



Spec No.: DS30-2002-149 Effective Date: 09/01/2010

Revision: A

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

Property of Lite-On Only

FEATURES

- *0.3 inch (7.62 mm) DIGIT HEIGHT
- *EXCELLENT SEGMENT UNIFORMITY
- ***LOW POWER REQUIREMENT**
- *HIGH BRIGHTNESS AND HIGH CONTRAST
- *WIDE VIEWING ANGLE
- *** SOLID STATE RELIABILITY**
- *BINNED FOR LUMINOUS INTENSITY

DESCRIPTION

The LSHD-7803 is a 0.3 inch (7.62 mm) digit height single-digit display. This device uses GREEN LED chips (GaP epi on GaP substrate). The display has gray face and green segments.

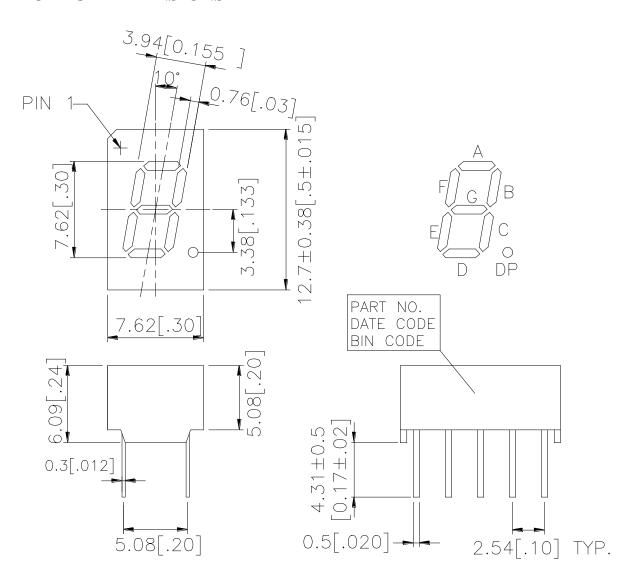
DEVICE

PART NO.	DESCRIPTION				
GREEN	Common Cathode				
LSHD-7803	Rt. Hand Decimal				

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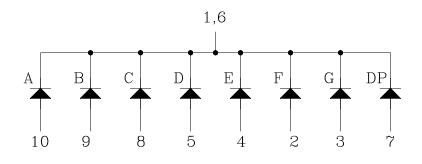
Property of Lite-On Only

PACKAGE DIMENSIONS



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

INTERNAL CIRCUIT DIAGRAM



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PIN CONNECTION

No.	CONNECTION			
1	Common Cathode			
2	Anode F			
3	Anode G			
4	Anode E			
5	Anode D			
6	Common Cathode			
7	Anode DP			
8	Anode C			
9	Anode B			
10	Anode A			

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ABSOLUTE MAXIMUM RATING AT Ta = 25°C

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°C	0.28	mA/ ⁰ 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						

^{*} see figure 5 to establish pulsed condition

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta = 25°C

PARAMETER	SYMBOL	MIN	ТҮР	MAX	UNIT	TEST CONDITION
Average Luminous Intensity Per Segment	Iv	500	1600		μcd	$I_F = 10mA$
Peak Emission Wavelength	λр		565		nm	$I_F = 20 \text{mA}$
Spectral Line Half-Width	Δλ		30		nm	$I_F = 20 \text{mA}$
Dominant Wavelength	λd		569		nm	$I_F = 20 \text{mA}$
Forward Voltage Per Segment	V_{F}		2.1	2.6	V	$I_F = 20 \text{mA}$
Reverse Current Per Segment	Ir			100	μΑ	$V_R = 5V$
Luminous Intensity Matching Ratio	Iv-m			2:1		$I_F = 10 \text{mA}$

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

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TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

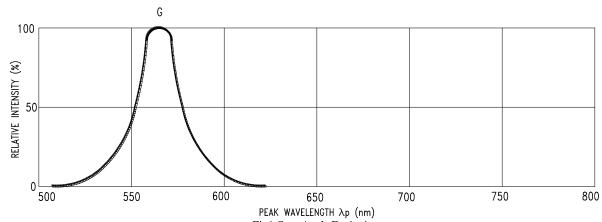
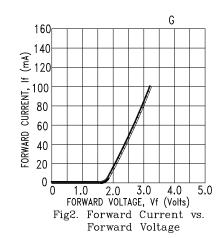
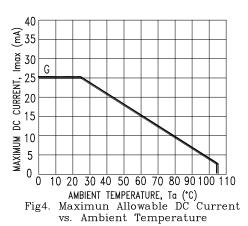


Fig1.Spectral Emission



4 3.5 G 2 10 15 20 FORWARD CURRENT, If (mA) Fig3. Relative Luminous Intensity



OPERATION IN THIS
REGION REQUIRES
TEMPERATURE
DERATING OF IPEAK
MAXIMUN 1000 500 10 2 5 10 20 100 DUTY CYCLE % (Frequency 1Khz) Fig5. Maximum Peak Current

vs. Duty Cycle %

vs. DC Forward Current

NOTE: G=GREEN.

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