



# LED Display Product Data Sheet LTP-14058AKY

Spec No.: DS-30-99-146

Effective Date: 04/15/2000

Revision: -

**LITE-ON DCC**

**RELEASE**

BNS-OD-FC001/A4

**FEATURES**

- \* 1.4 inch (35.76 mm) MATRIX HEIGHT.
- \* LOW POWER REQUIREMENT.
- \* SINGLE PLANE, WIDE VIEWING ANGLE.
- \* SOLID STATE RELIABILITY.
- \* 5x8 ARRAY WITH X-Y SELECT.
- \* COMPATIBLE WITH USASCII AND EBCDIC CODES.
- \* STACKABLE HORIZONTALLY.
- \* CATEGORIZED FOR LUMINOUS INTENSITY.

**DESCRIPTION**

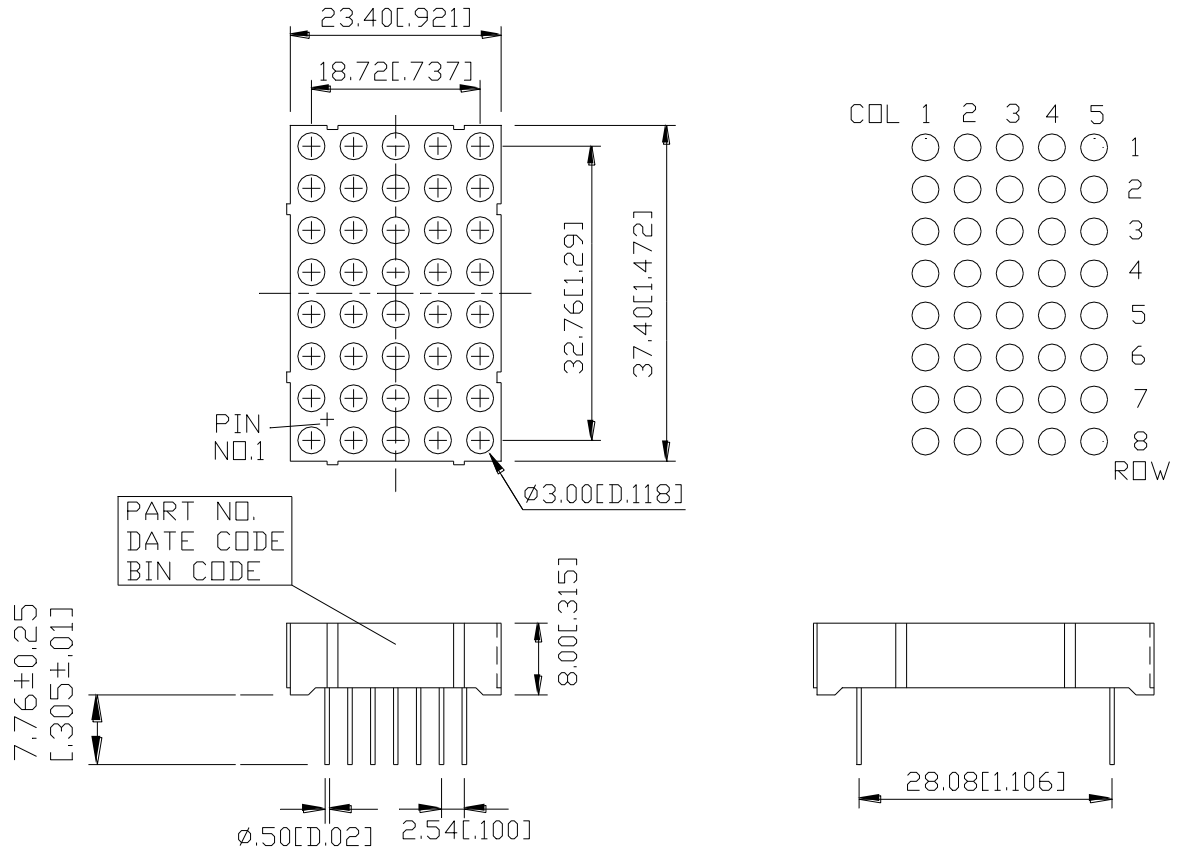
The LTP-14058AKY is a 1.4 inch ( 35.76 mm) matrix height 5x8 dot matrix displays. This device utilizes AlInGaP amber yellow LED chips which are made from AlInGaP on a transparent GaAs substrate, with a gray face and white dot color.

**DEVICE**

<b>PART NO.</b>	<b>DESCRIPTION</b>
AllnGaP AMBER YELLOW	ANODE COLUMN
LTP-14058AKY	CATHNODE ROW

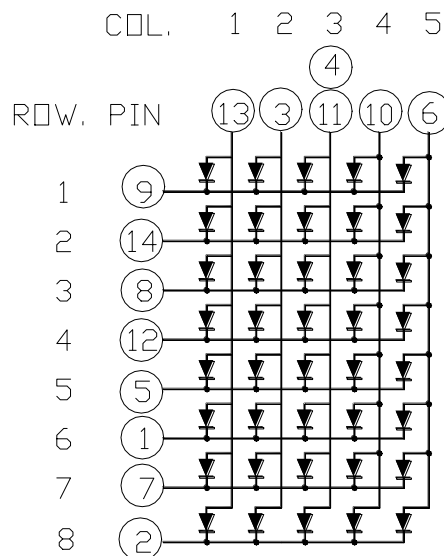
- \* Strongly suggest the application is designed by constant current source, because the chip brightness is highly sensitive to forward voltage.

## PACKAGE DIMENSIONS



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

## INTERNAL CIRCUIT DIAGRAM



**PIN CONNECTION**

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

**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°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
Average Luminous Intensity	I <sub>v</sub>	2100	3800		μcd	I <sub>p</sub> =32mA 1/16Duty
Peak Emission Wavelength	λ <sub>p</sub>		595		nm	I <sub>F</sub> =20mA
Spectral Line Half-Width	Δλ		15		nm	I <sub>F</sub> =20mA
Dominant Wavelength	λ <sub>d</sub>		592		nm	I <sub>F</sub> =20mA
Forward Voltage any Dot	V <sub>F</sub>		2.05	2.6	V	I <sub>F</sub> =20mA
Reverse Current any Dot	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> =2mA

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

**TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES**

(25°C Ambient Temperature Unless Otherwise Noted)

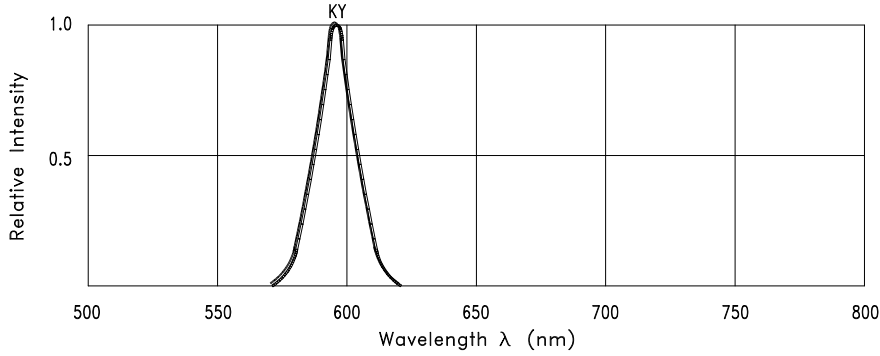


Fig1. Relative Intensity vs. Wavelength

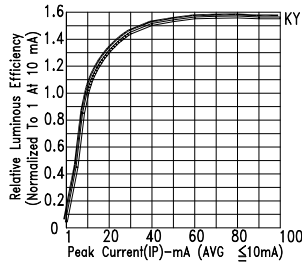


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT (REFRESH RATE 1KHz)

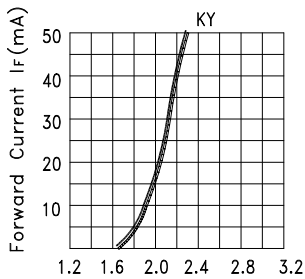


Fig3. Forward Current vs. Forward Voltage

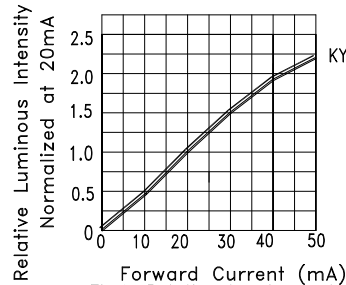


Fig4. Relative Luminous Intensity vs. Forward Current

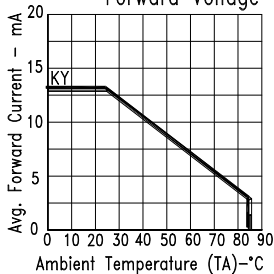


Fig5. Max. Average Forward Current vs. Ambient Temperature.

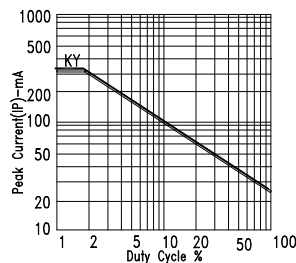


Fig6. Max. Peak Current vs. Duty Cycle % (Refresh Rate 1KHz)

NOTE : KY=AlInGaP Amber Yellow