



# LED Display Product Data Sheet LTC-7500KG

Spec No.: DS30-2007-0088

Effective Date: 04/01/2014

Revision: B

**LITE-ON DCC**

**RELEASE**

BNS-OD-FC001/A4

**LED DISPLAY  
LTC-7500KG**

**LED DISPLAY**

LTC-7500KG

<u>Rev</u>	<u>Description</u>	<u>By</u>	<u>Date</u>
01	Preliminary Spec.	Angel R Gao	03/08/2008
<b>Above data for PD and Customer tracking only</b>			
-	NPPR Received and Upload on System	Angel R Gao	03/08/2008
A	Revised error for pin define error in Page 5	Angel R Gao	03/10/2008
B	Modify Pin diameter from kover pin to round pin in Page 3	Reo Lin	03/24/2014

## LED DISPLAY LTC-7500KG

### 1. Description

The LTC-7500KG is a 0.72 inch (18.4mm) digit height triple digit seven-segment display. This device uses AS-AllnGap Green LED chips (AllnGap epi on GaAs substrate). The display has a black face and white segments.

#### 1.1 Features

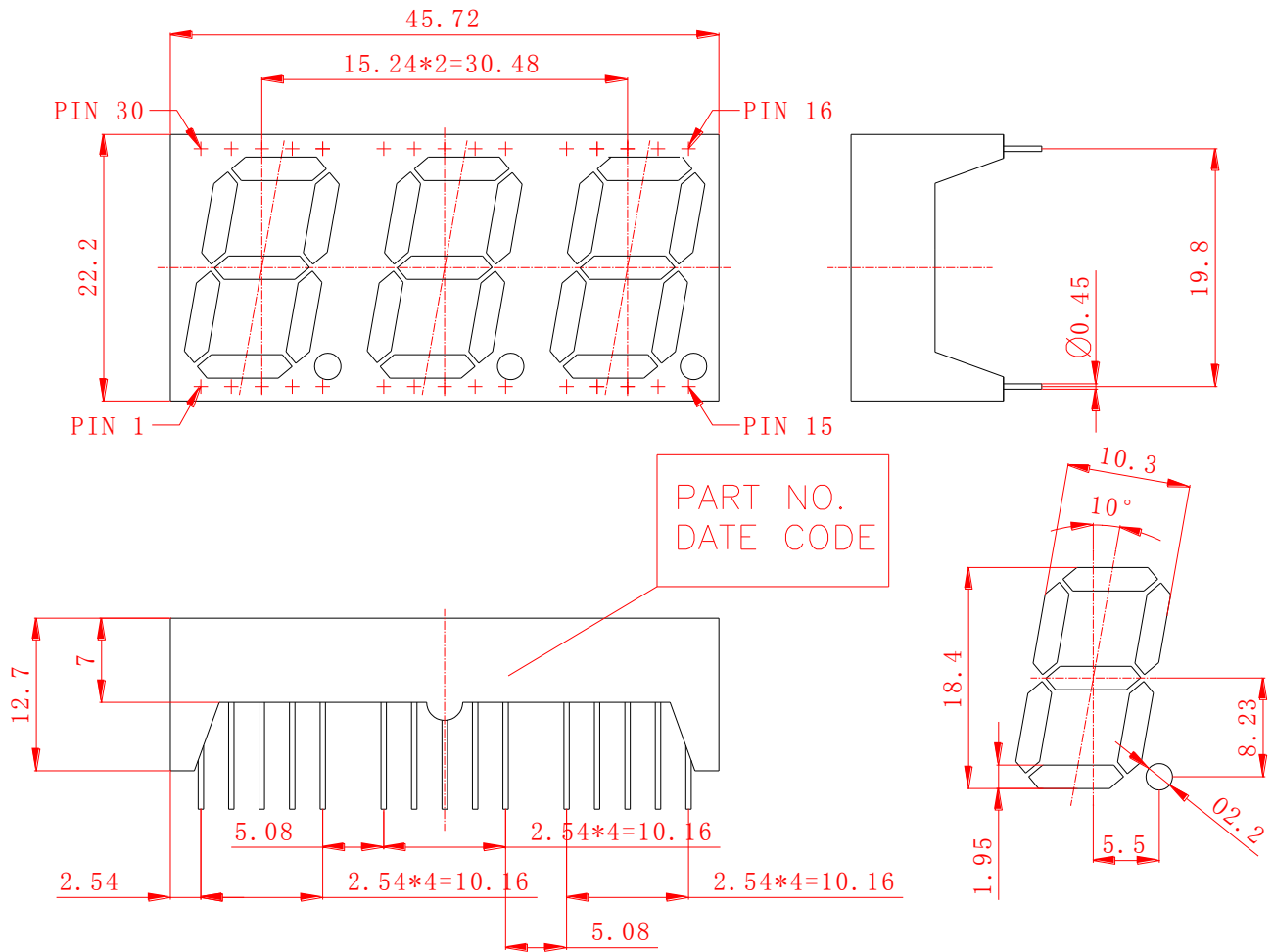
- 0.72 inch (18.4 mm) DIGIT HEIGHT
- CONTINUOUS UNIFORM SEGMENTS
- LOW POWER REQUIREMENT
- EXCELLENT CHARACTERS APPEARANCE
- HIGH BRIGHTNESS & HIGH CONTRAST
- WIDE VIEWING ANGLE
- SOLID STATE RELIABILITY
- CATEGORIZED FOR LUMINOUS INTENSITY.
- LEAD-FREE PACKAGE (ACCORDING TO ROHS)

#### 1.2 Device

Part No	Description
AllnGaP Green	Multiplex Common Cathode
LTC-7500KG	Rt. Hand Decimal

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**2. Package Dimensions**

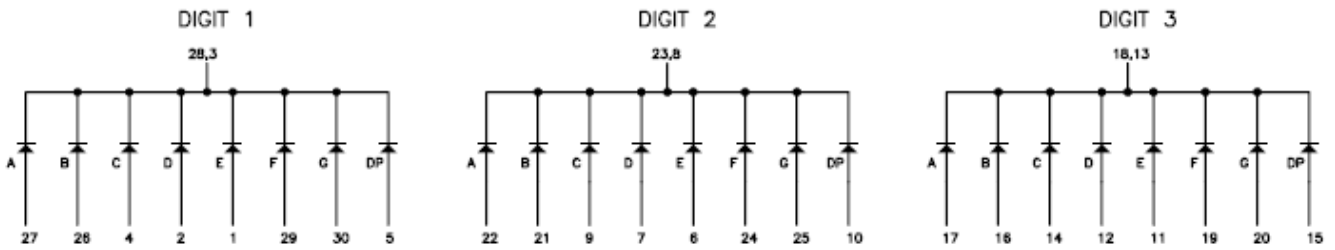
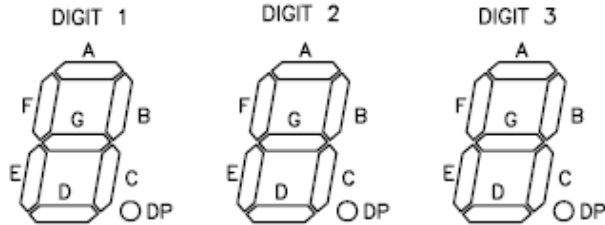


**Notes :**

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. Ink contamination (surface)  $\leq 20$ mils
5. Bubble in segment  $\leq 10$ mil
6. Bending  $\leq 1\%$  of reflector length
7. Recommend the best PCB hole: Diameter 0.9 mm

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**3. Internal Circuit Diagram**



THE SIGN "  " STANDS FOR AllnGaP GREEN CHIPS.

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**4. Pin Connection**

No	Connection
1	ANODE E1
2	ANDOE D1
3	COMMON CATHODE DIGIT 1
4	ANODE C1
5	ANODE DP1
6	ANODE E2
7	ANODE D2
8	COMMON CATHODE DIGIT 2
9	ANODE C2
10	ANODE DP2
11	ANODE E3
12	AMDOE D3
13	COMMON CATHODE DIGIT 3
14	ANDOE C3
15	ANODE DP3
16	ANODE B3
17	ANODE A3
18	COMMON CATHODE DIGIT 3
19	ANODE F3
20	ANODE G3
21	ANODE B2
22	ANODE A2
23	COMMON CATHODE DIGIT 2
24	ANODE F2
25	ANDOE G2
26	ANODE B1
27	ANODE A1
28	COMMON CATHODE DIGIT 1
29	ANODE F1
30	ANODE G1

## LED DISPLAY LTC-7500KG

### 5. Rating and Characteristics

#### 5.1. 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°C Per Segment	25 0.28	mA 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	500	1050		μcd	IF=1mA
			11550		μcd	IF=10mA
Peak Emission Wavelength	λp		571		nm	IF=20mA
Spectral Line Half-Width	Δλ		15		nm	IF=20mA
Dominant Wavelength	λd		572		nm	IF=20mA
Forward Voltage Per Chip	VF		2.05	2.6	V	IF=20mA
Reverse Current Per Segment <sup>(*)</sup>	IR			100	μA	VR=5V
Luminous Intensity Matching Ratio (Similar Light Area)	IV-m			2:1		IF=1mA

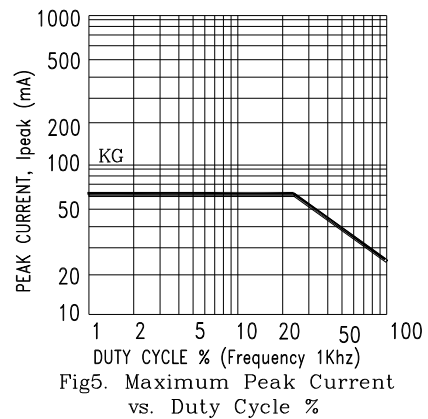
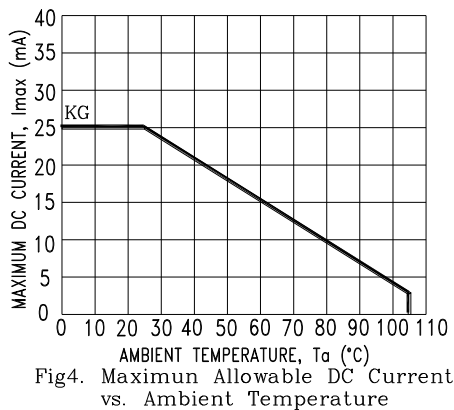
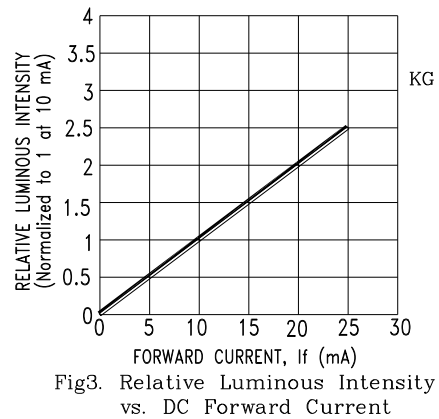
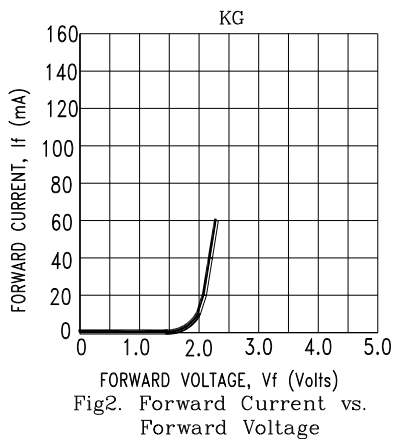
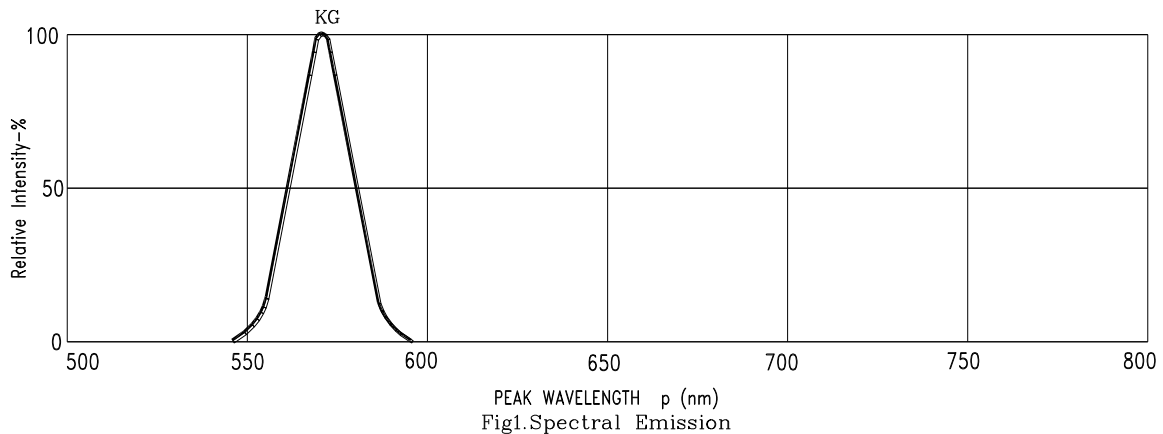
#### Notes :

- 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 : KG=AlInGaP Green