



**Spec No.: DS-30-99-066**Effective Date: 04/15/2000

Revision: -

**LITE-ON DCC** 

**RELEASE** 

BNS-OD-FC001/A4

## LITEON LITE-ON ELECTRONICS, INC.

### Property of Lite-On Only

### **FEATURES**

- \*1.24 inch (31.5 mm) MATRIX HEIGHT.
- \*LOW POWER REQUIREMENT.
- \*SINGLE PLANE, WIDE VIEWING ANGLE.
- \* SOLID STATE RELIABILITY.
- \*5×7 ARRAY WITH X-Y SELECT.
- \*COMPATIBLE WITH USASCII AND EBCDIC CODES.
- \*STACKABLE HORIZONTALLY.
- \*CATEGORIZED FOR LUMINOUS INTENSITY.

### **DESCRIPTION**

The LTP-1057AHR is a 1.24 inch (31.5 mm) matrix height 5x7 dot matrix display. This device utilizes high efficiency red LED chips, which are made from GaAsP on a transparent GaP substrate, and has a red face and red dot color.

### **DEVICE**

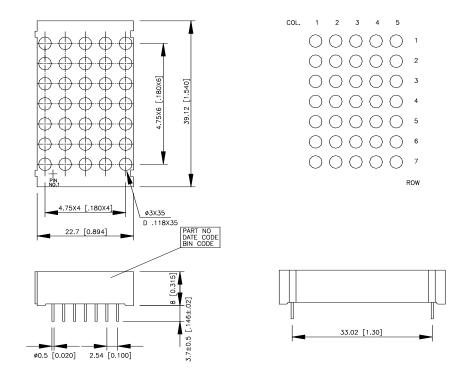
PART NO.	DESCRIPTION		
HI-EFF. RED	ANODE COLUMN		
LTP-1057AHR	CATHODE ROW		

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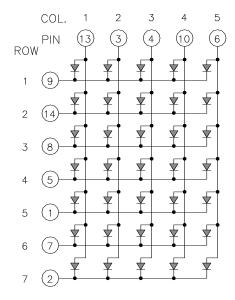
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### PACKAGE DIMENSIONS



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

### INTERNAL CIRCUIT DIAGRAM



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### PIN CONNECTION

No.	CONNECTION
1	CATHODE ROW 5
2	CATHODE ROW 7
3	ANODE COLUMN 2
4	ANODE COLUMN 3
5	CATHODE ROW 4
6	ANODE COLUMN 5
7	CATHODE ROW 6
8	CATHODE ROW 3
9	CATHODE ROW 1
10	ANODE COLUMN 4
11	NO PIN
12	NO PIN
13	ANODE COLUMN 1
14	CATHODE ROW 2

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

PARAMETER	MAXIMUM RATING	UNIT			
Average Power Dissipation Per Dot	36	mW			
Peak Forward Current Per Dot	100	mA			
Average Forward Current Per Dot	13	mA			
Derating Linear From 25 <sup>°</sup> C Per Dot	0.17	mA/°C			
Reverse Voltage Per Dot	5	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

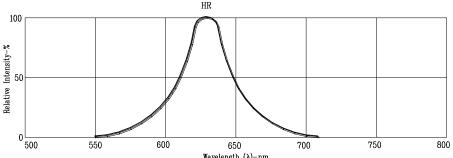
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
A vonce of voncinous Texton sites	Iv	1780	4000		μcd	I <sub>p</sub> =80mA
Average Luminous Intensity						1/16Duty
Peak Emission Wavelength	λр		635		nm	I <sub>F</sub> =20mA
Spectral Line Half-Width	Δλ		40		nm	I <sub>F</sub> =20mA
Dominant Wavelength	λd		623		nm	I <sub>F</sub> =20mA
	VF		2.0	2.6	<b>X</b> 7	I <sub>F</sub> =20mA
Forward Voltage any Dot			2.6	3.4	V	I <sub>F</sub> =80mA
Reverse Current any Dot	Ir			100	μΑ	V <sub>R</sub> =5V
Luminous Intensity Matching Ratio	Iv-m			2:1		I=10mA

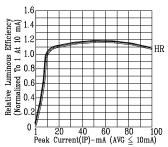
Note: Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commision Internationale De L'Eclairage) eye-response curve.

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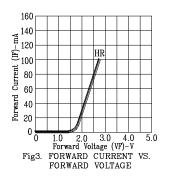
### TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

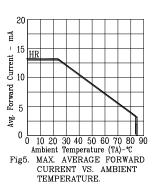
(25°C Ambient Temperature Unless Otherwise Noted)





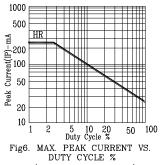
0 V d d0 80 100 Peak Current(IP)-mA (AVG ≦ 10mA) RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT (REFRESH RATE 1KHz) Fig2.





Relative Luminous Intensity (Normalized To 1 At 10 mA) HR Forward Current (IF)-mA
Fig4. RELATIVE LUMINOUS INTENSITY

VS. FORWARD CURRENT



(REFRESH RATE 1KHz)

NOTE: HR=HI.-EFF. RED

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**Authorized Distributor** 

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