



LED Display

Product Data Sheet

LTS-5001AJD-J

Spec No.: DS30-2009-0161

Effective Date: 12/15/2009

Revision: -

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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LED DISPLAY**LTS-5001AJD-J****DATA SHEET**

Rev	Description	By
01	ORIGINAL	<u>WARIN S.</u> <u>Mar 31.08</u>
02	Add min IV 3200 I _F =10mA	<u>WARIN S.</u> <u>Mar 27.09</u>
03	Add packing spec and label	KITTISAK B. July 30/2009
04	Change IF of luminous intensity From 2mA to 1mA And min IV 3400 I _F =10mA	KITTISAK B. Nov 03/2009
(Above data for PD and Customer tracking only)		
-	NPPR Received and Upload on OPNC	KITTISAK B. Nov 03/2009

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FEATURES

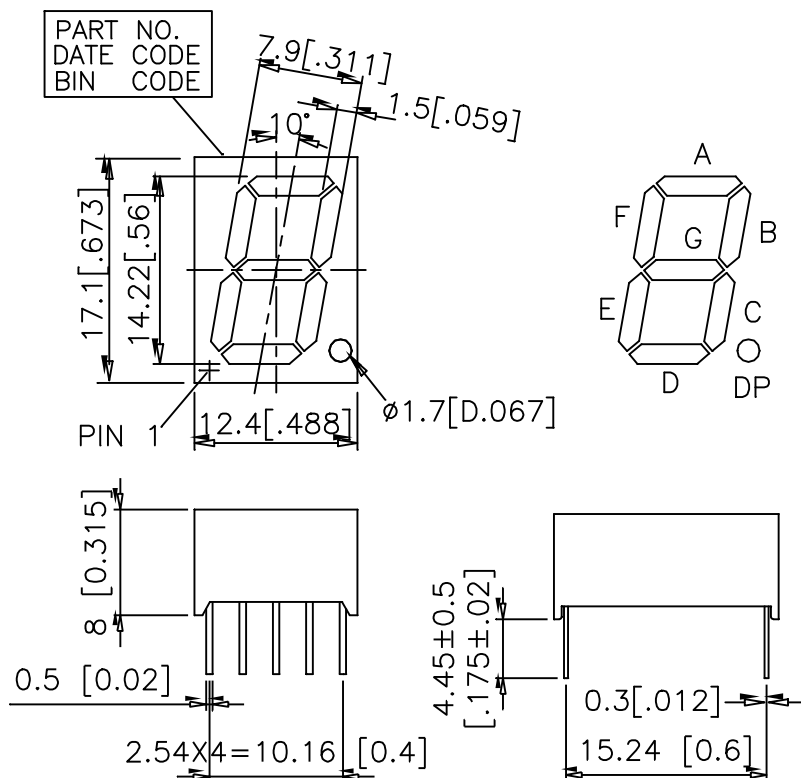
- * 0.56 inch (14.22 mm) DIGIT HEIGHT.
- * CONTINUOUS UNIFORM SEGMENTS
- * LOW POWER REQUIREMENT.
- * EXCELLENT CHARACTERS APPEARANCE.
- * HIGH BRIGHTNESS & HIGH CONTRAST.
- * WIDE VIEWING ANGLE.
- * SOLID STATE RELIABILITY.
- * CATEGORIZED FOR LUMINOUS INTENSITY.
- * **LEAD-FREE PACKAGE (ACCORDING TO ROHS)**

DESCRIPTION

The LTS-5001AJD-J is a 0.56 inch (14.22 mm) digit height single digit seven-segment display. This device utilizes AlInGaP hyper red LED chips, which are made from AlInGaP on a non-transparent GaAs substrate, and has a gray face and white segments.

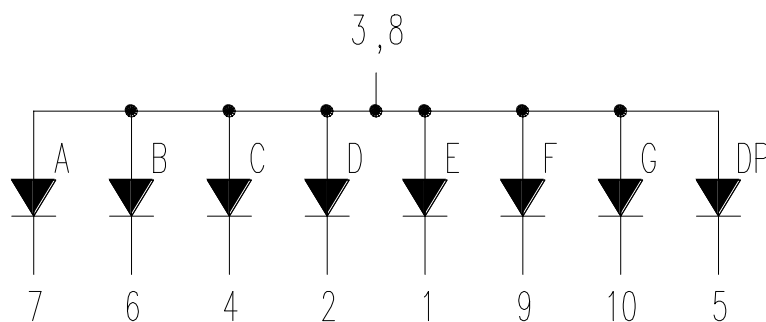
DEVICE

PART NO.	DESCRIPTION
AlInGaP HYPER RED	COMMON ANODE RT. HAND DECIMAL
LTS-5001AJD-J	

PACKAGE DIMENSIONS


NOTES: 1. All dimensions are in millimeters. Tolerances are ± 0.25 mm unless otherwise note.

2. Pin tip's shift tolerance is ± 0.4 mm.
3. Foreign material on segment ≤ 10 mils
4. Ink contamination (surface) ≤ 20 mils
5. Bending $\leq 1\%$ of reflector length
6. Bubble in segment ≤ 10 mils

INTERNAL CIRCUIT DIAGRAM


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 F
10	CATHODE G

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	25	mA
Derating Linear From 25°C Per Segment	0.28	mA/°C
Reverse Voltage Per Segment	5	V
Operating Temperature Range	-35°C to +105°C	
Storage Temperature Range	-35°C to +105°C	

Soldering Conditions: 1/16 inch below seating plane for 3 seconds at 260°C
or of temperature unit (during assembly) not over max. temperature rating above.

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C

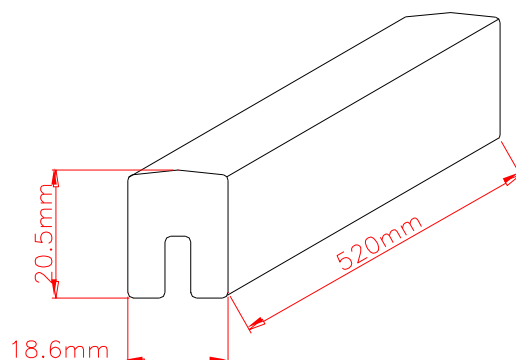
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I _v	320 3400	5000 24000		μcd	I _F =1mA I _F =10mA
Peak Emission Wavelength	λ _p		650		nm	I _F =20mA
Spectral Line Half-Width	Δλ		20		nm	I _F =20mA
Dominant Wavelength	λ _d		639		nm	I _F =20mA
Forward Voltage Per Segment	V _F		2.1	2.6	V	I _F =20mA
Reverse Current Per Segment	I _R			100	μA	V _R =5V
Luminous Intensity Matching Ratio	I _v -m			2:1		I _F =1mA

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. Cross talk specification ≤2.5%

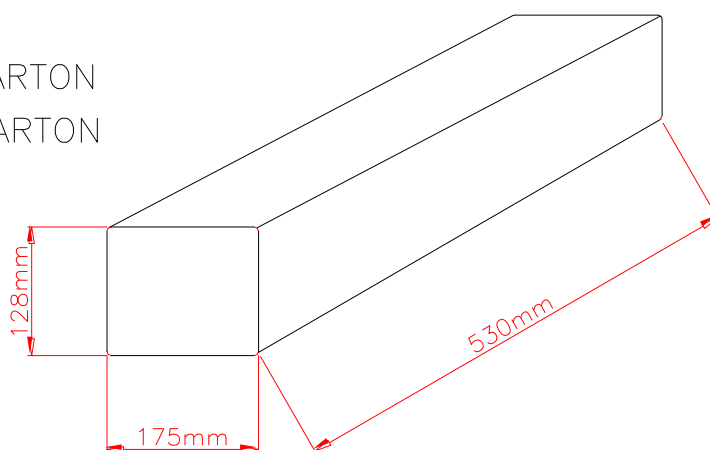
PACKING SPEC

40PCS/PACKING TUBE



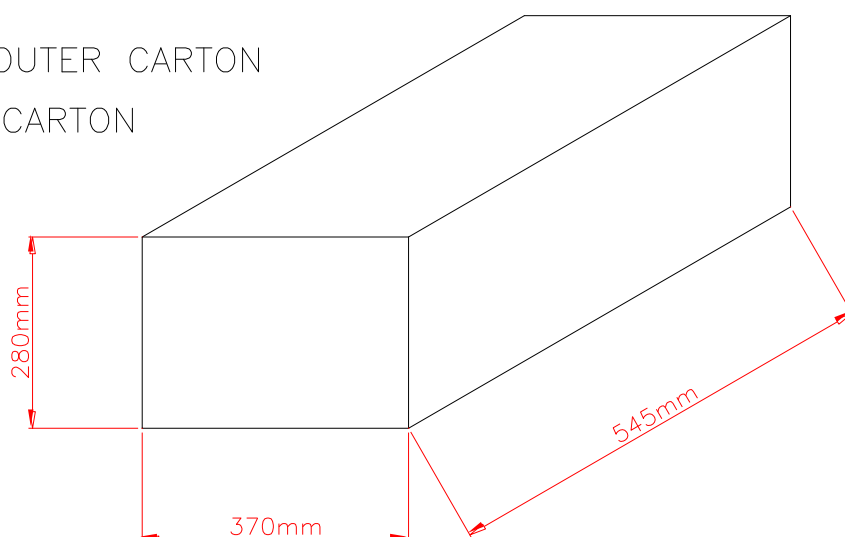
48 TUBES/INNER CARTON

1920 PCS/INNER CARTON



4 INNER CARTON/OUTER CARTON

7680 PCS/OUTER CARTON



EXAMPLE: Label marked on the device / tube / carton.

ONTUBE

	MATERIAL NO. :	LTS-5001AJD-J	BATCH : K
	QUANTITY :	40	
	CUS P/N :		MACHINE :
	DATE CODE :	0913	PB FREE
2009/03/27 01:22:21 TPD-6			

ON INNER CARTON

	MATERIAL NO. :	LTS-5001AJD-J	BATCH : K
	QUANTITY :	1920	
	CUS P/N :		MACHINE :
	DATE CODE :	0913	PB FREE
2009/03/27 01:22:21 TPD-6			

LITEON FINISHED GOODS STOCK LABEL

TAG NO. :	T0257085	
CUSTOMER :	Aici system	
CUS PART NO. :		
MATERIAL GROUP :		
MATERIAL NO :	LTS-5001AJD-J	
BATCH :	K	
QUANTITY :	1920	
DATE CODE :	0913	
COMMENT :	PBF	SHELF : BA1

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ON OUTER CARTON

LITEON FINISHED GOODS STOCK LABEL CTNNO.: 1

CUSTOMER : Aici system	
CUSTOMER P/N : NA	
CUSTOMER P/N : 	
BATCH	QUANTITY
K	7680
TOTAL 7680	

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LITEON FINISHED GOODS STOCK LABEL CTNNO.: 1

DELIVERY NOTE :	
CUSTOMER PO. :	
TYPE OF PACKAGE :	
INVOICE NO. :	
DATE CODE. :	

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TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

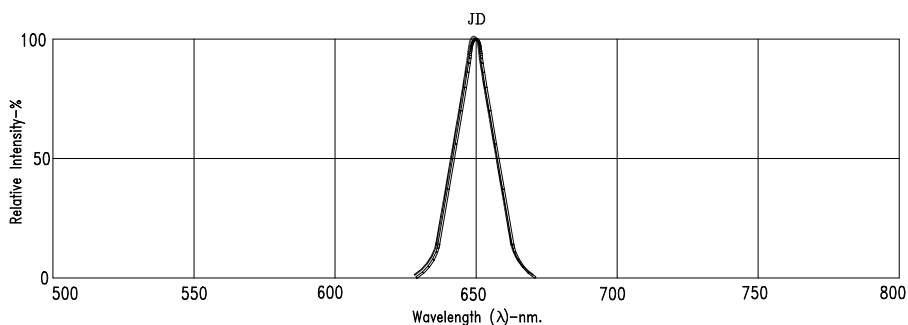


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

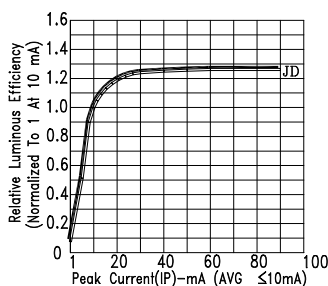


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT

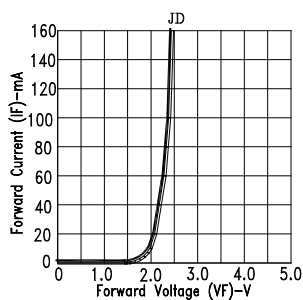


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

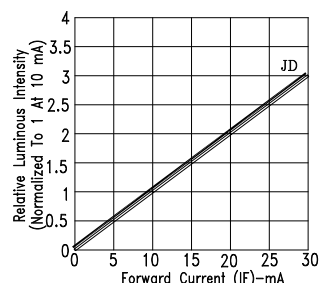


Fig4. RELATIVE LUMINOUS INTENSITY (NORMALIZED TO 1 AT 10 mA) VS. FORWARD CURRENT

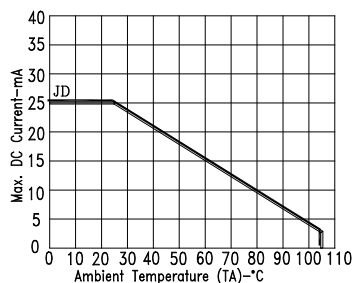


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE

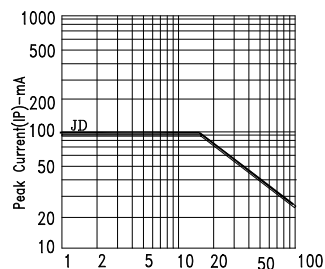


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE : JD=AlInGaP HYPER RED