



LED Display

Product Data Sheet

LTC-561ACB-J

Spec No.: DS30-2007-0111

Effective Date: 02/01/2013

Revision: A

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

LED DISPLAY**LTC-561ACB-J**
DATASHEET

<u>Rev</u>	<u>Description</u>	<u>By</u>
-	ORIGINAL VERSION	
A	Update VF and Dominant Wavelength for condition test from 20 mA to 5 mA	<u>Kritsana T.</u> <u>Dec 11- 1012</u>

SPEC. NO.: DS30-2007-0111

D A T E : Dec 11-2012

REV. NO. : A

PAGE NO. : 0 OF 7

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)**

DESCRIPTION

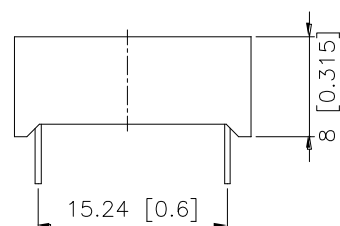
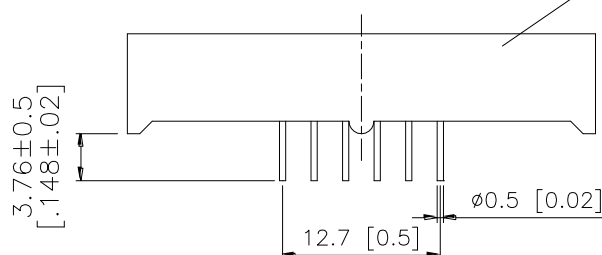
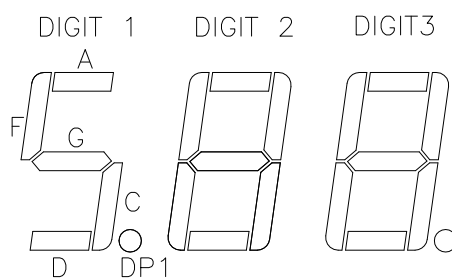
The LTC-561ACB-J is a 0.56 inch (14.22 mm) digit height triple digit seven-segment display. This device uses InGaN BLUE LED chips (InGaN epi on SiC substrate). The display has gray face and white segments.

DEVICE

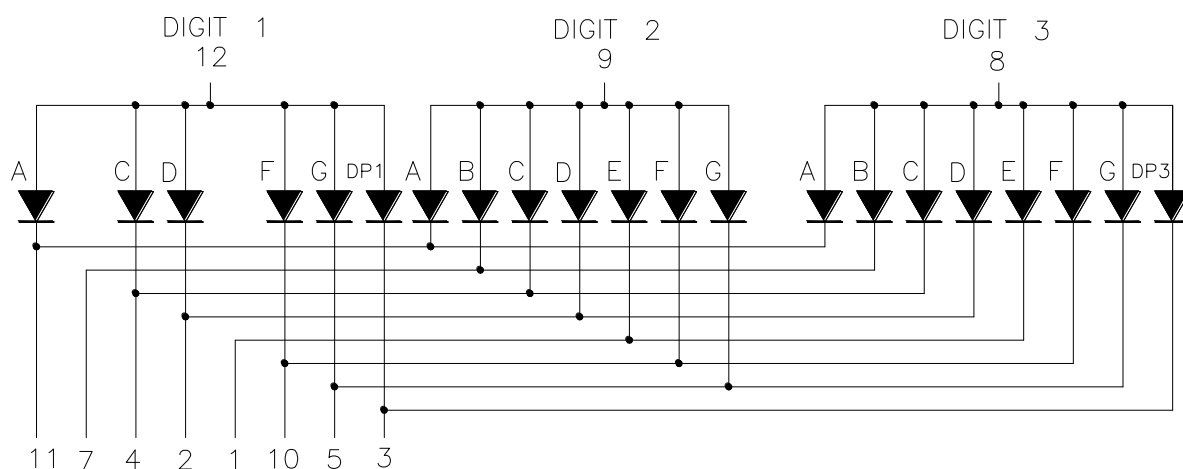
PART NO.	DESCRIPTION
InGaN BLUE	Multiplex Common Anode Rt. Hand Decimal
LTC-561ACB-J	

Technical drawing showing a 3x3 grid of components. Dimensions and labels include:

- Overall width: 37.7 [1.484]
- Overall height: 19.05 [0.75]
- Horizontal spacing between columns: 12.7X2=25.4 [1]
- Vertical spacing between rows: 14.22 [0.56]
- Top horizontal offset: 8.13 [0.32]
- Top-left diagonal offset: 1.45 [0.057]
- Top-right angle: 8°
- Labels: PIN 1, PIN 7



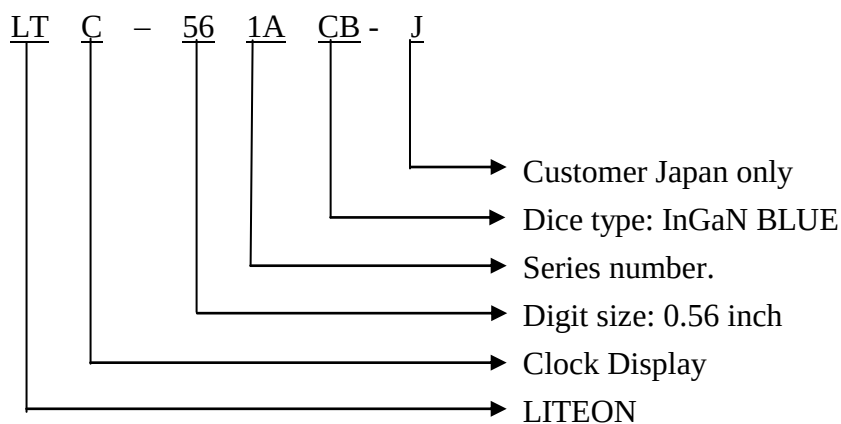
INTERNAL CIRCUIT DIAGRAM



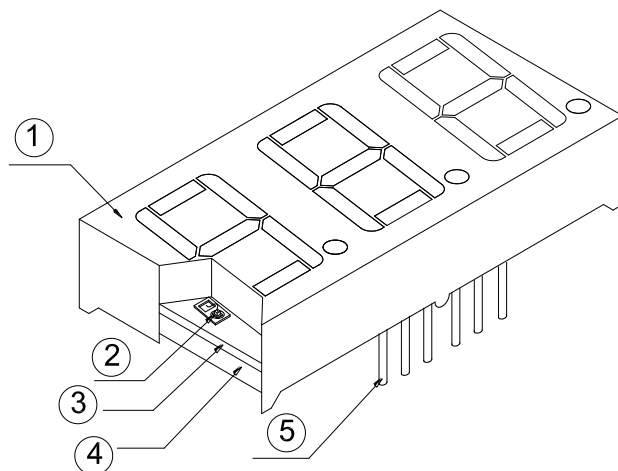
PIN CONNECTION

NO.	CONNECTION
1	CATHODE E
2	CATHODE D
3	CATHODE D.P.
4	CATHODE C
5	CATHODE G
6	NO CONNECTION
7	CATHODE B
8	COMMON ANODE, DIGIT 3
9	COMMON ANODE, DIGIT 2
10	CATHODE F
11	CATHODE A
12	COMMON ANODE , DIGIT 1

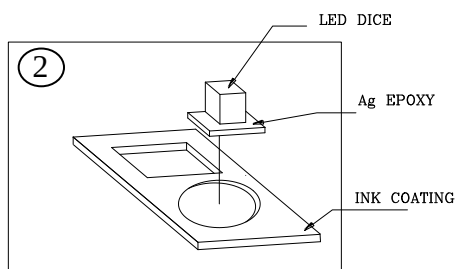
Explanation for Part Number



Cross Section & Material List.



1. Ag CONDUTIVE EPOXY USING
2. ON THE PCB, COATING A LAYER OF INK FOR CONTROLLING THE Ag EPOXY SCOPE



No.	Items	Material
1	Reflector	Polycarbonate
2	LED chip	InGaN BLUE
3	PCB	Resin + Glass + Fiber
4	Epoxy	Resin
5	Round pin	Cu + Fe + Sn

*** LED CHIP MAKER IS CREE**

ABSOLUTE MAXIMUM RATING AT Ta=25°C

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation Per Segment	115	mW
Peak Forward Current Per Segment (Frequency 1Khz, 10% duty cycle)	60	mA
Continuous Forward Current Per Segment	30	mA
Forward Current Derating from 25 ⁰ C	0.33	mA/ ⁰ C
Reverse Voltage Per Segment	5	V
Operating Temperature Range	-35 ⁰ C to +105 ⁰ C	
Storage Temperature Range	-35 ⁰ C to +105 ⁰ C	
Soldering Conditions: 1/16 inch below seating plane for 3 seconds at 260 ⁰ C., 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 Per Segment	I _v	5400	13800		μcd	I _F = 10mA
Peak Emission Wavelength	λ _p		468		nm	I _F = 20mA
Spectral Line Half-Width	Δλ		25		nm	I _F = 20mA
Dominant Wavelength	λ _d	464	470	475	nm	I _F = 5mA
Forward Voltage Per Segment	V _F	2.5		3.5	V	I _F = 5mA
Reverse Current Per Segment	I _R			100	μA	V _R = 5V
Luminous Intensity Matching Ratio (Similar Light Area)	I _v -m			2 : 1		I _F = 10mA

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

BIN TABLE 2	BIN RANK TABLE					μcd I _F =10mA
BIN GRAD	M	N	P	Q	R	
RANG	5401~8600	8601~13700	13701~21820	21821~34700	34701~55170	

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

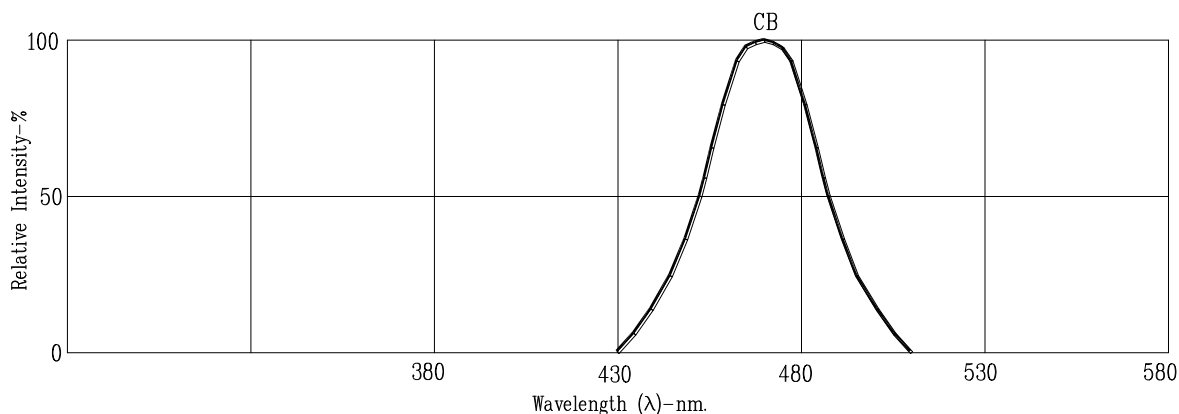


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

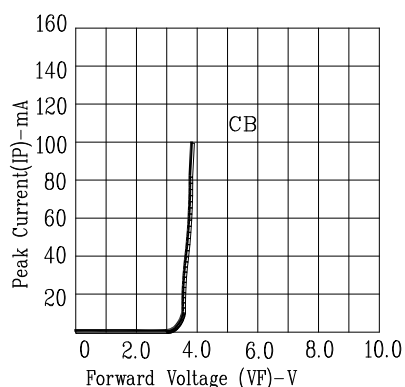


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

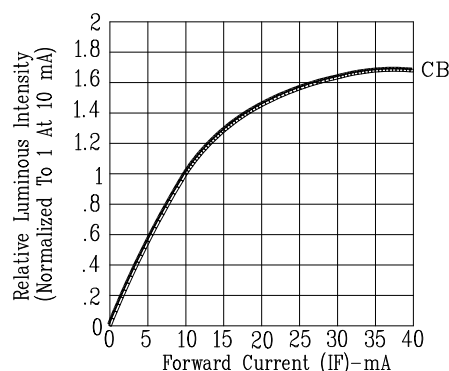


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

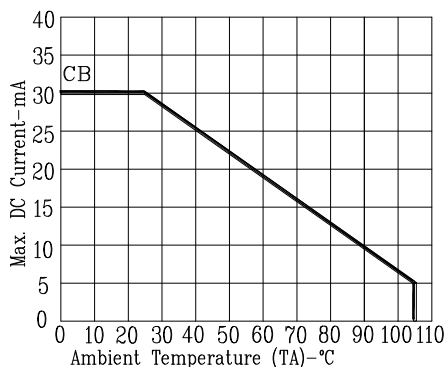


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

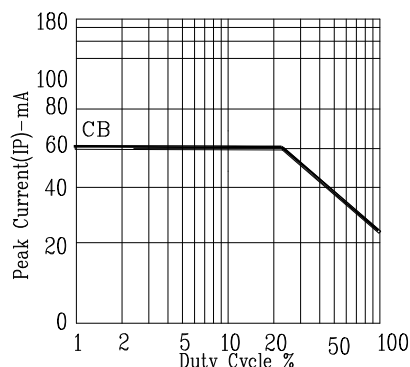


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: CB=InGaN Blue

Property of Lite-On Only

The Packing spec

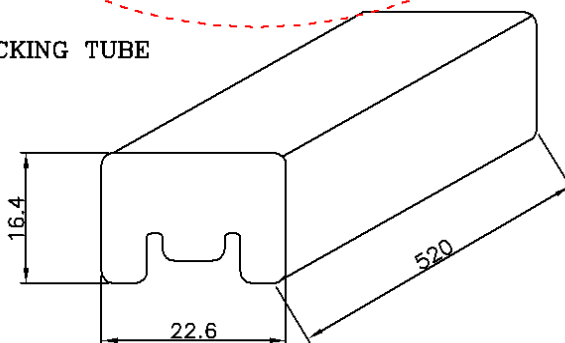
ON INNER CARTON

	MATERIAL NO. : LTC - 561ACB-J	BATCH : P
	QUANTITY : 1496	
	CUS. P/N :	MACHINE :
	DATE CODE : 0725	PBFREE

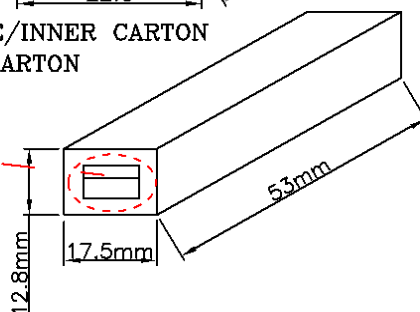
LITEON FINISHED GOODS STOCK LABEL

TAG NO. : T0257085	
CUSTOMER : SHARP	
CUS.PARTNO. :	
MATERIAL GROUP : O30300CHG	
MATERIAL NO. : LTC - 561ACB-J	
BATCH : G	
QUANTITY : 510	
DATE CODE : 0725	
COMMENT : PBF	SHELF : BA1

13 PCS/PACKING TUBE



55 PACKING TUBE/INNER CARTON
715 PCS/INNER CARTON



4 INNER CARTON/OUTER CARTON
2860 PCS/OUTER CARTON

