

LED Display
Product Data Sheet
LTS-312AG

Spec No. :DS-30-97-276
Effective Date: 06/29/2022
Revision: B

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

LED DISPLAY LTS-312AG

LED DISPLAY

LTS-312AG

<u>Rev</u>	<u>Description</u>	<u>By</u>	<u>Date</u> <u>DD/MM/YYYY</u>
01	Preliminary SPEC	Koko Hsu	26/04/2000
Above data for PD and Customer tracking only			
-	Preliminary SPEC	Koko Hsu	26/04/2000
A	lose MFG site: TJ; Modified DS title to "LITE-ON TECHNOLOGY CORPORATION"	Eason Lin	20/03/2009
B	1.Add AllnGaP 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	30/03/2022

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1. Description

The LTS-312AG is a 0.3-inch (7.62-mm) digit height single digit seven-segment display. This device utilizes green LED chips, (GaP epi on GaP substrate / AlInGaP on a non-transparent GaAs substrate) and has a gray face and white segments.

1.1 Features

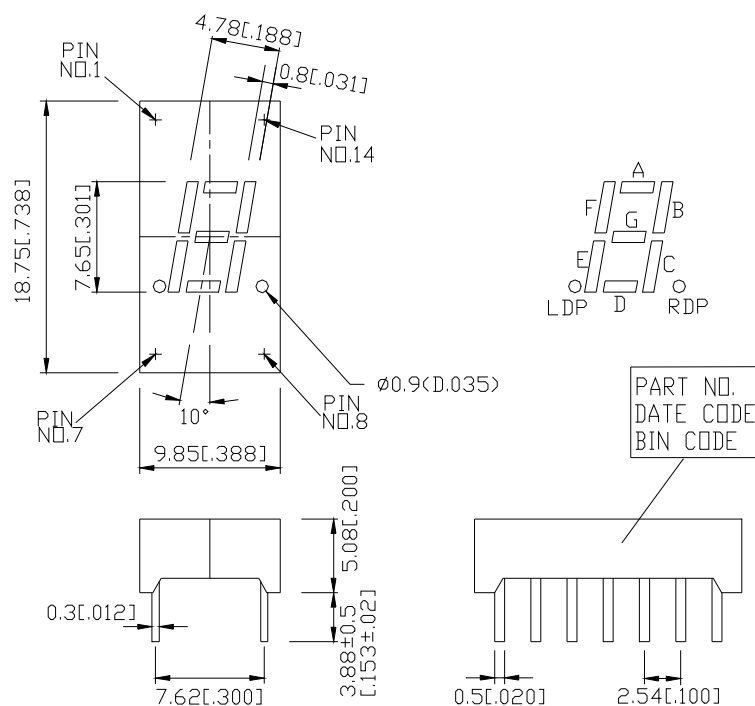
- * 0.3 inch (7.62-mm) DIGIT HEIGHT.
- * CONTINUOUS UNIFORM SEGMENTS.
- * LOW POWER REQUIREMENT.
- * EXCELLENT CHARACTERS APPEARANCE.
- * HIGH BRIGHTNESS & HIGH CONTRAST.
- * WIDE VIEWING ANGLE.
- * SOLID STATE RELIABILITY.
- * CATEGORIZED FOR LUMINOUS INTENSITY.

1.2 Device

Part No	Description
Green	COMMON ANODE
LTS-312AG	

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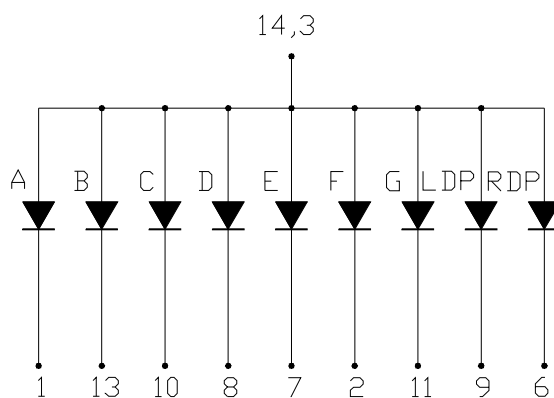
2. Package Dimensions



Note:

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

3. Internal Circuit Diagram



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4. Pin Connection

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

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5. Rating and Characteristics

5.1. Absolute Maximum Rating at Ta=25°C

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°C Per Segment	0.33	mA/°C
Reverse Voltage Per Segment	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 below seating plane.		

5.2. Electrical / Optical Characteristics at Ta=25°C

Parameter	Symbol	MIN.	TYP.	MAX.	Unit	Test Condition
Average Luminous Intensity	IV	800	2000		μcd	IF=10mA
Peak Emission Wavelength	λp		565		nm	IF=20mA
Spectral Line Half-Width	Δλ		30		nm	IF=20mA
Dominant Wavelength	λd		569		nm	IF=20mA
Forward Voltage Per Segment	VF		2.1	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:

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

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5.3. Typical Electrical / Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)

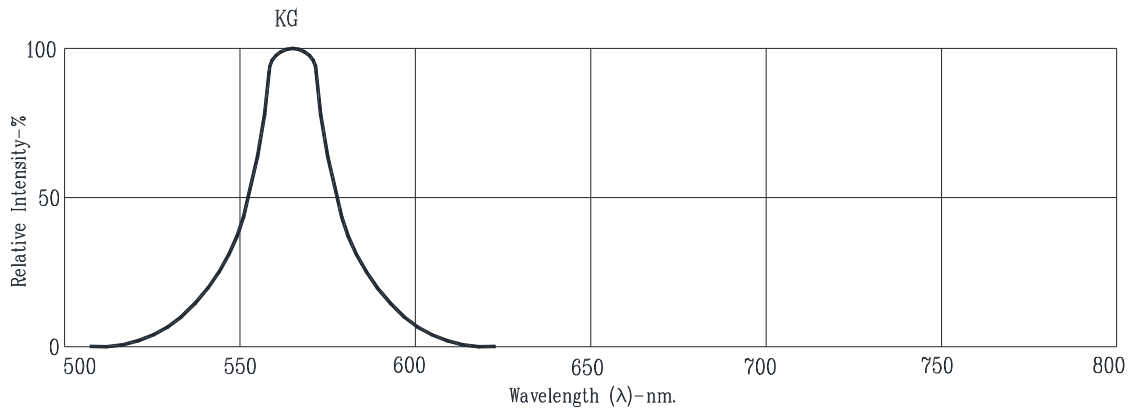


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

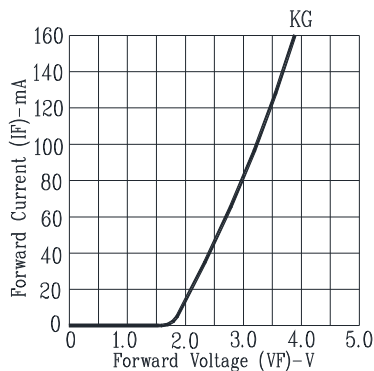


Fig2. FORWARD CURRENT VS. FORWARD VOLTAGE

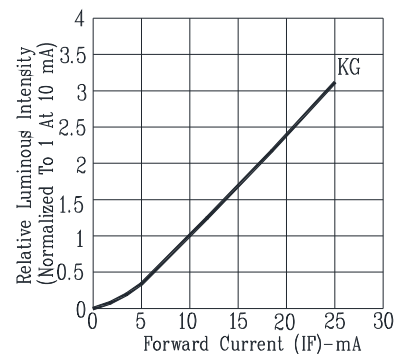


Fig3. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

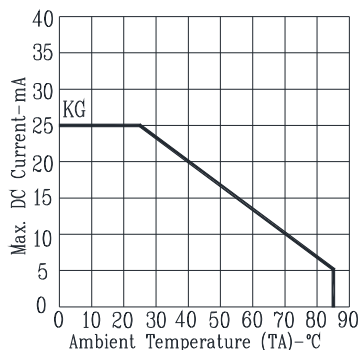


Fig4. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

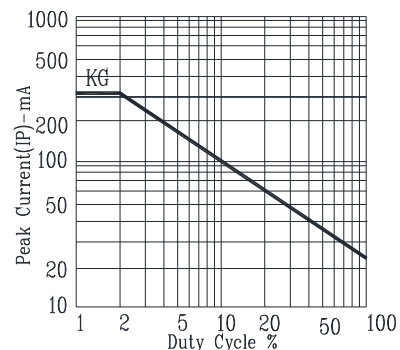


Fig5. MAX. PEAK CURRENT VS. DUTY CYCLE %
(REFRESH RATE 1KHz)