LITEON®
OPTOELECTRONICS

LED Display

Product Data Sheet

LTD-2701JD-HB

Spec No.: DS30-2012-0033

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Revision: -

LITE-ON DCC

RELEASE

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LED DISPLAY

LTD-2701JD-HB
DATA SHEET

Rev	Description	By
01	RDR Original Spec	Phanomkorn J. January 4, 2012

Spec No.	
Date	January 4, 2012
Revision No.	01
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Customer Approval	
Date	

FEATURES

∗0.28 inch (7 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)

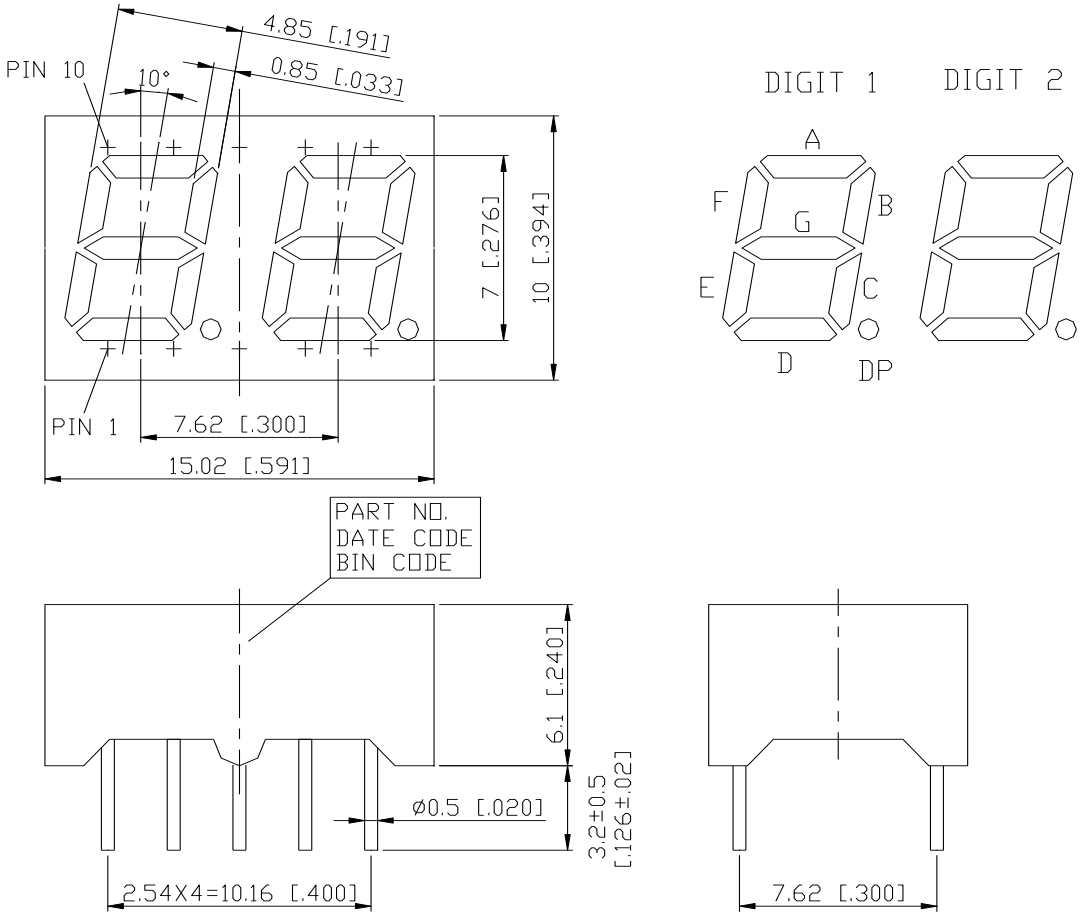
DESCRIPTION

The LTD-2701JD-HB is a 0.28 inch (7 mm) digit height dual digit seven-segment display. This device utilizes AlInGaP Hyper Red LED chips, which are made from AlInGaP on a non-transparent GaAs substrate. This display is built by special reflector material that can pass high-temperature soldering condition; the display has gray face and white segments.

DEVICE

PART NO.	DESCRIPTION
AlInGaP Hyper Red	Duplex Common Cathode
LTD-2701JD-HB	Rt. Hand Decimal

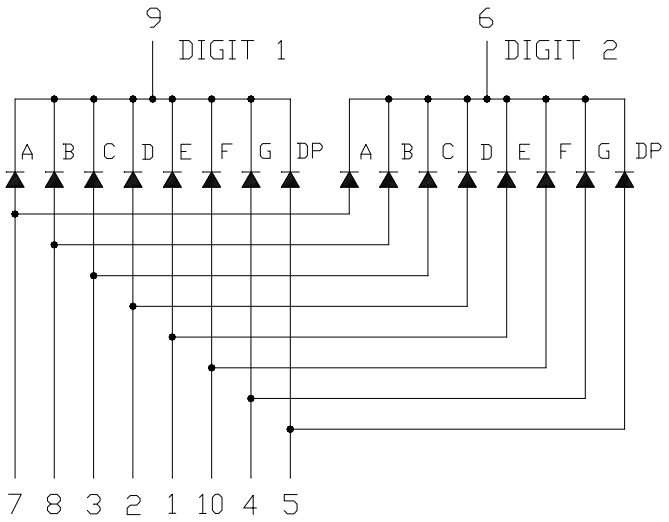
PACKAGE DIMENSIONS



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

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 +120℃	
Storage Temperature Range	-35℃ to +120℃	
Soldering Conditions : 1/16 inch below seating plane for 5 seconds at 265°C ±5°C or of temperature unit (during assembly) not over max. temperature rating.		

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	200	600		μcd	I_F=1mA
Peak Emission Wavelength	λp		650		nm	I_F=20mA
Spectral Line Half-Width	Δλ		20		nm	I_F=20mA
Dominant Wavelength	λd		639		nm	I_F=20mA
Forward Voltage Per Segment	V_F		2.1	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

NOTES:

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. Cross talk specification ≦ 2.5%
3. Reverse voltage is only for IR test. It cannot continue to operate at this situation.

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

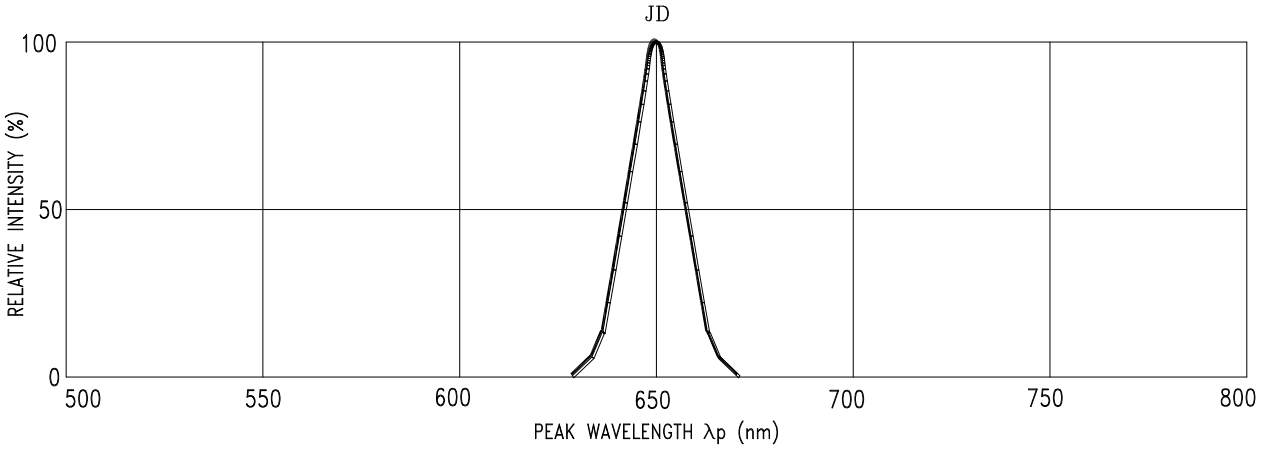


Fig1.Spectral Emission

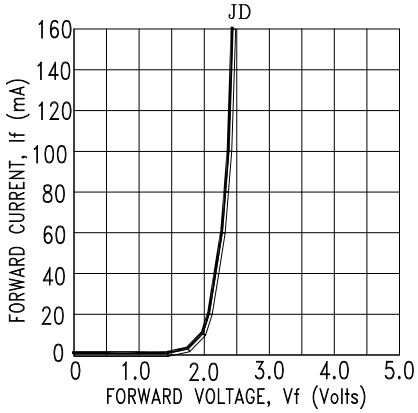


Fig2. Forward Current vs. Forward Voltage

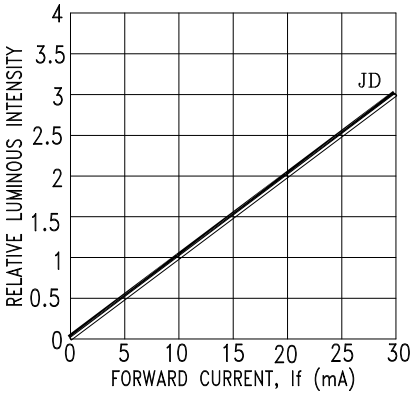


Fig3. Relative Luminous Intensity vs. DC Forward Current

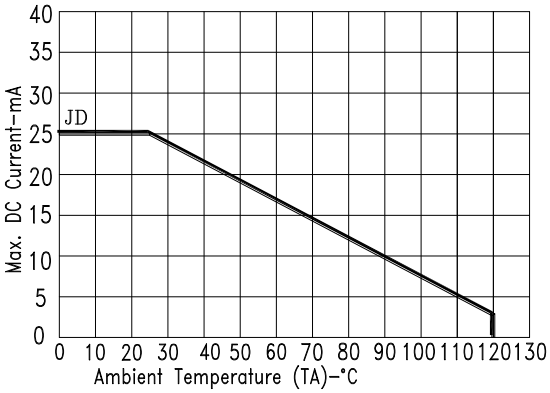


Fig4. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

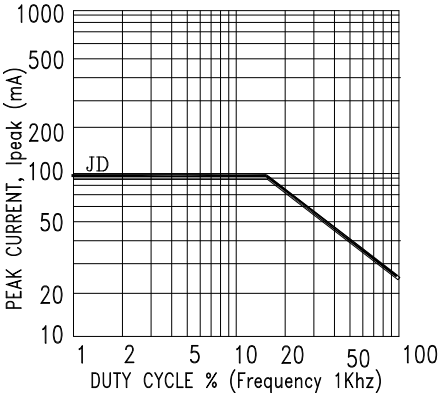


Fig5. Maximum Peak Current vs. Duty Cycle %

NOTE : JD=AlInGaP HYPER RED