



**Spec No.: DS30-2000-359** Effective Date: 11/14/2000

Revision: -

**LITE-ON DCC** 

**RELEASE** 

BNS-OD-FC001/A4

# LITEON LITE-ON ELECTRONICS, INC.

## Property of Lite-on Only

#### **FEATURES**

- \*2.0 inch (50.8 mm) DIGIT HEIGHT.
- \*LOW POWER REQUIREMENT.
- \*EXCELLENT CHARACTERS AND APPEARANCE.
- \*HIGH CONTRAST.
- \*HIGH BRIGHTNESS.
- \*WIDE VIEWING ANGLE.
- \*4X4 ARRAY WITH X-Y SELECT.
- \*STACKABLE VERTICALLY AND HORIZONTALLY.

#### **DESCRIPTION**

The LTP-2344G is 2.0 inch (50.8 mm) matrix height 4x4 dot matrix display. This device utilizes green LED chips, which are made from GaP on a GaP substrate, and has a gray face and white dots.

#### **DEVICE**

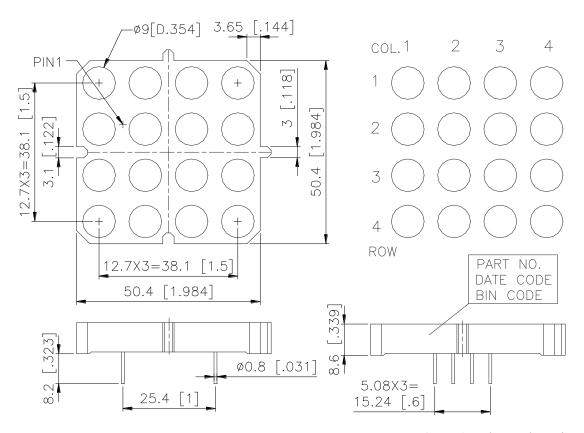
PART NO.	DESCRIPTION			
GREEN	ANODE ROW			
LTP-2344G	CATHODE COLUMN			

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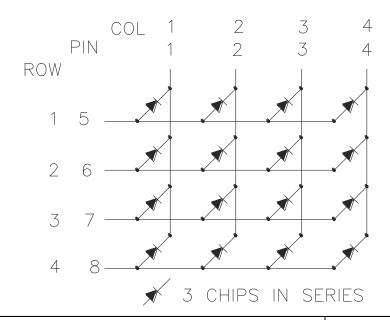
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#### **PACKAGE DIMENSIONS**



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

### INTERNAL CIRCUIT DIAGRAM



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### PIN CONNECTION

No.	CONNECTION					
1	CATHODE COLUMN 1					
2	CATHODE COLUMN 2					
3	CATHODE COLUMN 3					
4	CATHODE COLUMN 4					
5	ANODE ROW 1					
6	ANODE ROW 2					
7	ANODE ROW 3					
8	ANODE ROW 4					

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

PARAMETER	MAXIMUM RATING	UNIT		
Average Power Dissipation Per Dot	96	mW		
Peak Forward Current Per Dot	90	mA		
Average Forward Current Per Dot	11	mA		
Derating Linear From 25 <sup>°</sup> C Per Dot	0.15	mA/°C		
Reverse Voltage Per Segment	15	V		
Operating Temperature Range	-35°C to +85°C			
Storage Temperature Range	-35°C to +85°C			
Solder Temperature: max 260°C for max 3sec at 1.6mm[1/16inch] below seating plane.				

#### ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C

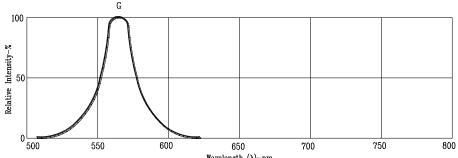
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	Iv	5.0	11.0		mcd	IP=80mA 1/16DUTY
Peak Emission Wavelength	λр		565		nm	IF=20mA
Spectral Line Half-Width	Δλ		30		nm	I <sub>F</sub> =20mA
Dominant Wavelength	λd		569		nm	I <sub>F</sub> =20mA
			6.3	7.8	V	I <sub>F</sub> =20mA
Forward Voltage Per Chip	$V_{\mathrm{F}}$		9.0	11.1		I <sub>F</sub> =80mA
Reverse Current Per Chip	IR			100	μΑ	V <sub>R</sub> =15V
Luminous Intensity Matching Ratio	Iv-m			2:1		IP=80mA 1/16DUTY

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

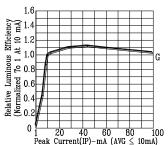
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#### TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

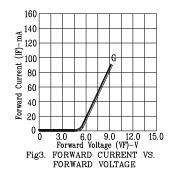
(25°C Ambient Temperature Unless Otherwise Noted)

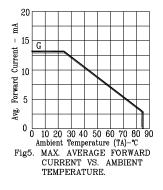


 $\label{eq:wavelength} \begin{tabular}{lll} Wavelength $(\lambda)$-nm. \\ Fig1. RELATIVE INTENSITY VS. WAVELENGTH \\ \end{tabular}$ 



I 2U 4U 60 80 100
Peak Current(IP)-mA (AVG \( \) 10mA)
RELATIVE LUMINOUS EFFICIENCY
(LUMINOUS INTENSITY PER UNIT
CURRENT) VS. PEAK CURRENT
(REFRESH RATE 1KHz)





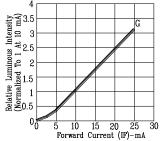
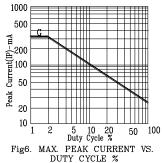


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: G=GREEN

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