LITEON®
OPTOELECTRONICS

LED Display

Product Data Sheet

LTS-5501ACB

Spec No.: DS30-2005-139

Effective Date: 07/01/2005

Revision: -

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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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)**

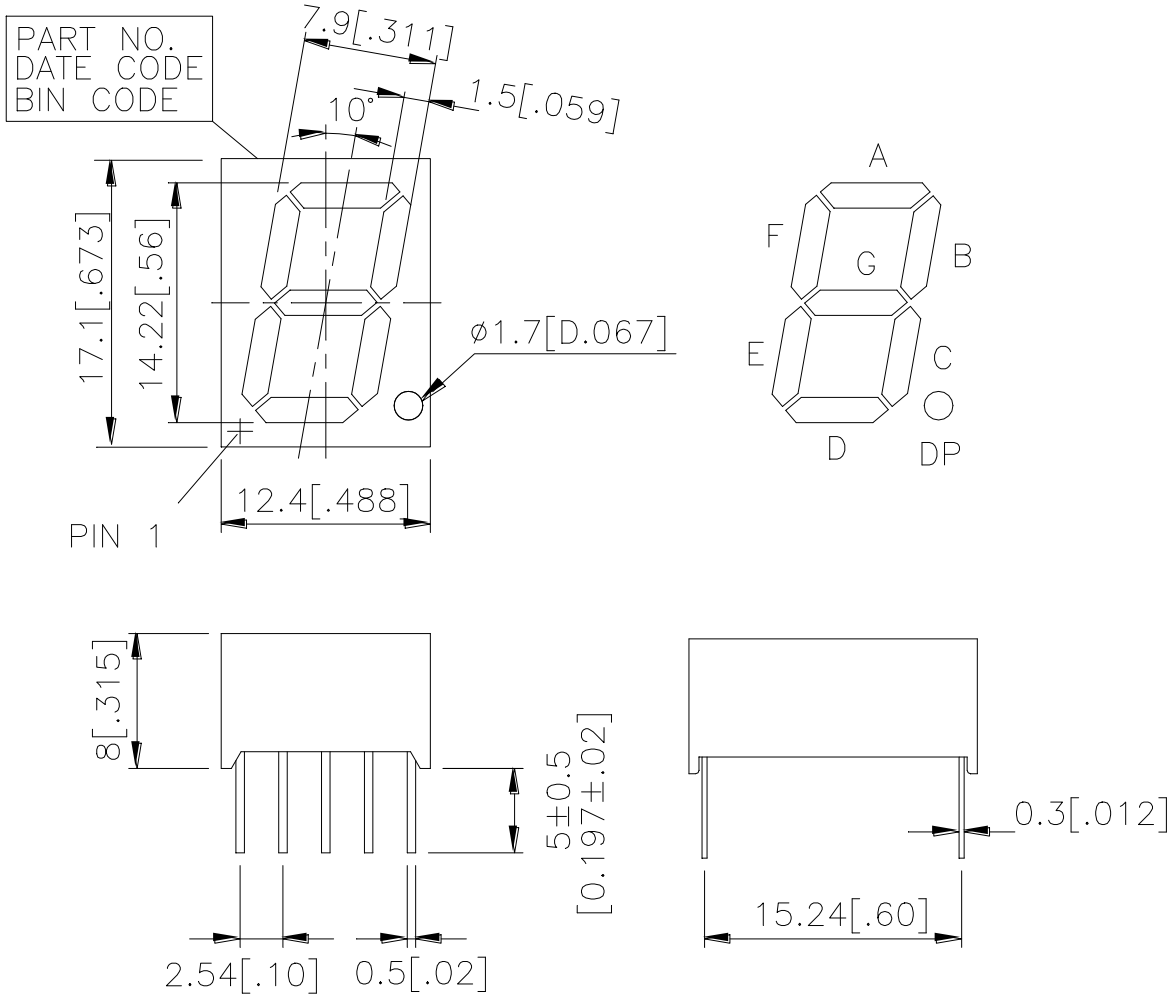
DESCRIPTION

The LTS-5501ACB is a 0.56 inch (14.22 mm) digit height single digit display. This device uses InGaN BLUE LED chips (InGaN epi on SiC substrate). The display has gray face and white segments.

DEVICE

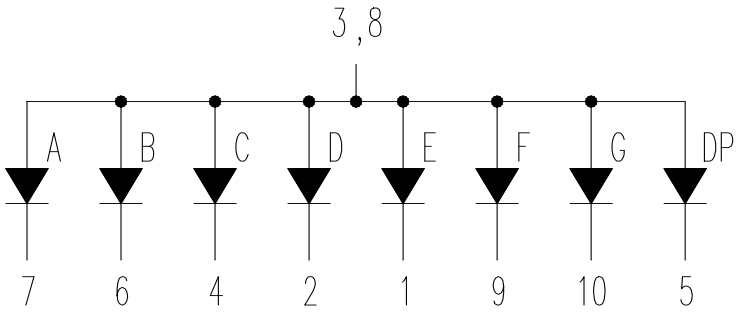
PART NO.	DESCRIPTION
InGaN BLUE	Common Anode
LTS-5501ACB	Rt. Hand Decimal

PACKAGE DIMENSIONS



NOTES: All dimensions are in millimeters. Tolerances are ± 0.25-mm (0.01“) unless otherwise noted.

INTERNAL CIRCUIT DIAGRAM



PIN CONNECTION

No.	CONNECTION
1	CATHODE E
2	CATHODE D
3	COMMON ANODE
4	CATHODE C
5	CATHODE DP.
6	CATHODE B
7	CATHODE A
8	COMMON ANODE
9	CATHODE F
10	CATHODE G

ABSOLUTE MAXIMUM RATING

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation Per Segment	70	mW
Peak Forward Current Per Segment (Frequency 1Khz, 35% duty cycle)	100	mA
Continuous Forward Current Per Segment Forward Current Derating from 25^0C	30 0.4	mA mA/^{0}C
Reverse Voltage Per Segment	5	V
Operating Temperature Range	-35^0C to +85^0C	
Storage Temperature Range	-35^0C to +85^0C	
Solder Temperature 1/16 inch Below Seating Plane for 3 Seconds at 260^0C		

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25^{o}C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	3400	7500		μcd	I_F=10mA
Peak Emission Wavelength	λp		468		nm	I_F=20mA
Spectral Line Half-Width	Δλ		25		nm	I_F=20mA
Dominant Wavelength	λd		470		nm	I_F=20mA
Forward Voltage Per Segment	V_F		3.3	3.8	V	I_F=20mA
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.

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

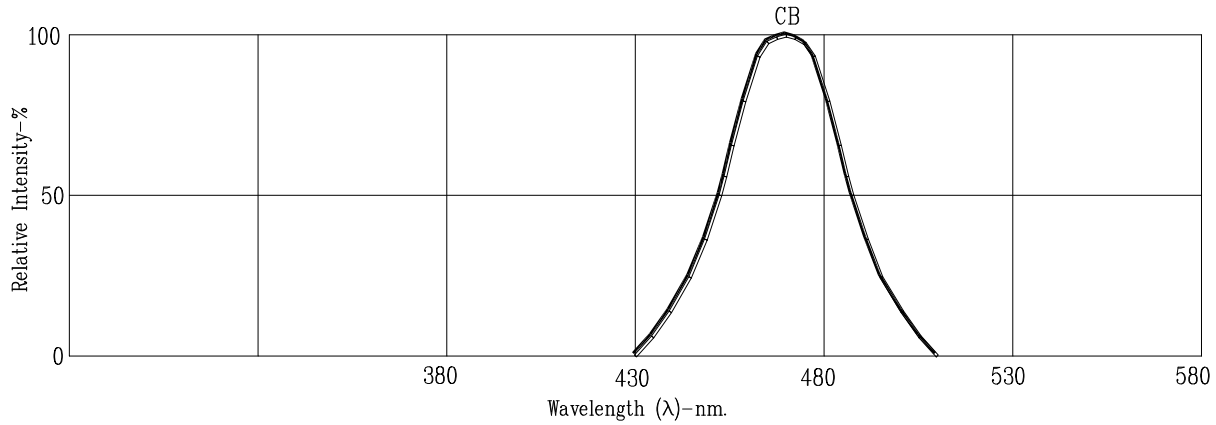


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

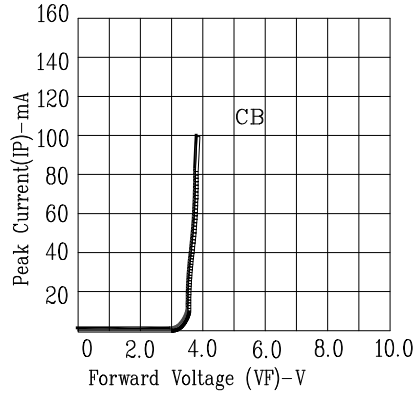


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

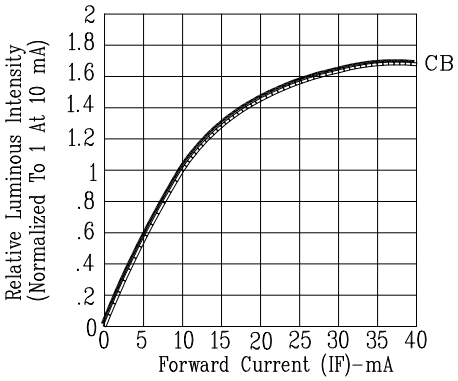


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

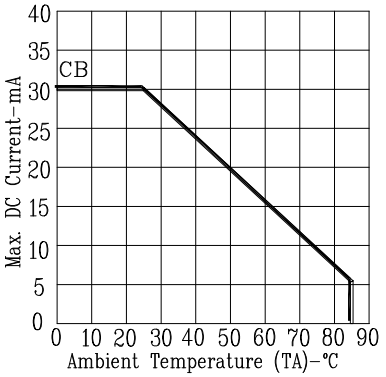


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

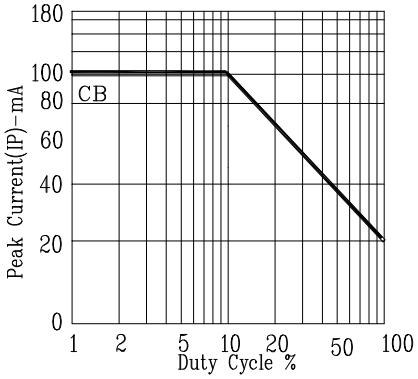


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: CB=InGaN Blue