



# **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**

**LITE-ON Technology Corp. / Optoelectronics**

No.90,Chien 1 Road, Chung Ho, New Taipei City 23585, Taiwan, R.O.C.

Tel: 886-2-2222-6181 Fax: 886-2-2221-1948 / 886-2-2221-0660

<http://www.liteon.com/opto>

**FEATURES**

- \* 1.4 inch (35.76 mm) MATRIX HEIGHT.
- \* LOW POWER REQUIREMENT.
- \* SINGLE PLANE, WIDE VIEWING ANGLE.
- \* SOLID STATE RELIABILITY.
- \* 5×8 ARRAY WITH X-Y SELECT.
- \* COMPATIBLE WITH USASCII AND EBCDIC CODES.
- \* STACKABLE HORIZONTALLY.
- \* CATEGORIZED FOR LUMINOUS INTENSITY.

**DESCRIPTION**

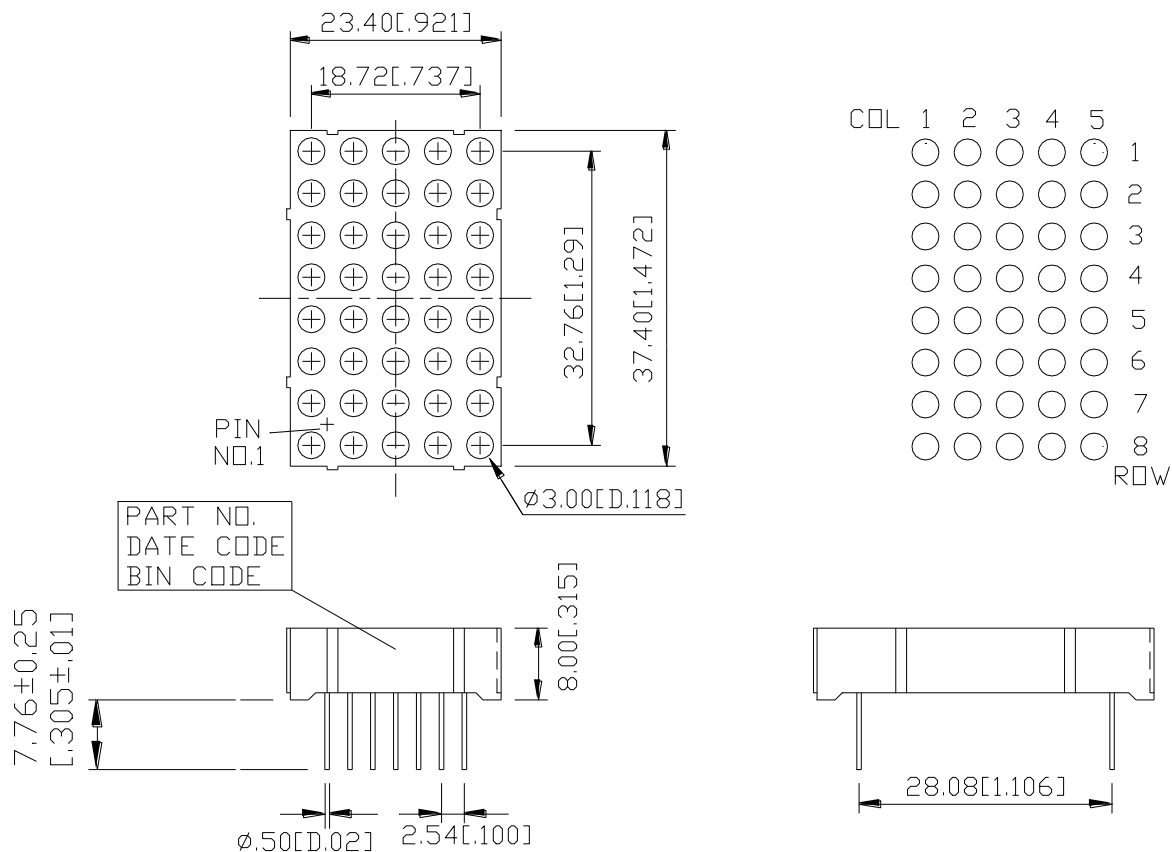
The LTP-14058AKY is a 1.4 inch ( 35.76 mm) matrix height 5×8 dot matrix displays. This device utilizes AlInGaP amber yellow LED chips which are made from AlInGaP on a transparent GaAs substrate, with a gray face and white dot color.

**DEVICE**

| PART NO.             | DESCRIPTION  |
|----------------------|--------------|
| AlInGaP AMBER YELLOW | ANODE COLUMN |
| LTP-14058AKY         | CATHNODE ROW |

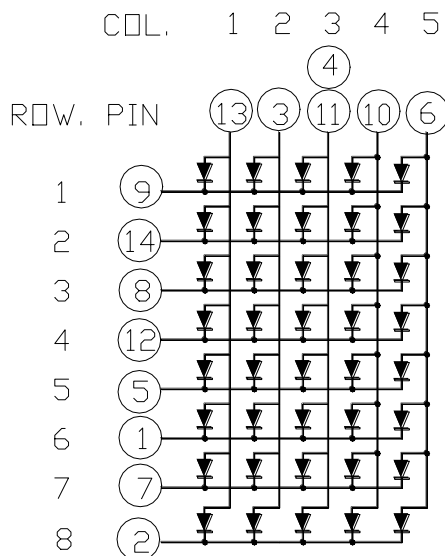
- \* Strongly suggest the application is designed by constant current source, because the chip brightness is highly sensitive to forward voltage.

## 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<br>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 (Commision Internationale De L'Eclairage) eye-response curve.

## TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

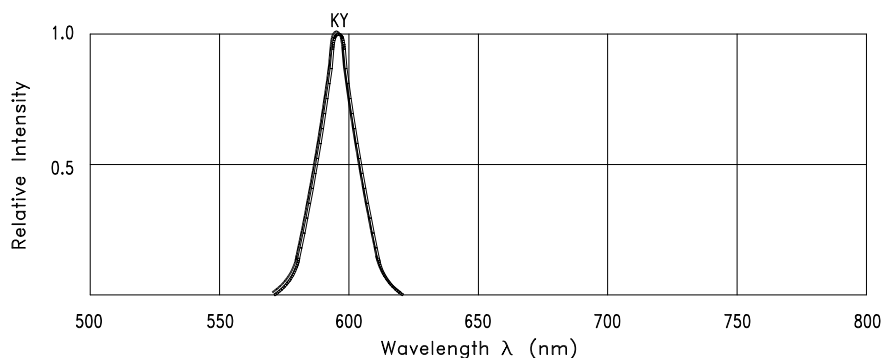


Fig1. Relative Intensity vs. Wavelength

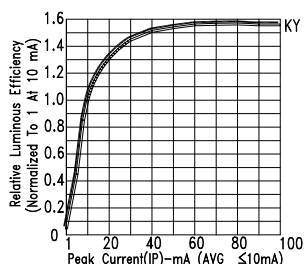


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT (REFRESH RATE 1KHz)

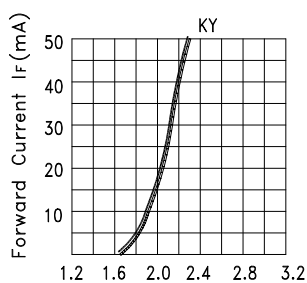


Fig3. Forward Current vs. Forward Voltage

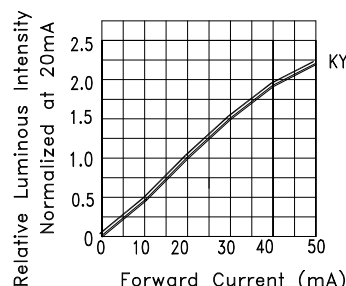


Fig4. Relative Luminous Intensity vs. Forward Current

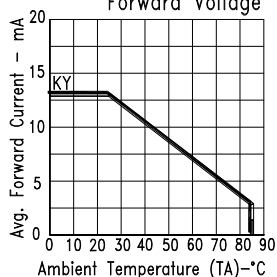


Fig5. Max. Average Forward Current vs. Ambient Temperature.

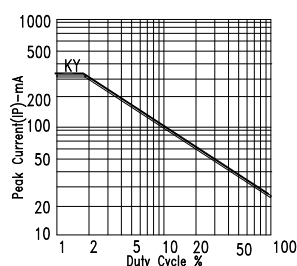


Fig6. Max. Peak Current vs Duty Cycle % (Refresh Rate 1KHz)

NOTE : KY=AlInGaP Amber Yellow

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Lite-On:](#)

[LTP-14058AKY](#)