



**Spec No.: DS30-2007-0210**Effective Date: 01/24/2008

Revision: -

**LITE-ON DCC** 

**RELEASE** 

BNS-OD-FC001/A4

#### LITE-ON Technology Corp. / Optoelectronics

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### LED DISPLAY

### LTC-5623JG DATASHEET

Rev	<u>Description</u>	By			
01	ORIGINAL	KITTISAK			
	(Refer to contour drawing Revision (-))	Dec 18/2007			
(Abov	(Above data for PD and Customer tracking only)				
-	NPPR Received and Upload on OPNC	<u>KITTISAK</u>			
		Dec 26/2007			

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#### **FEATURES**

- \*0.56 inch (14.2 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)

#### DESCRIPTION

The LTC-5623JG is a 0.56 inch (14.2 mm) digit height quadruple digit seven-segment display. This device utilizes AlInGap green LED chips, which are made from AlInGap on a non-transparent GaP substrate, and has a black face and green segments.

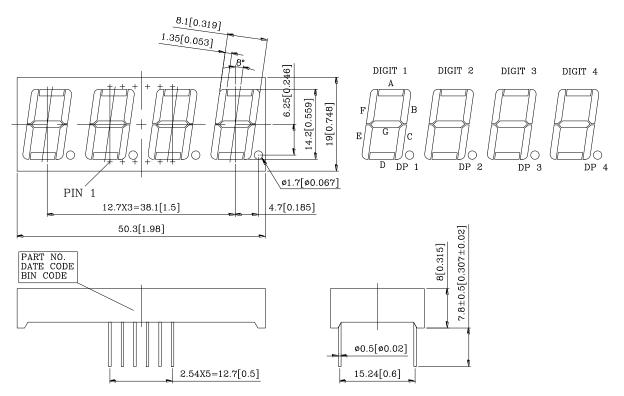
#### **DEVICE**

PART NO.	DESCRIPTION			
AlInGap Green	Multiplex Common Anode			
LTC-5623JG	Rt. Hand Decimal			

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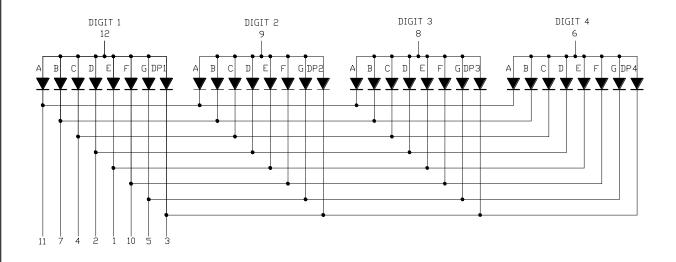
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#### PACKAGE DIMENSIONS



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.

#### INTERNAL CIRCUIT DIAGRAM



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### PIN CONNECTION

NO.	CONNECTION				
1	CATHODE E				
2	CATHODE D				
3	CATHODE D.P.				
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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### ABSOLUTE MAXIMUM RATING AT Ta=25°C

PARAMETER	MAXIMUM RATING	UNIT	
Power Dissipation Per Segment	70	mW	
Peak Forward Current Per Segment (1/10 Duty Cycle, 0.1ms Pulse Width)	60	mA	
Continuous Forward Current Per Segment Derating Linear From 25℃ Per Segment	25	mA mA/°C	
Reverse Voltage Per Segment	0.33	V	
Operating Temperature Range	$-35^{\circ}\text{C}$ to $+105^{\circ}\text{C}$		
Storage Temperature Range	-35°C to +105°C		

Solder Temperature: max 260°C for max 3sec at 1.6mm below seating plane. or temperature of unit (during assembly) not over max. temperature rating above

#### ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	Iv	320	700		μcd	I <sub>F</sub> =1mA
Peak Emission Wavelength	λр		571		nm	I <sub>F</sub> =20mA
Spectral Line Half-Width	Δλ		15		nm	I <sub>F</sub> =20mA
Dominant Wavelength	λd		572		nm	I <sub>F</sub> =20mA
Forward Voltage Per Segment	VF		2.05	2.6	V	I <sub>F</sub> =20mA
Reverse Current Per Segment	Ir			100	μΑ	V <sub>R</sub> =5V
Luminous Intensity Matching Ratio (Similar Light Area)	Iv-m			2:1		I <sub>F</sub> =1mA

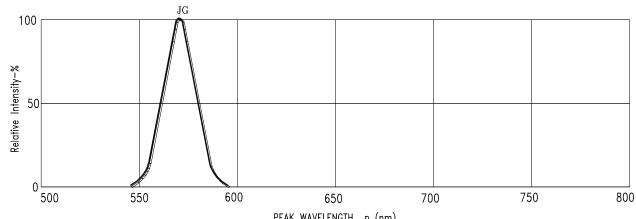
Note: Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commision Internationale De L'Eclairage) eye-response curve.

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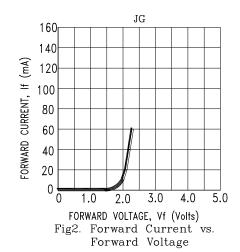
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#### TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)



PEAK WAVELENGTH p (nm) Fig1.Spectral Emission



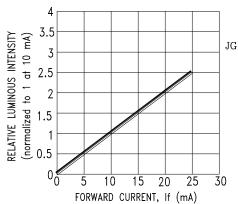
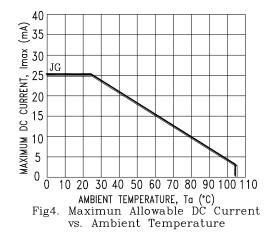


Fig3. Relative Luminous Intensity vs. DC Forward Current



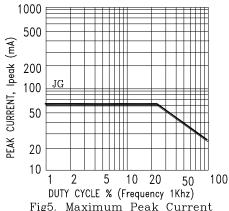


Fig5. Maximum Peak Current vs. Duty Cycle %

NOTE: JG=AlInGaP Green

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