



# LED Display Product Data Sheet LTD-5250G

Spec No.: DS-30-97-010

Effective Date: 01/25/2014

Revision: A

**LITE-ON DCC**

**RELEASE**

BNS-OD-FC001/A4

**LED DISPLAY  
LTD-5250G**

**LED DISPLAY**

LTD-5250G

<u>Rev</u>	<u>Description</u>	<u>By</u>	<u>Date</u>
01	Preliminary SPEC	Tina Chen	04/04/2000
<b>Above data for PD and Customer tracking only</b>			
-	NPPR Received and Upload to system	Tina Chen	05/04/2000
A	- Correct hue range on page 5 - Update Operating/Storage Temperature Range from -35°C to +85°C become to -35°C to +105°C	Phanomkorn	01/08/2014

**LED DISPLAY  
LTD-5250G**

**1. Description**

The LTD-5250G is a 0.52inch (13.2mm) digit height dual digit seven-segment display. The device utilizes green LED chips, which are made from GaP on a transparent GaP substrate, and has a gray face and green segments.

**1.1 Features**

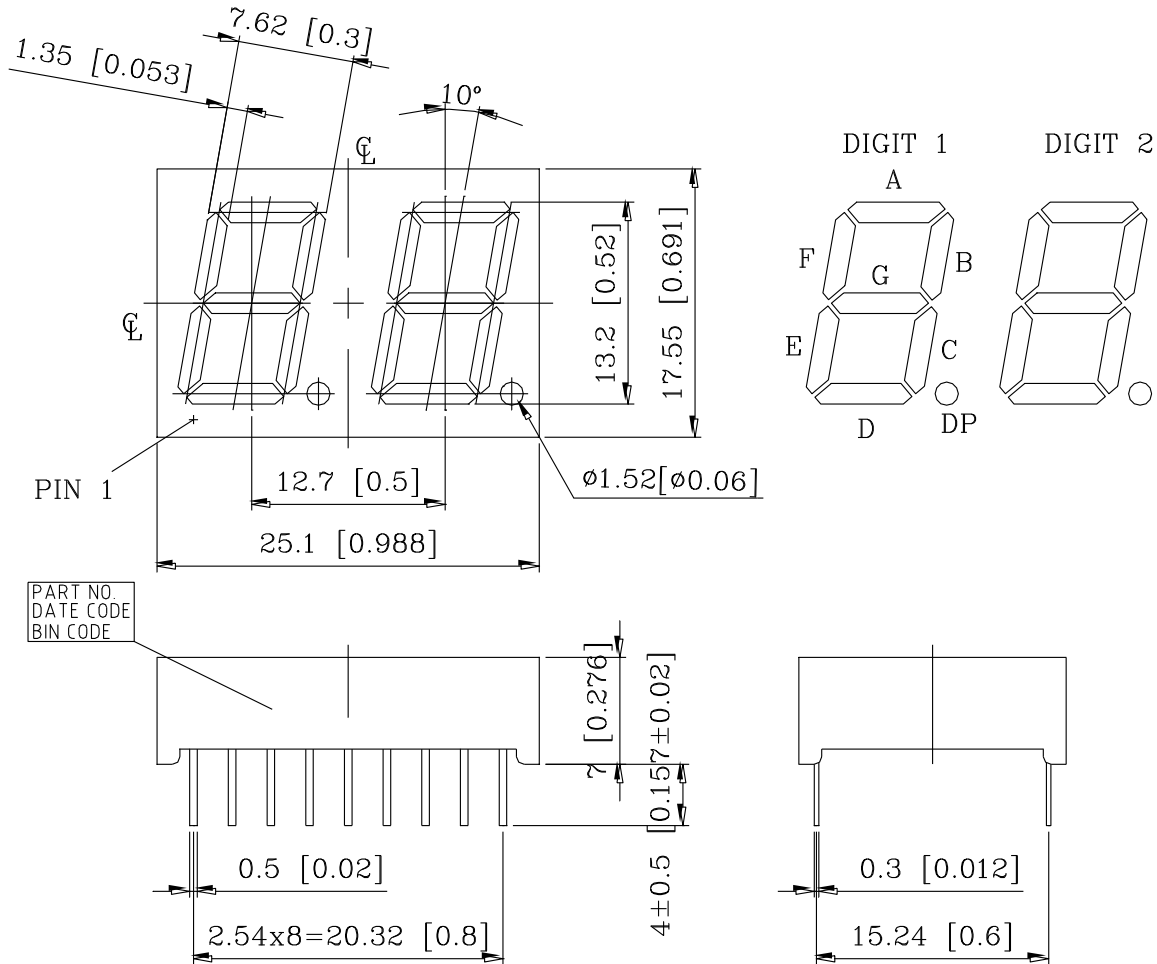
- 0.52INCH (13.2mm) DIGIT HEIGHT
- CONTINUOUS UNIFORM SEGMENTS
- LOW POWER REQUIREMENT
- EXCELLENT CHARACTERS APPEARANCE
- HIGH BRIGHTNESS & HIGH CONTRAST
- WIDE VIEWING ANGLE
- SOLID STATE RELIABILITY
- CATEGORIZED FOR LUMINOUS INTENSITY
- **LEAD-FREE PACKAGE (ACCORDING TO ROHS)**

**1.2 Device**

Part No	Description
GREEN	COMMON ANODE
LTD-5250G	RT. HAND DECIMAL

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**2. Package Dimensions**

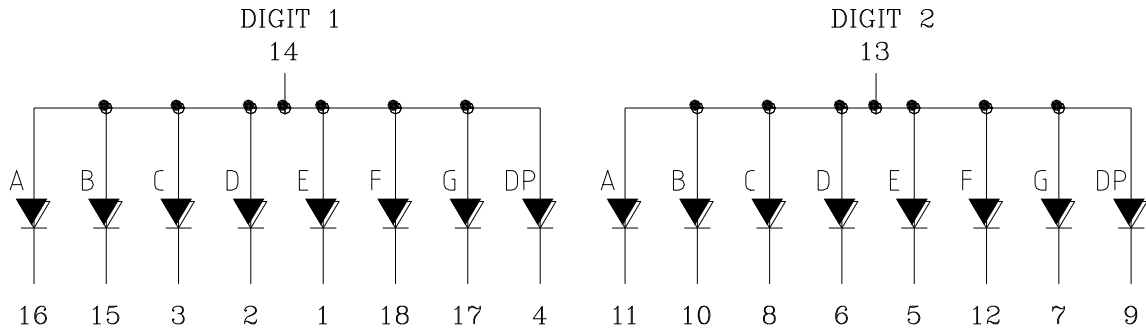


**Notes :**

1. All dimensions are in millimeters. Tolerances are  $\pm 0.25$  mm (0.01") unless otherwise noted
2. Pin tip's shift tolerance is  $\pm 0.4$  mm
3. Foreign material on segment  $\leq 10$ mil
4. Bending  $\leq 1\%$  of reflector length
5. Bubble in segment  $\leq 10$ mil
6. Ink contamination on surface  $\leq 20$ mil

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**3. Internal Circuit Diagram**



**4. Pin Connection**

No	Connection
1	CATHODE E (DIGIT 1)
2	CATHODE D (DIGIT 1)
3	CATHODE C (DIGIT 1)
4	CATHODE DP (DIGIT 1)
5	CATHODE E (DIGIT 2)
6	CATHODE D (DIGIT 2)
7	CATHODE G (DIGIT 2)
8	CATHODE C (DIGIT 2)
9	CATHODE DP (DIGIT 2)
10	CATHODE B (DIGIT 2)
11	CATHODE A (DIGIT 2)
12	CATHODE F (DIGIT 2)
13	COMMON ANODE (DIGIT 2)
14	COMMON ANODE (DIGIT 1)
15	CATHODE B (DIGIT 1)
16	CATHODE A (DIGIT 1)
17	CATHODE G (DIGIT 1)
18	CATHODE F (DIGIT 1)

## LED DISPLAY LTD-5250G

### 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	0.28	mA/°C
Operating Temperature Range	-35°C to +105°C	
Storage Temperature Range	-35°C to +105°C	

Solder Condition: 1/16 inch below seating plane for 3 seconds at 260°C or temperature of unit (during assembly) not over max. temperature rating above

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

Electrical / Optical Characteristics at Ta=25°C Parameter	Symbol	MIN.	TYP.	MAX.	Unit	Test Condition
Average Luminous Intensity Per Segment	IV	800	2200		mcd	IF=10mA
Peak Emission Wavelength	$\lambda_p$		565		nm	IF=20mA
Spectral Line Half-Width	$\Delta\lambda$		30		nm	IF=20mA
Dominant Wavelength	$\lambda_d$		569		nm	IF=20mA
Forward Voltage Per Chip	VF		2.0	2.6	V	IF=20mA
Reverse Current Per Segment <sup>(*)</sup>	IR			100	$\mu$ A	VR=5V
Luminous Intensity Matching Ratio (Similar Light Area)	IV-m			2:1		IF=10mA

#### Notes :

- Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commission International De L'Eclairage) eye-response curve
- Crosstalk specification  $\leq$  1%
- Reverse voltage is only for IR test. It cannot continue to operate at this situation

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## 5.3. Typical Electrical / Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)

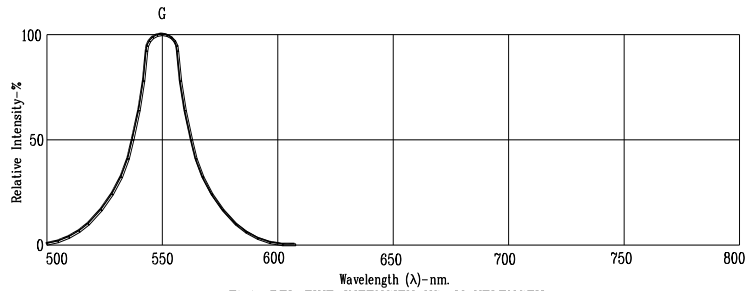


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

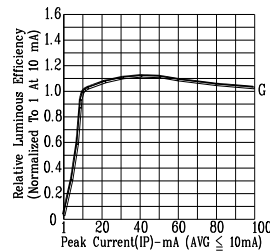


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT (REFRESH RATE 1KHz)

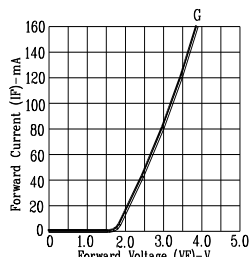


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

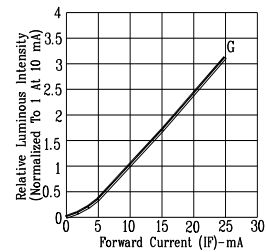


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

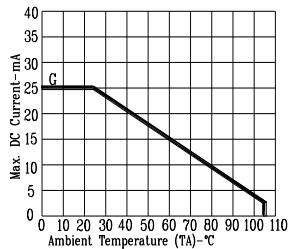


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

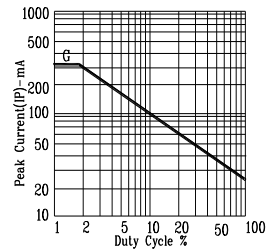


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: G=GREEN