



# **LED Display**

## **Product Data Sheet**

### **LTD-4608HG-NB**

Spec No.: DS30-2001-152

Effective Date: 04/29/2004

Revision: A

**LITE-ON DCC**

**RELEASE**

**BNS-OD-FC001/A4**

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## FEATURES

- \* 0.4 inch (10.0 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**

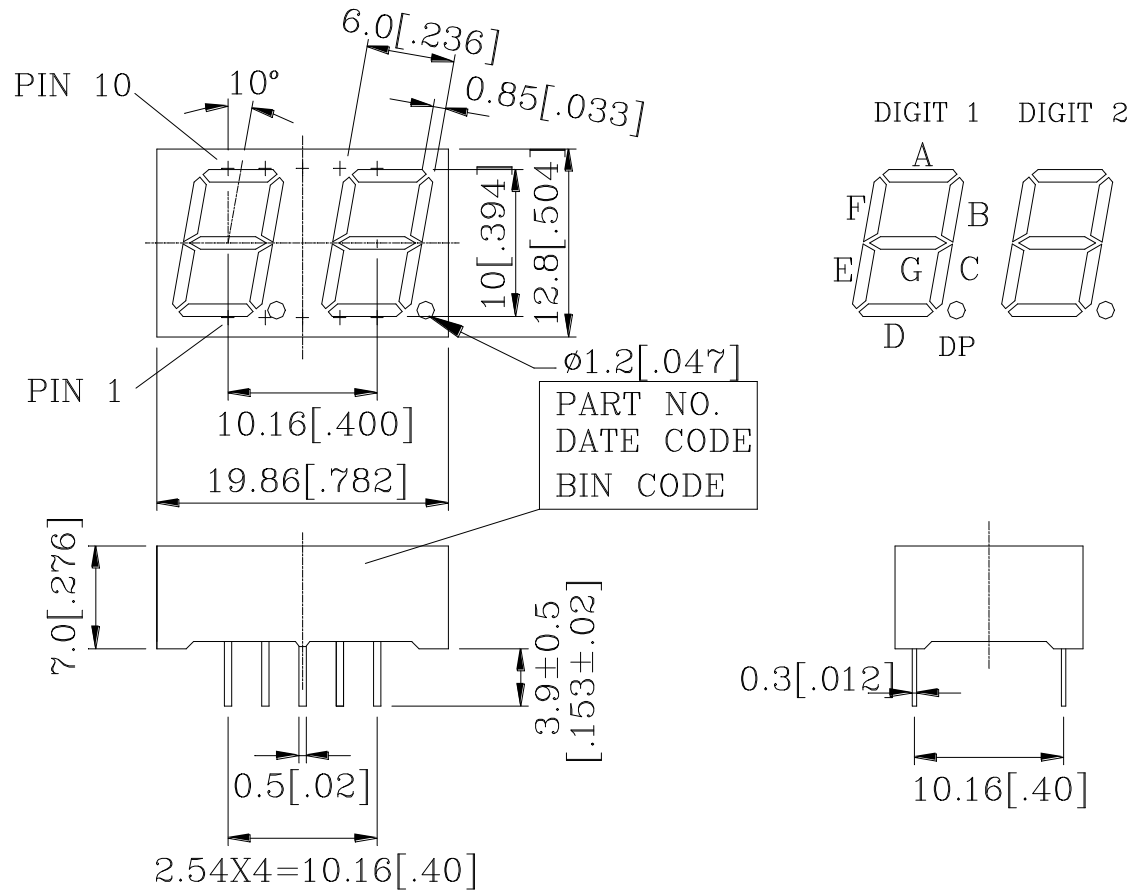
## DESCRIPTION

The LTD-4608HG-NB is a 0.4 inch (10.0 mm) digit height dual digit seven-segment display. This device uses high efficiency GREEN LED chips (GaP epi on GaP substrate).The display has black face and white segments.

## DEVICE

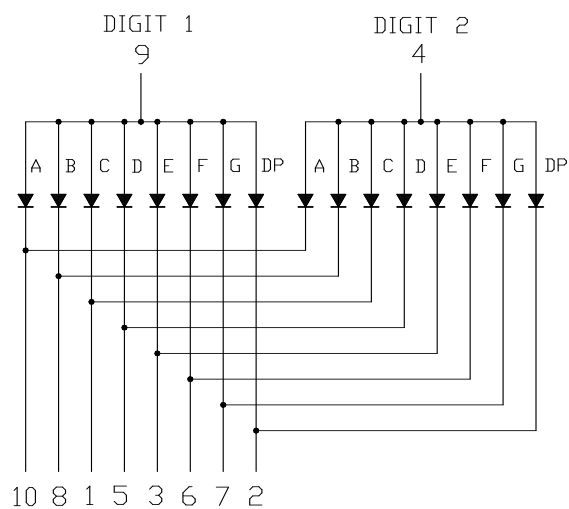
PART NO.	DESCRIPTION
HI-EFF. GREEN	Dualplex Common Anode Rt. Hand Decimal
LTD-4608HG-NB	

## PACKAGE DIMENSIONS



NOTES: All dimensions are in millimeters. Tolerances are  $\pm 0.25\text{-mm}$  (0.01") unless otherwise noted.

### INTERNAL CIRCUIT DIAGRAM



**PIN CONNECTION**

<b>No.</b>	<b>CONNECTION</b>
1	CATHODE C
2	CATHODE D.P.
3	CATHODE E
4	COMMON ANODE (DIGIT 2)
5	CATHODE D
6	CATHODE F
7	CATHODE G
8	CATHODE B
9	COMMON ANODE (DIGIT 1)
10	CATHODE A

**ABSOLUTE MAXIMUM RATING**

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation Per Segment	75	mW
Peak Forward Current Per Segment ( Frequency 1Khz,10% duty cycle, )	100*	mA
Continuous Forward Current Per Segment	25	mA
Forward Current Derating from 25 <sup>0</sup> C	0.33	mA/ <sup>0</sup> C
Reverse Voltage Per Segment	5	V
Operating Temperature Range	-35 <sup>0</sup> C to +85 <sup>0</sup> C	
Storage Temperature Range	-35 <sup>0</sup> C to +85 <sup>0</sup> C	
Soldering Conditions: 1/16 inch below seating plane for 3 seconds at 260 <sup>0</sup> C		

\*See figure 5 to establish pulsed condition

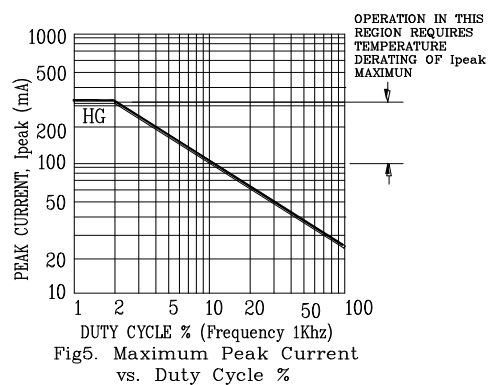
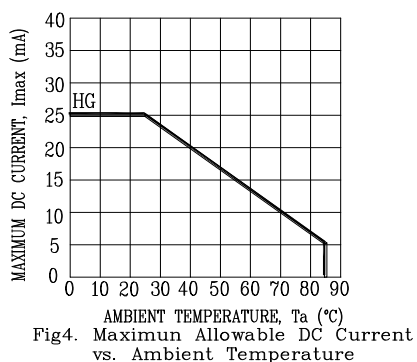
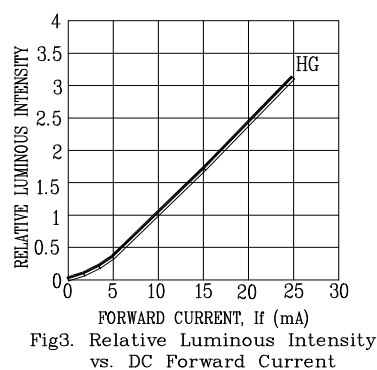
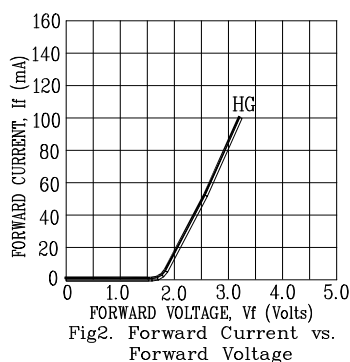
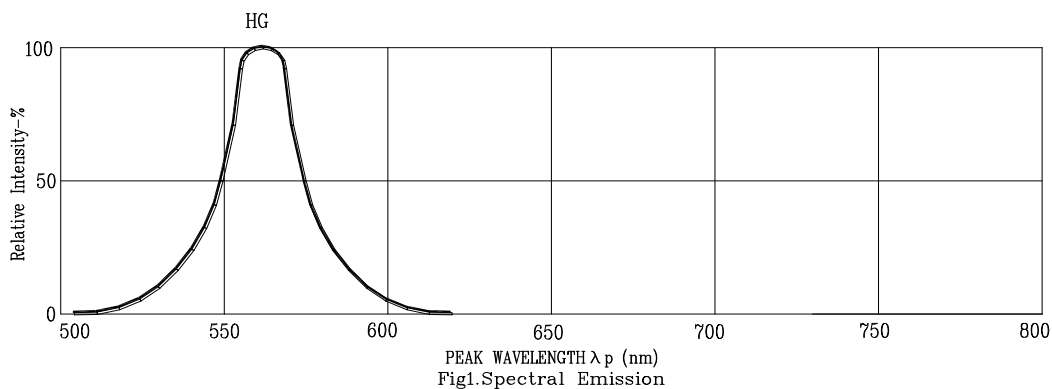
**ELECTRICAL / OPTICAL CHARACTERISTICS AT T<sub>A</sub>=25<sup>0</sup>C**

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I <sub>v</sub>	1300	3100		μcd	I <sub>F</sub> =10mA
Peak Emission Wavelength	λ <sub>p</sub>		565		nm	I <sub>F</sub> =20mA
Spectral Line Half-Width	Δλ		30		nm	I <sub>F</sub> =20mA
Dominant Wavelength	λ <sub>d</sub>		569		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	I <sub>v</sub> -m			2:1		I <sub>F</sub> =10mA

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

**TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES**

(25°C Ambient Temperature Unless Otherwise Noted)



NOTE: HG=HI-EFF. GREEN