



LED Display Product Data Sheet LTD-5523AKTB

Spec No.: DS30-2003-145

Effective Date: 07/05/2003

Revision: -

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

FEATURES

- * 0.56 inch (14.22 mm) DIGIT HEIGHT
- * EXCELLENT SEGMENT UNIFORMITY
- * LOW POWER REQUIREMENT
- * HIGH BRIGHTNESS AND HIGH CONTRAST
- * WIDE VIEWING ANGLE
- * SOLID STATE RELIABILITY
- * BINNED FOR LUMINOUS INTENSITY

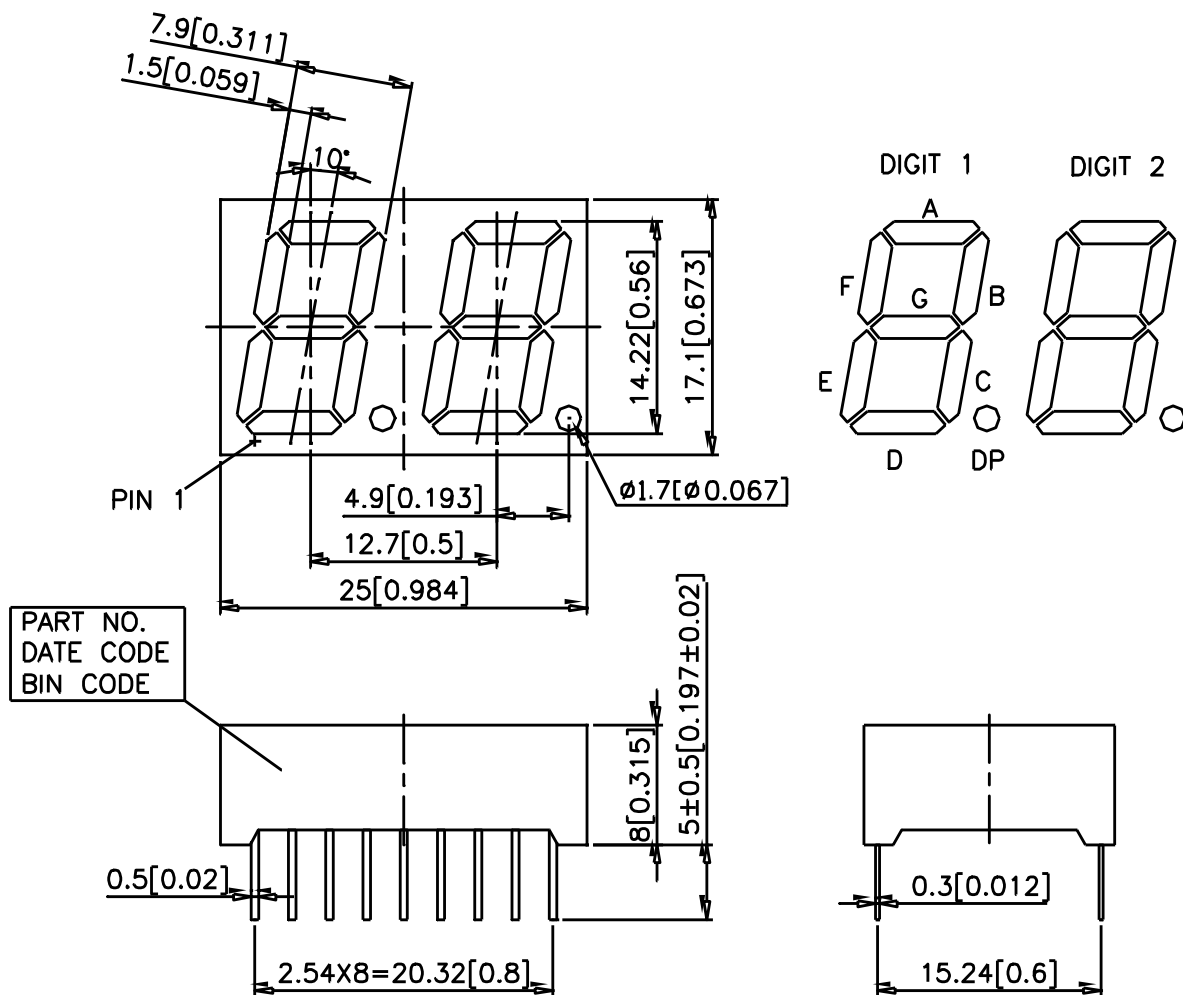
DESCRIPTION

The LTD-5523AKTB is a 0.56 inch (14.22 mm) digit height dual-digit display. This device uses InGaN BLUE chips (InGaN epi on Sapphire substrate). The display has gray face and white segments.

DEVICE

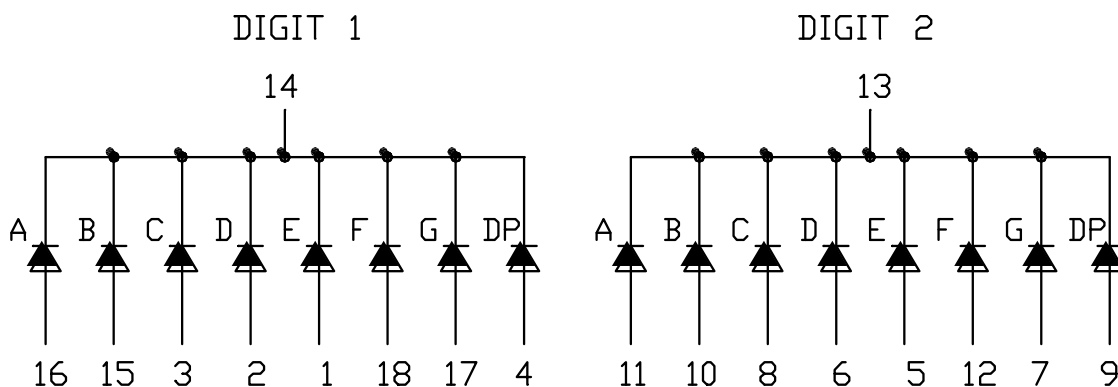
PART NO.	DESCRIPTION
InGaN BLUE	Common Cathode
LTD-5523AKTB	Rt. Hand Decimal

PACKAGE DIMENSIONS



NOTES: All dimensions are in millimeters. Tolerances are $\pm 0.25\text{mm}$ ($0.01''$) unless otherwise noted.

INTERNAL CIRCUIT DIAGRAM



PIN CONNECTION

No.	CONNECTION
1	Anode E (Digit 1)
2	Anode D (Digit 1)
3	Anode C (Digit 1)
4	Anode DP(Digit 1)
5	Anode E (Digit 2)
6	Anode D (Digit 2)
7	Anode G (Digit 2)
8	Anode C (Digit 2)
9	Anode DP (Digit 2)
10	Anode B (Digit 2)
11	Anode A (Digit 2)
12	Anode F (Digit 2)
13	Common Cathode (Digit 2)
14	Common Cathode (Digit 1)
15	Anode B (Digit 1)
16	Anode A (Digit 1)
17	Anode G (Digit 1)
18	Anode F (Digit 1)

ABSOLUTE MAXIMUM RATING

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation Per Segment	120	mW
Peak Forward Current Per Segment (Frequency 1Khz, 10% duty cycle)	100	mA
Continuous Forward Current Per Segment	20	mA
Forward Current Derating from 25 ⁰ C	0.25	mA/ ⁰ C
Reverse Voltage Per Segment	5	V
*Electrostatic Discharge Threshold(HBM)	300	V
Operating Temperature Range	-35 ⁰ C to +85C	
Storage Temperature Range	-35 ⁰ C to +85C	
Soldering Conditions : 1/16 inch below seating plane for 3 seconds at 260 ⁰ C		

* HBM:Human Body Model. Seller gives no other assurances regarding the ability of product to withstand ESD.

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25⁰C

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITION
Average Luminous Intensity Per Segment	I _v	3400	9000		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		470		nm	I _F = 20mA
Forward Voltage Per Segment	V _F		3.5	4.0	V	I _F = 20mA
Reverse Current Per Segment	I _R			100	μA	V _R = 5V
Luminous Intensity Matching Ratio	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)

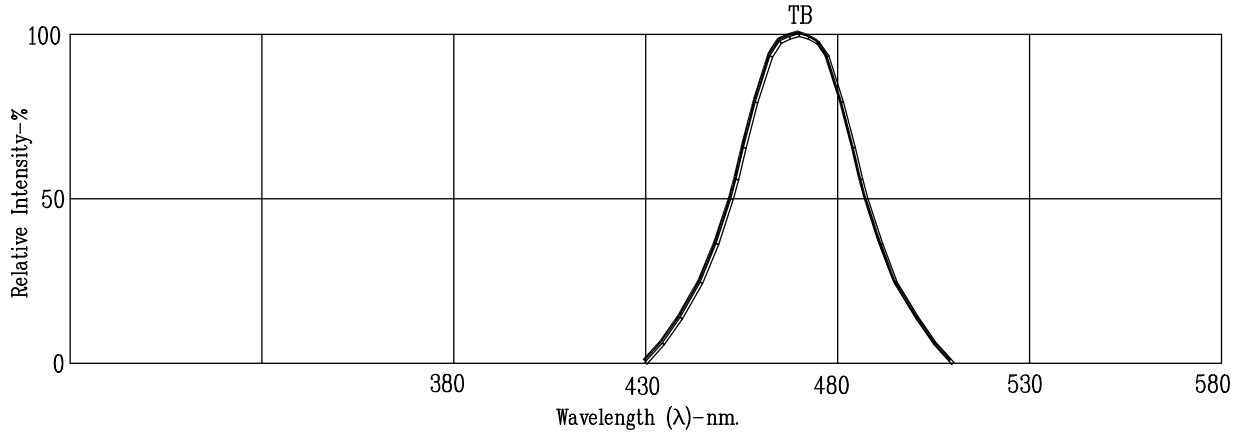


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

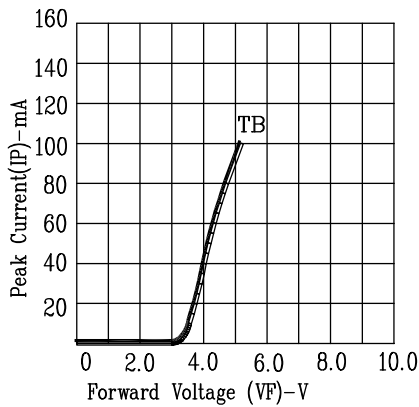


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

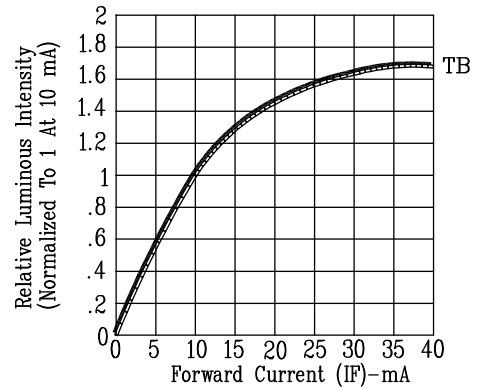


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

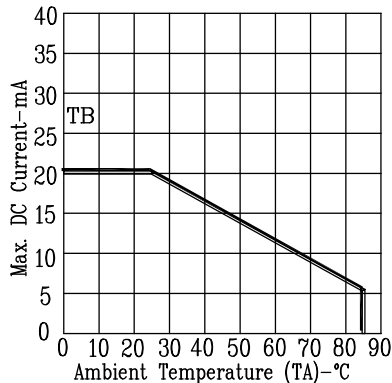


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

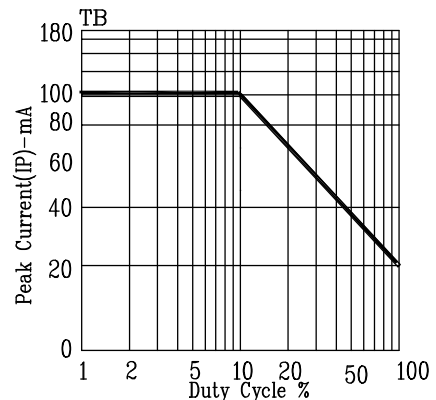


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: TB=InGaN/sapphire Blue