LITEON®
OPTOELECTRONICS

LED Display

Product Data Sheet

LTS-546AJD-25

Spec No.: DS30-2010-0066

Effective Date: 08/18/2010

Revision: -

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

LTS-546AJD-25
DATASHEET

Rev	Description	By
01	ORIGINAL Refer to LTS-546AJD change pin length to 2.6mm.+/-0.2mm.	Warin S May 28, 2009
02	Add bin table on page 4 of 5	Kittisak B. April 08/2010
03	CSC issue (30-10-049) BIN limit G, H,J only	Kittisak B. July 28/2010
(Above data for PD and Customer tracking only)		
-	NPPR Received and Upload on OPNC	KITTISAK B. July 28/2010

SPEC. NO.: DS30-2010-0066

D A T E : July 28/2010

REV. NO. : -

PAGE NO. : 0 OF 5

FEATURES

∗0.52 INCH (13.2-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)**

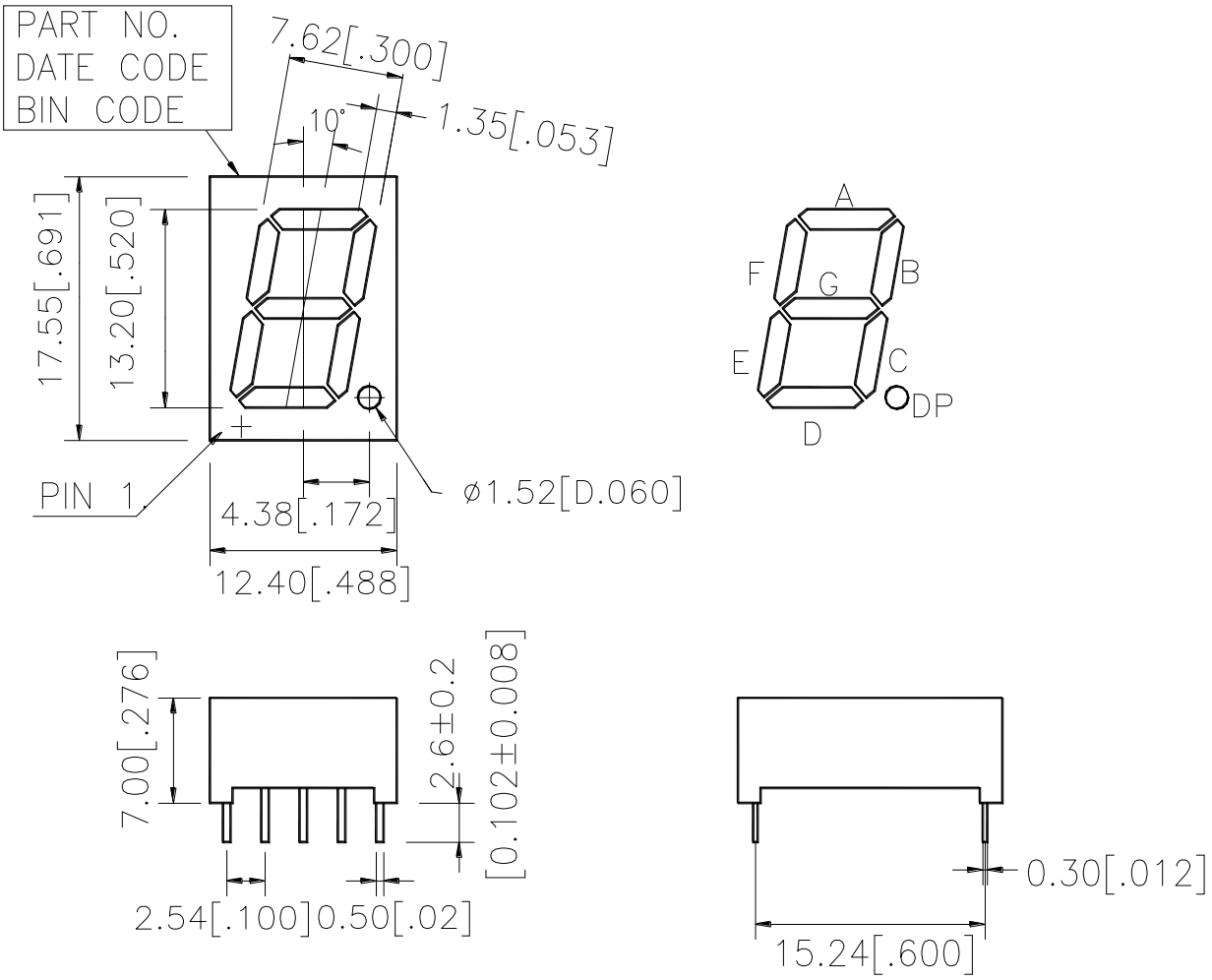
DESCRIPTION

The LTS-546AJD-25 is a 0.52-inch (13.2-mm) height single digit 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,
LTS-546AJD-25	Rt. Hand decimal

PACKAGE DIMENSIONS

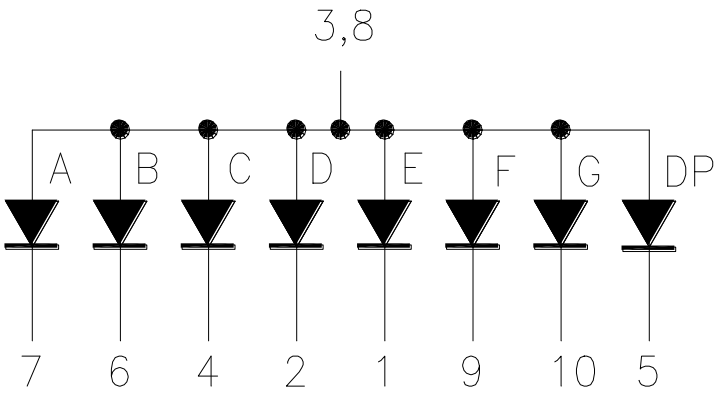


NOTES:1.All dimensions are in millimeters. Tolerances are ± 0.25 mm unless otherwise noted.

2. Pin tip's shift are ± 0.40 mm
3. Foreign material on segment ≦10mils
4. Ink contamination (surface) ≦20mils
5. Bending≦1% of reflector length
6. Bubble in segment ≦10mils

.

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 Derating Linear From 25^0C Per Segment	25 0.28	mA mA/^{0}C
Reverse Voltage Per Segment	5	V
Operating Temperature Range	-35^0C to +105^0C	
Storage Temperature Range	-35^0C to +105^0C	
Soldering Conditions: 1/16 inch below seating plane for 5 seconds at 260^0C 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	500	808		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

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

2. Cross talk max 2.5%

BIN TABLE

BIN TABLE 2 FOR LUMINOUS INTENSITY

BIN GRADE	G	H	J
RANGE(ucd)IF=1mA	501-800	801-1300	1301-2100

The Luminous Intensity Tolerance ±15percentage

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

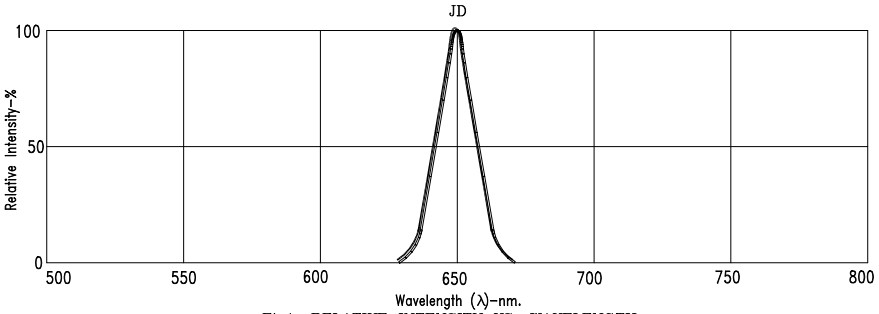


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

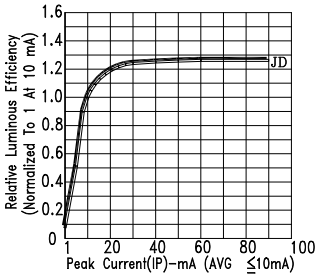


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT

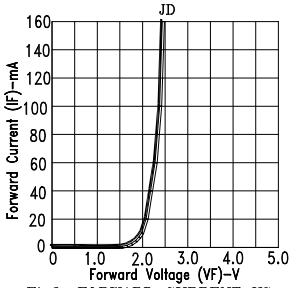


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

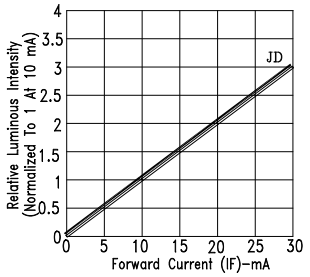


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

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

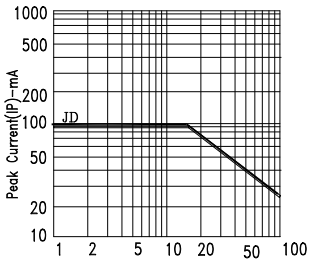


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE : JD=AlInGaP HYPER RED