



LED Display

Product Data Sheet

LTC-3710CB

Spec No.: DS30-2005-033

Effective Date: 02/23/2005

Revision: -

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

FEATURES

- * 0.3 inch (7.62 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)**

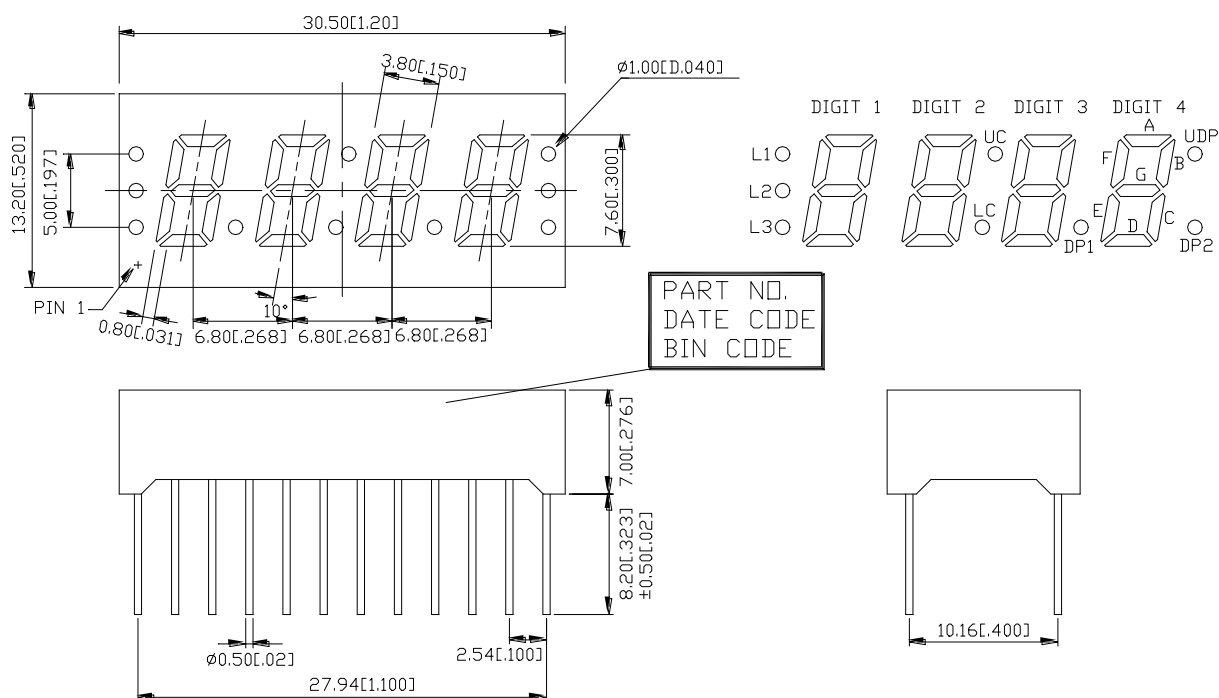
DESCRIPTION

The LTC-3710CB is a 0.3 inch (7.62 mm) digit height quadruple digit seven-segment display. This device uses InGaN blue LED chips (GaN epi on SiC substrate). The display has a black face and white segments.

DEVICE

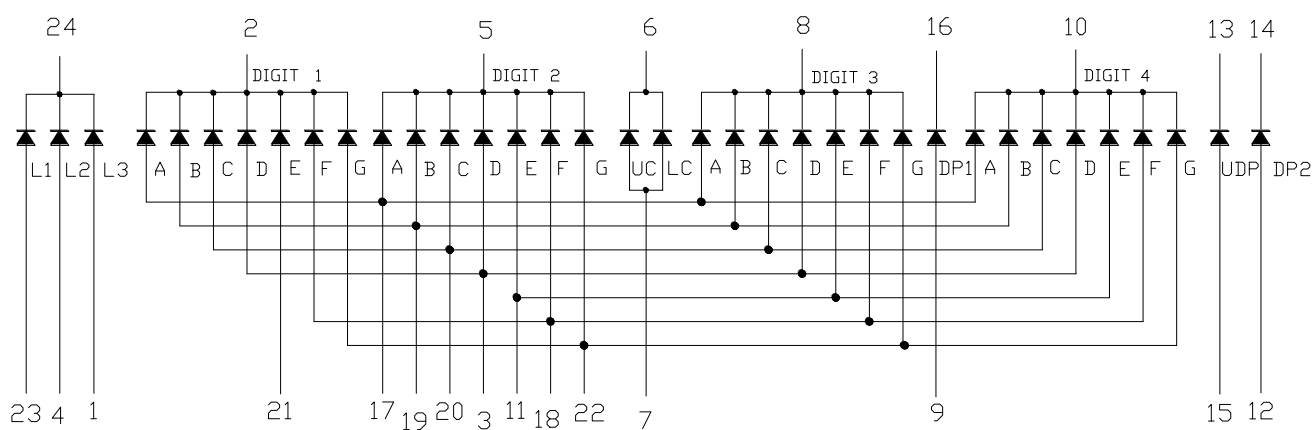
PART NO.	DESCRIPTION
InGaN Blue	Multiplex Common Cathode Rt. Hand Decimal
LTC-3710CB	

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	NO	CONNECTION
1	ANODE L3	13	CATHODE UDP
2	COMMON CATHODE DIGIT 1	14	CATHODE DP2
3	ANODE 1D,2D,3D,4D	15	ANODE UDP
4	ANODE L2	16	CATHODE DP1
5	COMMON CATHODE DIGIT 2	17	ANODE 1A,2A,3A,4A
6	CATHODE UC,LC	18	ANODE 1F,2F,3F,4F
7	ANODE UC,LC	19	ANODE 1B,2B,3B,4B
8	COMMON CATHODE DIGIT 3	20	ANODE 1C,2C,3C,4C
9	ANODE DP1	21	ANODE 1E
10	COMMON CATHODE DIGIT 4	22	ANODE 1G,2G,3G,4G
11	ANODE 2E,3E,4E	23	ANODE L1
12	ANODE DP2	24	CATHODE L1,L2,L3

ABSOLUTE MAXIMUM RATING

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation Per Segment	65	mW
Peak Forward Current Per Segment (Frequency 1Khz, 10% duty cycle)	60	mA
Continuous Forward Current Per Segment	15	mA
Derating Linear From 25°C Per Segment	0.2	mA/°C
Reverse Voltage Per Segment	5	V
Operating Temperature Range	-35°C to +85°C	
Storage Temperature Range	-35°C to +85°C	
Soldering Conditions : 1/16 inch below seating plane for 3 seconds at 260 ⁰ C		

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I _v	2100	5800		μcd	I _F =10mA
Peak Emission Wavelength	λ _p		428		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		3.8	4.5	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)

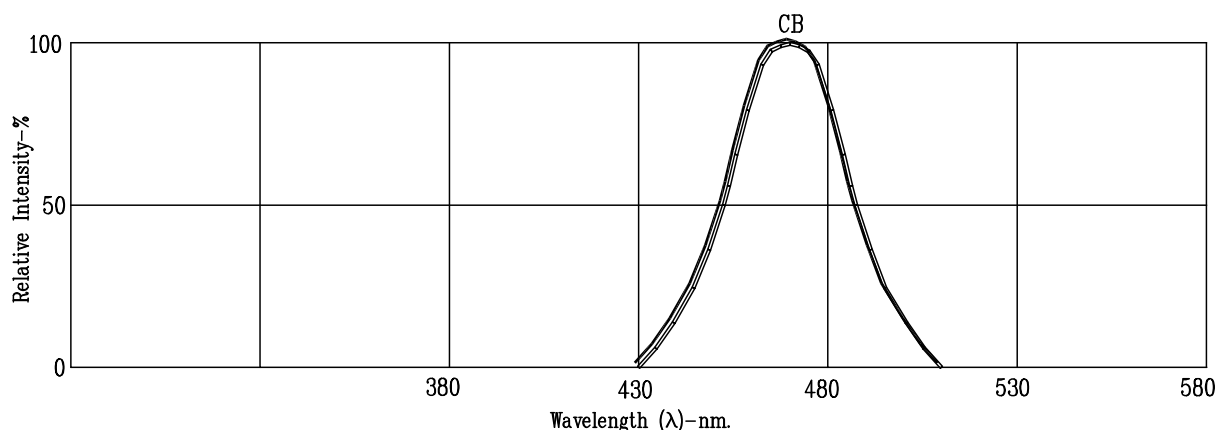


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

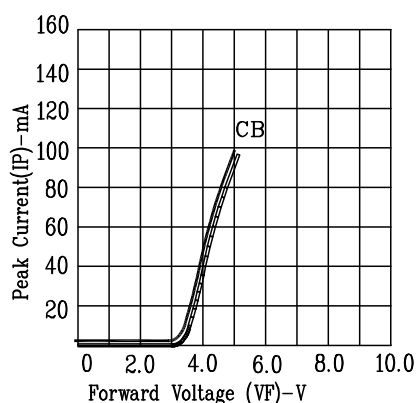


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

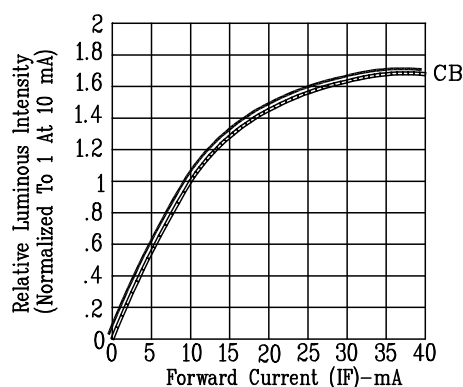


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

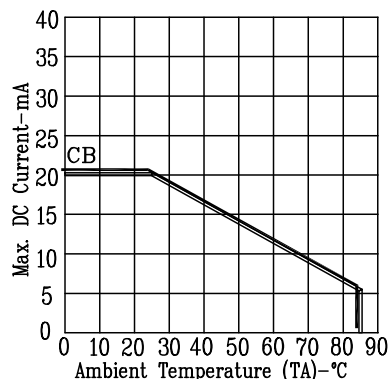


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

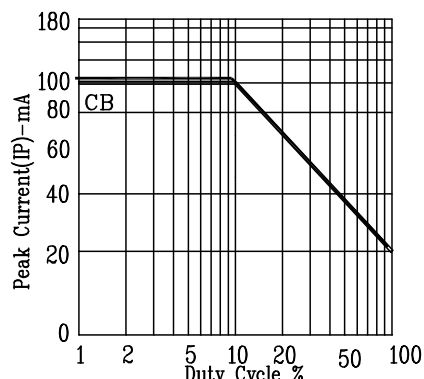


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE %
(REFRESH RATE 1KHz)

NOTE: CB=InGaN Blue