



# LED Display Product Data Sheet LTP-4823JD

Spec No.: DS30-2006-142

Effective Date: 09/20/2006

Revision: -

**LITE-ON DCC**

**RELEASE**

BNS-OD-FC001/A4

**FEATURES**

- \* 0.4 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)**

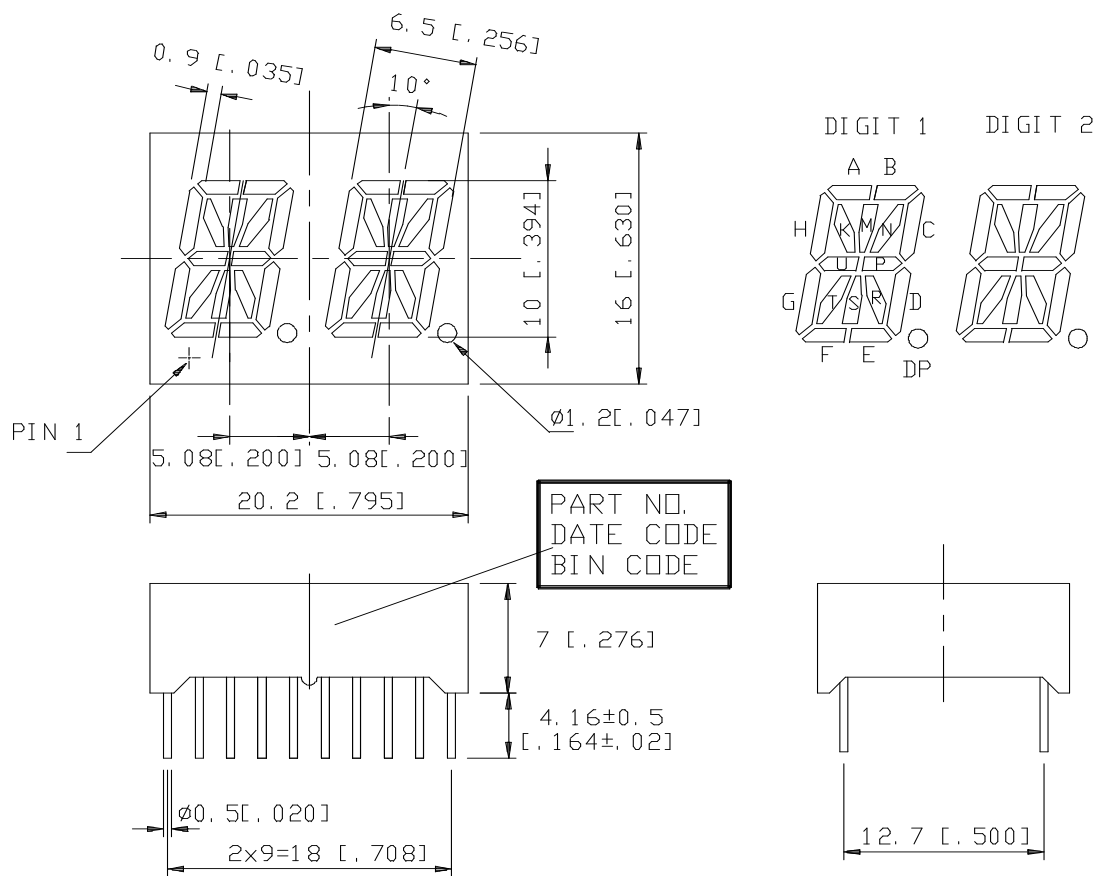
**DESCRIPTION**

The LTP-4823JD is a 0.4 inch (10 mm) digit height dual digit 16-segments alphanumeric display. This device utilizes AllnGaP hyper red LED chips, which are made from AllnGaP on a non-transparent GaAs substrate, and has a gray face and white segments.

**DEVICE**

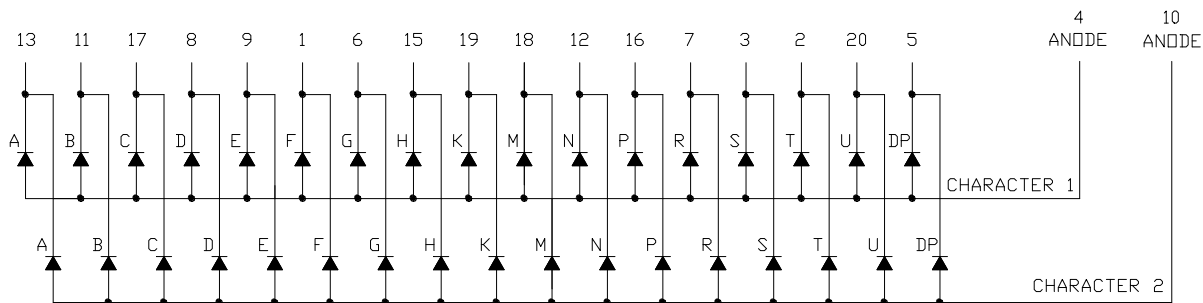
<b>PART NO.</b>	<b>DESCRIPTION</b>
AllnGaP HYPER RED	DUPLEX COMMON ANODE
LTP-4823JD	RT. HAND DECIMAL

## PACKAGE DIMENSIONS



- NOTES: 1. All dimensions are in millimeters. Tolerances are  $\pm 0.25$  mm unless otherwise note.  
 2. Pin tip's shift tolerance is  $\pm 0.4$  mm.

## INTERNAL CIRCUIT DIAGRAM



**PIN CONNECTION**

<b>No.</b>	<b>CONNECTION</b>
1	CATHODE F
2	CATHODE T
3	CATHODE S
4	COMMON ANODE CHARACTER 1
5	CATHODE D.P.
6	CATHODE G
7	CATHODE R
8	CATHODE D
9	CATHODE E
10	COMMON ANODE CHARACTER 2
11	CATHODE B
12	CATHODE N
13	CATHODE A
14	NO CONNECTION
15	CATHODE H
16	CATHODE P
17	CATHODE C
18	CATHODE M
19	CATHODE K
20	CATHODE U

**ABSOLUTE MAXIMUM RATING AT Ta=25°C**

PARAMETER	MAXIMUM RATING	UNIT
Average Power Dissipation Per Segment	70	mW
Peak Forward Current Per Segment	90	mA
Average Forward Current Per Segment	25	mA
Derating Linear From 25°C Per Segment	0.33	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 <sub>v</sub>	320	975		μcd	I <sub>F</sub> =1mA
Peak Emission Wavelength	λ <sub>p</sub>		650		nm	I <sub>F</sub> =20mA
Spectral Line Half-Width	Δλ		20		nm	I <sub>F</sub> =20mA
Dominant Wavelength	λ <sub>d</sub>		639		nm	I <sub>F</sub> =20mA
Forward Voltage Per Segment	V <sub>F</sub>		2.1	2.6	V	I <sub>F</sub> =20mA
Reverse Current Per Segment	I <sub>R</sub>			100	μA	V <sub>R</sub> =5V
Luminous Intensity Matching Ratio (Similar Light Area)	I <sub>v-m</sub>			2:1		I <sub>F</sub> =1mA

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

**TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES**

(25°C Ambient Temperature Unless Otherwise Noted)

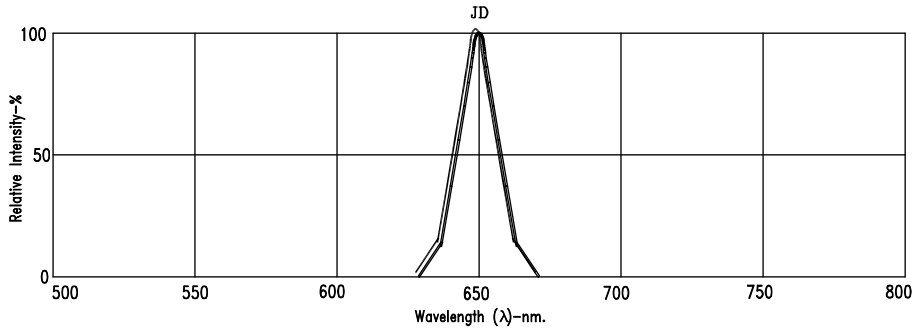


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

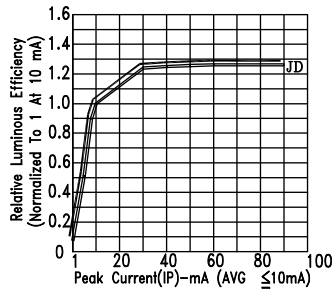


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT

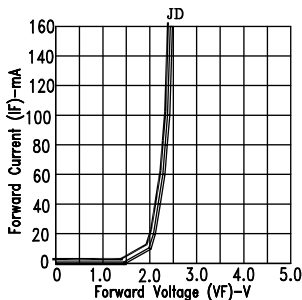


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

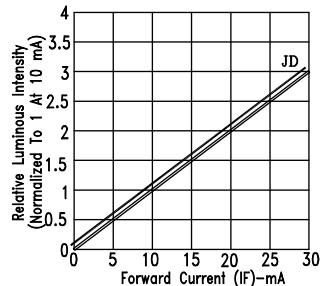


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

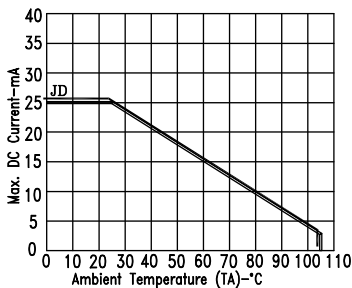


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

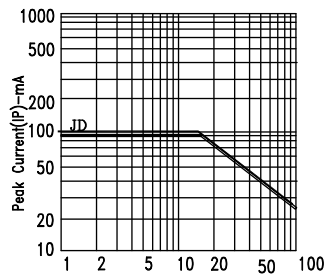


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE : JD=AlInGaP HYPER RED