

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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**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**

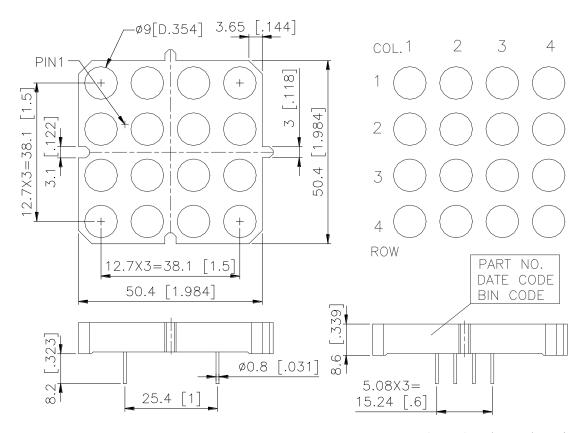
PART NO.	DESCRIPTION			
GREEN	ANODE ROW			
LTP-2344G	CATHODE COLUMN			

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## LITE-ON ELECTRONICS, INC.

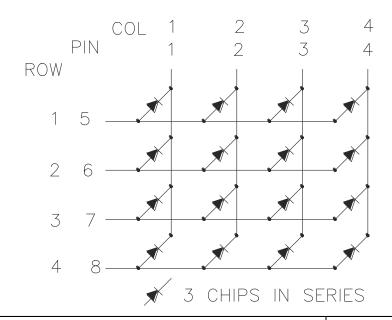
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#### PACKAGE DIMENSIONS



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

### INTERNAL CIRCUIT DIAGRAM



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# LITEON LITE-ON ELECTRONICS, INC.

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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°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

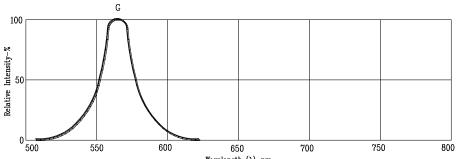
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	Iv	5.0	11.0		mcd	IP=80mA 1/16DUTY
Peak Emission Wavelength	λр		565		nm	IF=20mA
Spectral Line Half-Width	Δλ		30		nm	I <sub>F</sub> =20mA
Dominant Wavelength	λd		569		nm	I <sub>F</sub> =20mA
			6.3	7.8	V	I <sub>F</sub> =20mA
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.

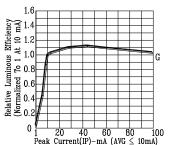
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#### TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

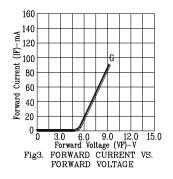
(25°C Ambient Temperature Unless Otherwise Noted)

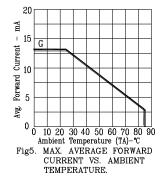


 $\label{eq:wavelength} \begin{tabular}{lll} Wavelength $(\lambda)$-nm. \\ Fig1. RELATIVE INTENSITY VS. WAVELENGTH \\ \end{tabular}$ 



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)





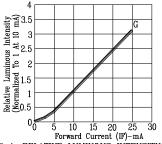
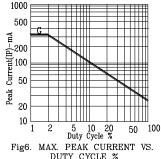


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: G=GREEN

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