LITEON®
OPTOELECTRONICS

LED Display
Product Data Sheet
LTS-4910AHR

Spec No. :DS-30-97-311
Effective Date: 06/16/2022
Revision: A

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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LED DISPLAY

LTS-4910AHR

Rev	Description	By	Date DD/MM/YYYY
01	Preliminary SPEC	Ruby Lee	16/10/2000
Above data for PD and Customer tracking only			
-	Preliminary SPEC	Ruby Lee	16/10/2000
A	1.Add AlInGaP dice in description at page 2 2.Update note 2 of Electrical/Optical Characteristics at page 5 3.Correct typical Electrical/Optical Characteristics Curves at page 6	William Lin	31/03/2022

LED DISPLAY
LTS-4910AHR

1. Description

The LTS-4910AHR is a 0.4 inch (10.16 mm) digit height single digit seven-segment display. This device utilizes high efficiency red LED chips, (GaP epi on GaP substrate / AlInGaP on a non-transparent GaAs substrate) and has a red face and red segments.

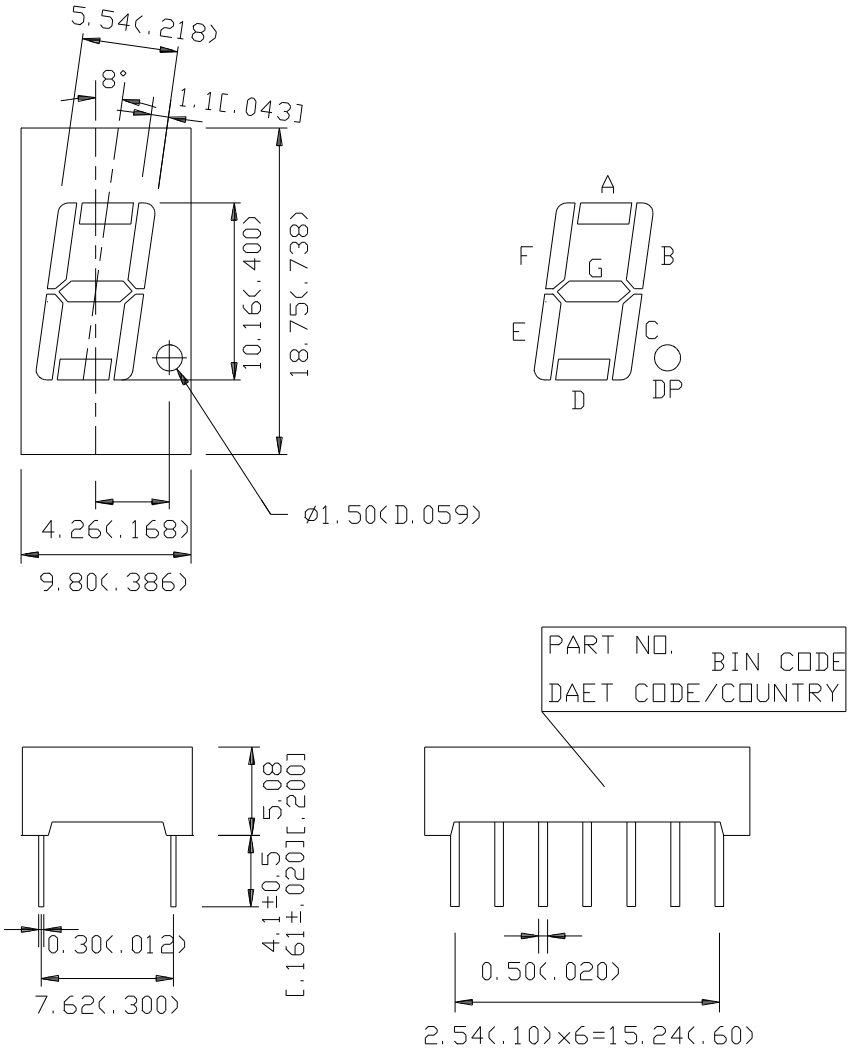
1.1 Features

- 0.4 inch (10.16 mm) DIGIT HEIGHT.
- CONTINUOUS UNIFORM SEGMENTS.
- LOW POWER REQUIREMENT.
- EXCELLENT CHARACTERS APPEARANCE.
- HIGH BRIGHTNESS & HIGH CONTRAST.
- WIDE VIEWING ANGLE.
- SOLID STATE RELIABILITY.
- CATEGORIZED FOR LUMINOUS INTENSITY.

1.2 Device

Part No	Description
RED ORANGE	Common Anode
LTS-4910AHR	Rt. Hand Decimal

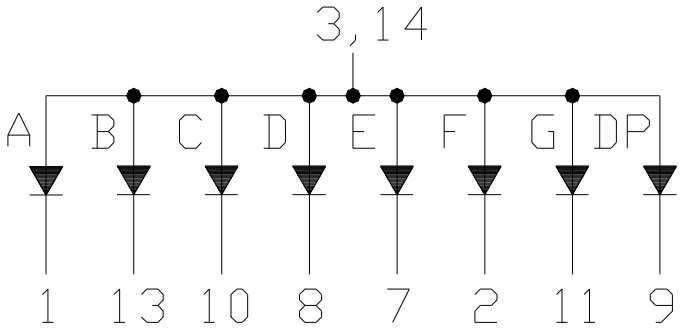
2. Package Dimensions



Note:

1. All dimensions are in millimeters. Tolerances are ±0.25 mm (0.01 “) unless otherwise noted.

3. Internal Circuit Diagram



4. Pin Connection

No.	CONNECTION
1	CATHODE A
2	CATHODE F
3	COMMON ANODE
4	NO PIN
5	NO PIN
6	NO PIN
7	CATHODE E
8	CATHODE D
9	CATHODE DP
10	CATHODE C
11	CATHODE G
12	NO PIN
13	CATHODE B
14	COMMON ANODE

5. Rating and Characteristics

5.1. Absolute Maximum Rating at Ta=25℃

Parameter	Maximum Rating	Unit
Power Dissipation Per Segment	75	mW
Peak Forward Current Per Segment (1/10 Duty Cycle, 0.1ms Pulse Width)	100	mA
Continuous Forward Current Per Segment	25	mA
Derating Linear From 25^{0}C Per Segment	0.33	mA/℃
Reverse Voltage Per Segment	5	V
Operating Temperature Range	-35℃ to +85℃	
Storage Temperature Range	-35℃ to +85℃	
Solder Temperature: max 260℃ for max 3sec at 1.6mm[1/16inch] below seating plane.		

5.2. Electrical / Optical Characteristics at Ta=25℃

Parameter	Symbol	MIN.	TYP.	MAX.	Unit	Test Condition
Average Luminous Intensity	IV	870	2200		μcd	IF = 10mA
Peak Emission Wavelength	λp		635		nm	IF = 20mA
Spectral Line Half-Width	Δλ		40		nm	IF = 20mA
Dominant Wavelength	λd		623		nm	IF = 20mA
Forward Voltage Per Segment	VF		2.0	2.6	V	IF = 20mA
Reverse Current Per Segment	IR			100	μA	VR = 5V
Luminous Intensity Matching Ratio	IV-m			2:1		IF = 10mA

Note:

1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commision Internationale De L'Eclairage) eye-response curve.
2. Reverse voltage is only for IR test, it cannot continue to operate this situation.

5.3. Typical Electrical / Optical Characteristics Curves

(25℃ Ambient Temperature Unless Otherwise Noted)

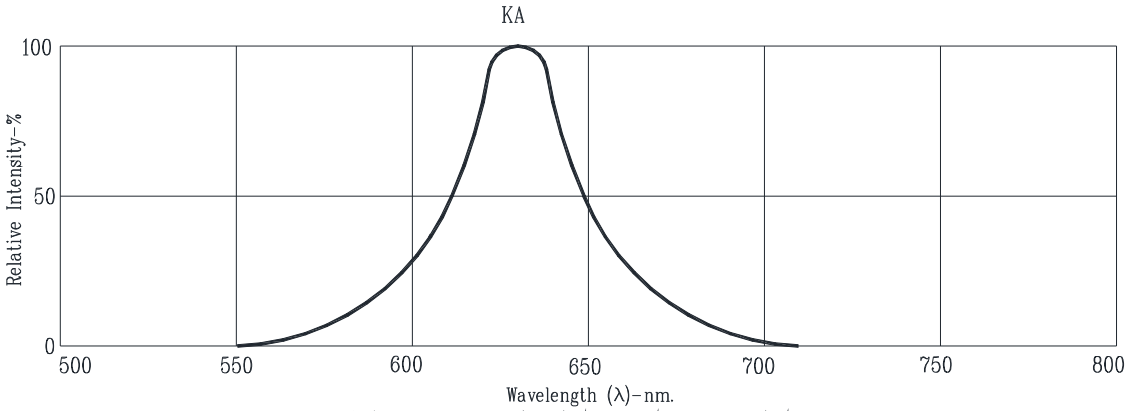


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

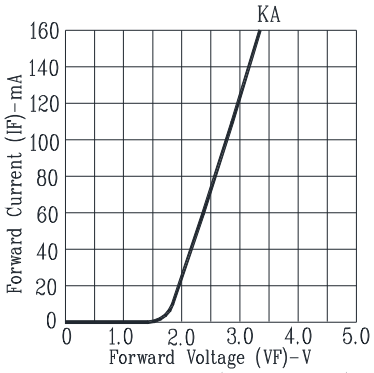


Fig2. FORWARD CURRENT VS. FORWARD VOLTAGE

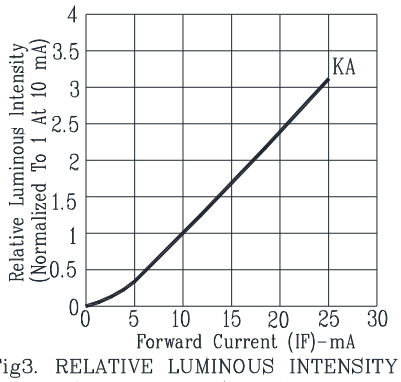


Fig3. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

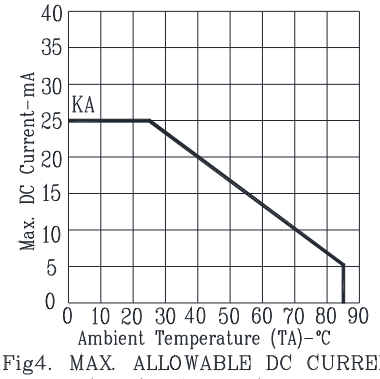


Fig4. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

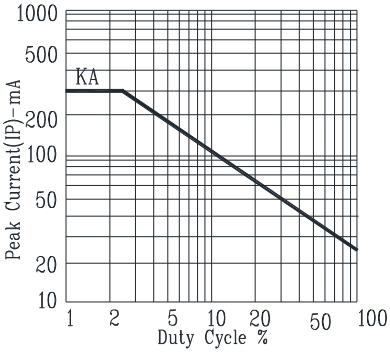


Fig5. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)