



LED Display

Product Data Sheet

LTC-5688G-S4

Spec No.: DS30-2006-006

Effective Date: 12/11/2013

Revision: C

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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<u>Rev</u>	<u>Description</u>	<u>By</u>	<u>Date</u>
01	Preliminary Spec.	Lizzy Pan	03/22/2006
Above data for PD and Customer tracking only			
-	NPPR Received and Upload on system	Lizzy Pan	03/22/2006
A	Modify Pin Length	Lizzy Pan	08/23/2006
B	Remove Reverse Voltage 5 V in Page 6	Reo Lin	06/19/2012
C	Add Liteon Specification In Page 3	Reo Lin	11/14/2013

**LED DISPLAY
LTC-5688G-S4****1. Description**

The LTC-5688G-S4 is a 0.56 inch (14.22 mm) digit height quadruple digit seven-segment display. This device uses Green LED chips (GaP epi on GaP substrate). The display has a light gray face and green segments.

1.1 Features

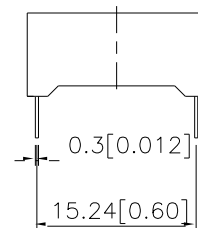
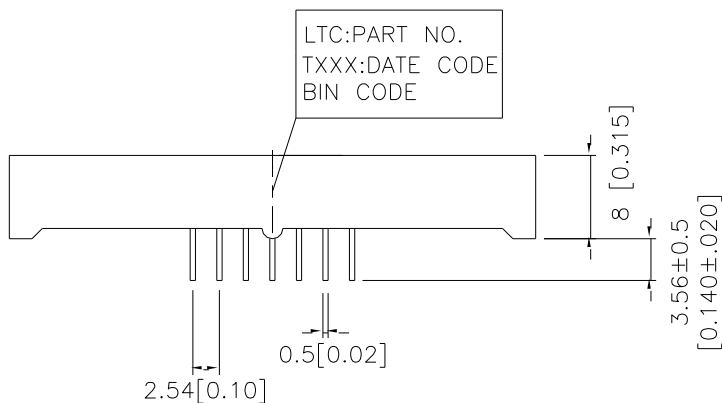
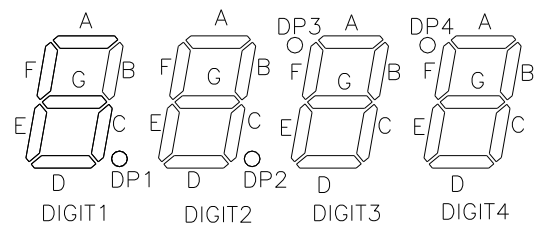
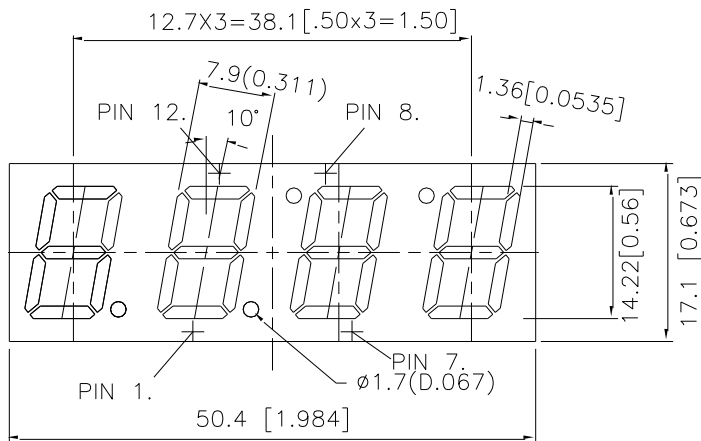
- 0.56 inch (14.22 mm) DIGIT HEIGHT
- CONTINUOUS UNIFORM SEGMENTS
- LOW POWER REQUIREMENT
- EXCELLENT CHARACTERS APPEARANCE
- HIGH BRIGHTNESS & HIGH CONTRAST
- WIDE VIEWING ANGLE
- SOLID STATE RELIABILITY
- CATEGORIZED FOR LUMINOUS INTENSITY.
- LEAD-FREE PACKAGE (ACCORDING TO ROHS)

1.2 Device

Part No	Description
Green	Common Anode
LTC-5688G-S4	Rt. Hand Decimal

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2. Package Dimensions

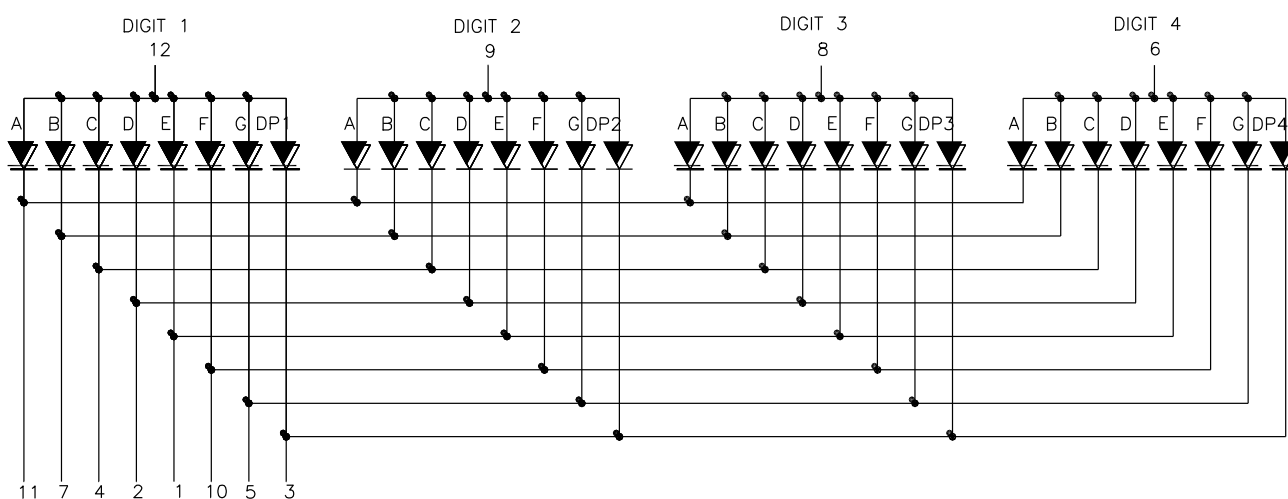


Notes :

1. All dimensions are in millimeters. Tolerances are ± 0.25 mm (0.01 ") unless otherwise noted
2. Pin tip's shift tolerance is ± 0.4 mm
3. Foreign material on segment ≤ 10 mil
4. Ink contamination (surface) ≤ 20 mil
5. Bubble in segment ≤ 10 mil
6. Bending $\leq 1\%$ of reflector length
7. Scratch on surface : ≤ 15 mils for point or Length ≤ 60 mil and Width ≤ 6 mil
8. Recommend the best PCB hole: Diameter 1.0 mm

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3. Internal Circuit Diagram



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4. Pin Connection

No	Connection
1	CATHODE E
2	CATHODE D
3	CATHODE DP
4	CATHODE C
5	CATHODE G
6	COMMON ANODE DIGIT 4
7	CATHODE B
8	COMMON ANODE DIGIT 3
9	COMMON ANODE DIGIT 2
10	CATHODE F
11	CATHODE A
12	COMMON ANODE DIGIT 1

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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	0.28	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

Parameter	Symbol	MIN.	TYP.	MAX.	Unit	Test Condition
Average Luminous Intensity Per Segment	IV	1300	2400		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 Chip	VF		2.1	2.6	V	IF=20mA
Reverse Current Per Segment ^(*)	IR			100	μA	VR=5V
Luminous Intensity Matching Ratio (Similar Light Area)	IV-m			2:1		IF=10mA

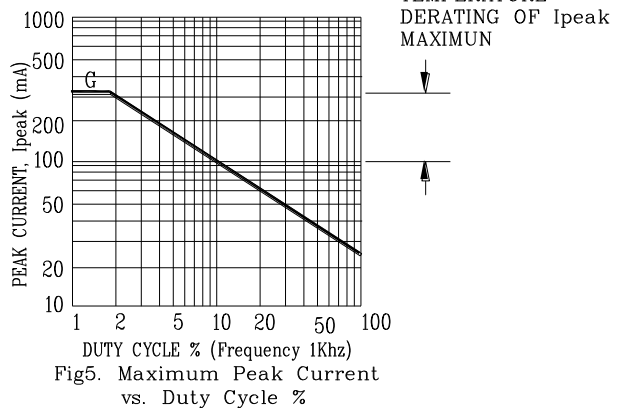
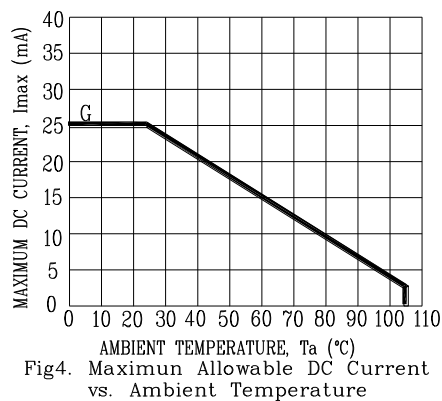
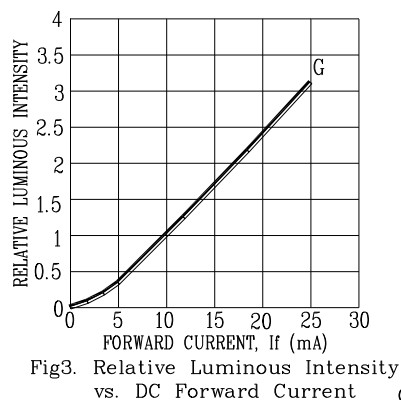
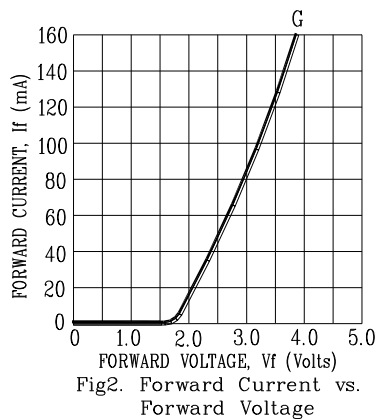
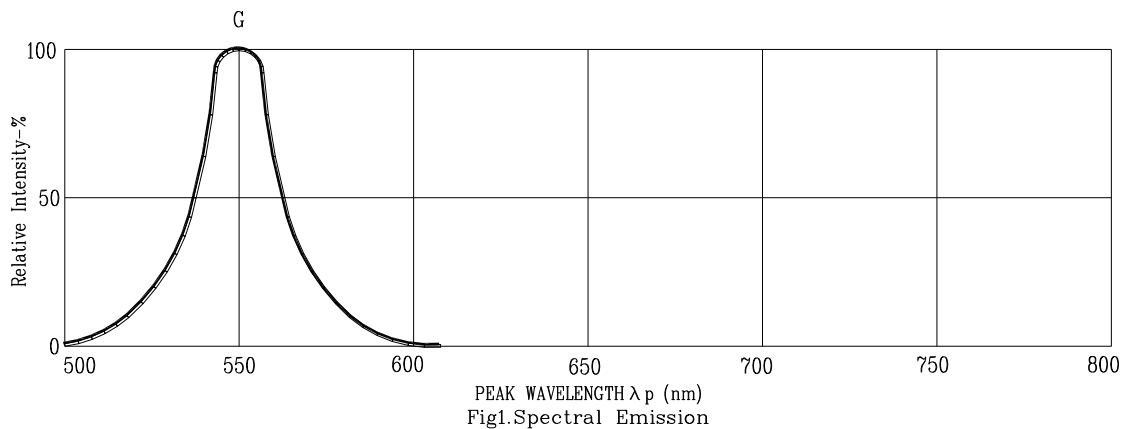
Notes :

- Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commission International De L'Eclairage) eye-response curve
- Reverse voltage is only for IR test. It cannot continue to operate at this situation
- Cross talk specification $\leq 2.5\%$

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5.3. Typical Electrical / Optical Characteristics Curves

(25°C Ambient Temperature Unless Otherwise Noted)



NOTE: G=STD GREEN