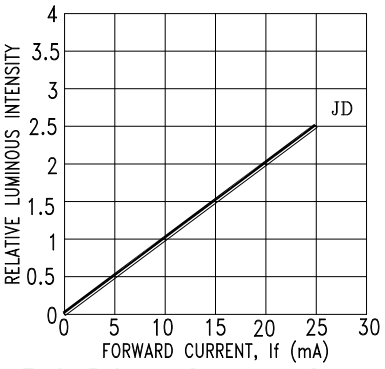


Fig3. Relative Luminous Intensity vs. DC Forward Current

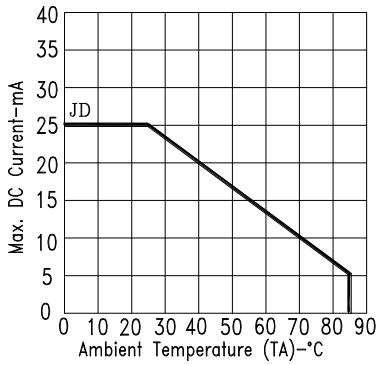


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

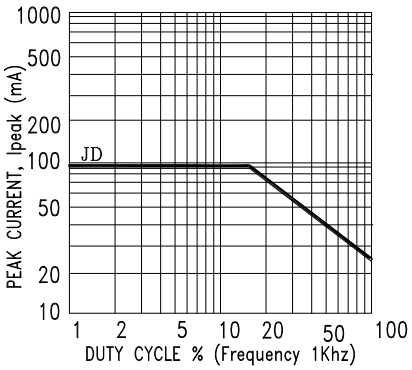


Fig5. Maximum Peak Current vs. Duty Cycle %

NOTE : JD=AlInGaP HYPER RED