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LITEON®
OPTOELECTRONICS

LED Display

Product Data Sheet

LTS-4301Y

Spec No.: DS-30-96-260

Effective Date: 02/13/2014

Revision: A

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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LED DISPLAY

LTS-4301Y

Rev	Description	By	Date
01	Preliminary SPEC	Koko Hsu	05-Apr-2000
Above data for PD and Customer tracking only			
-	Release NPPR	Koko Hsu	05-Apr-2000
A	- Correct Peak Emission Wavelength - Update Operating/Storage Temperature Range from -35°C to +85°C to -35°C to +105°C	Anon B	21-Jan-2013

LED DISPLAY
LTS-4301Y

1. Description

The LTS-4301Y is a 0.4 inch (10.0 mm) digit height single digit even-segment display. This device utilizes yellow LED chips, which are made from GaAsP on a transparent GaP substrate, and has a gray face and white segments.

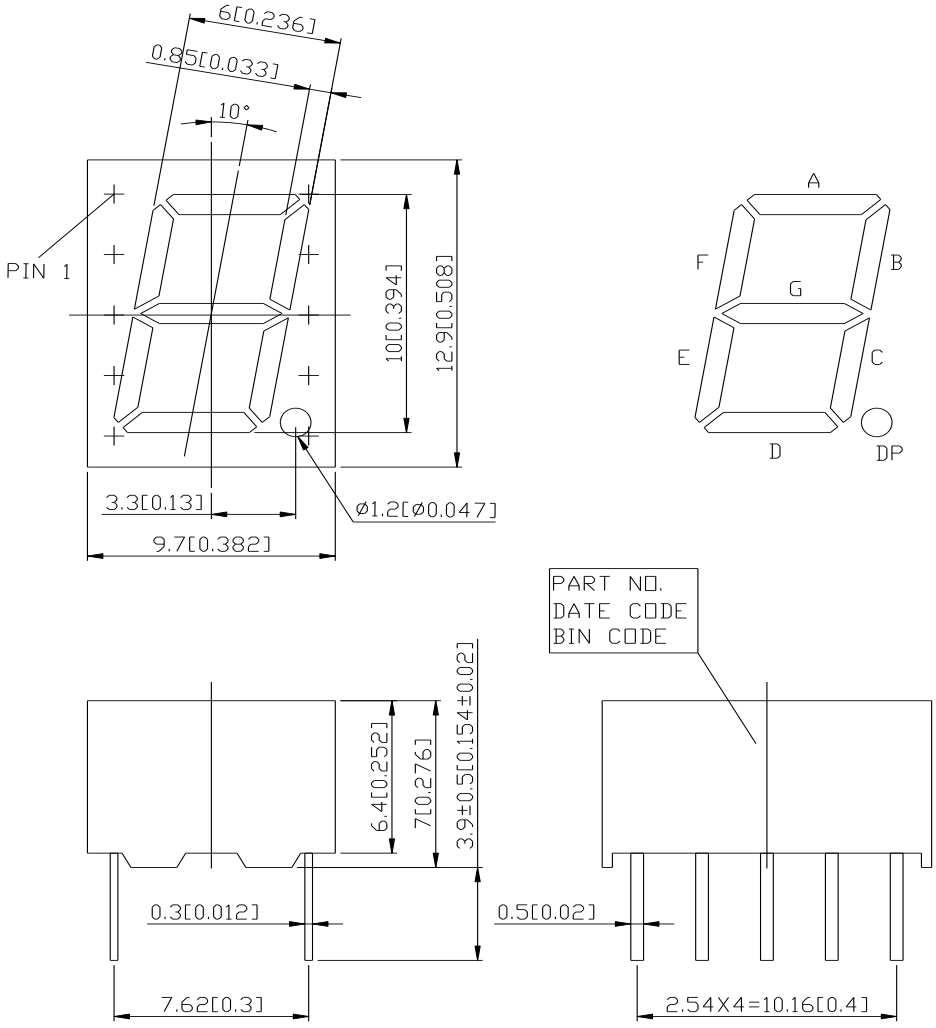
1.1 Features

- 0.40 inch (10.0 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
- LEAD-FREE PACKAGE(ACCORDING TO ROHS)

1.2 Device

Part No	Description
YELLOW	Common Anode
LTS-4301Y	Rt. Hand Decimal

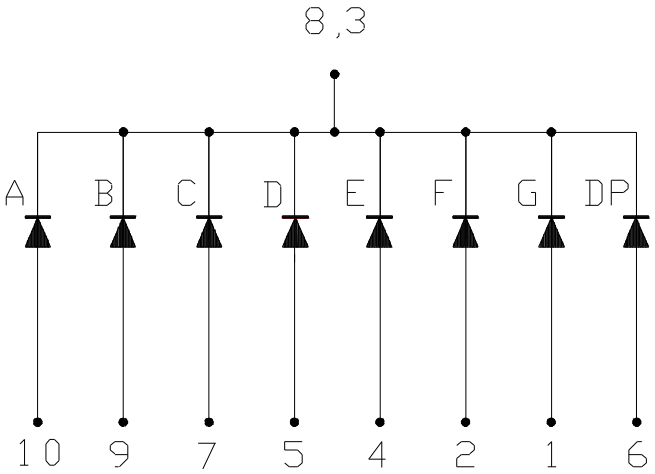
2. Package Dimensions



Notes :

1. All dimensions are in millimeters. Tolerances are ± 0.25mm (0.01“) unless otherwise noted.
2. Foreign materials on segment ≦10mils
3. Bubble in segment ≦10mils
4. Bending≦1% of reflector length
5. Ink contamination (surface) ≦20mils
6. Pin tip’s shift tolerance is ± 0.4 mm.

3. Internal Circuit Diagram



4. Pin Connection

No.	CONNECTION
1	ANODE G
2	ANODE F
3	COMMON CATHODE
4	ANODE E
5	ANODE D
6	ANODE D.P.
7	ANODE C
8	COMMON CATHODE
9	ANODE B
10	ANODE A

5. Rating and Characteristics

5.1. Absolute Maximum Rating at Ta=25°C

Parameter	Maximum Rating	Unit
Power Dissipation Per Segment	60	mW
Peak Forward Current Per Segment (1/10 Duty Cycle, 0.1ms Pulse Width)	80	mA
Continuous Forward Current Per Segment Derating Linear From 25°C Per Segment	20 0.22	mA mA/°C
Operating Temperature Range	-35°C to +105°C	
Storage Temperature Range	-35°C to +105°C	
Solder Conditions: 1/16 inch below seating plane for 3 seconds at 260℃., or temperature of unit (during assembly) not over max. temperature rating above		

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

Parameter	Symbol	MIN.	TYP.	MAX.	Unit	Test Condition
Average Luminous Intensity	IV	800	2200		ucd	IF=10mA
Peak Emission Wavelength	λp		585		nm	IF=20mA
Spectral Line Half-Width	Δλ		35		nm	IF=20mA
Dominant Wavelength	λd		588		nm	IF=20mA
Forward Voltage Per Chip	VF		2.10	2.60	V	IF=20mA
Reverse Current Per Segment(*2)	IR			100	μA	VR=5V
Luminous Intensity Matching Ratio (Similar Light Area)	IV-m			2:1		IF=10mA

Notes :

1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commission International De L'Eclariage) eye-response curve
2. Reverse voltage is only for IR test. It cannot continue to operate at this situation
3. Cross talk specification ≤ 1.0%

6. Typical Electrical / Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)

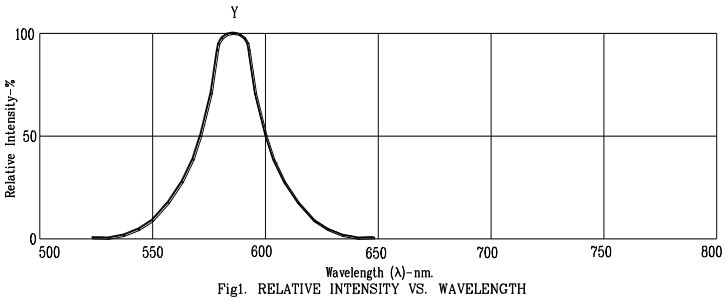


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

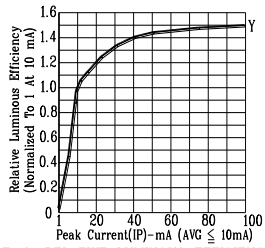


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT (REFRESH RATE 1KHz)

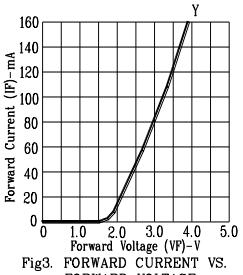


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

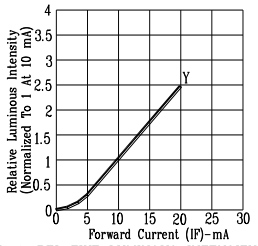


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

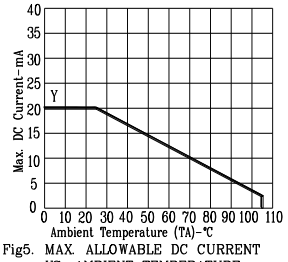


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

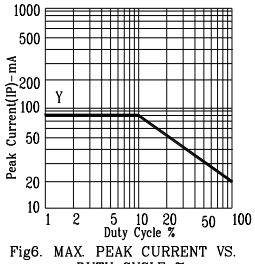


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE : Y=YELLOW