LITEON®
OPTOELECTRONICS

LED Display

Product Data Sheet

LTC-2811TBE

Spec No.: DS30-2010-0279

Effective Date: 12/08/2010

Revision: -

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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LED DISPLAY

LTC-2811TBE
DATA SHEET

item	Description	By	DATE
-	**NPPR Original Spec**	Richard Lin	5/18/10
1	**Change Pin dimension**	Richard Lin	5/31/10
2	**Revise Pin location from single to double side**	Richard Lin	6/28/10
3	**Change pin dimension**	Eason Lin	10/13/10

FEATURES

- 0.275 inch (7 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)**

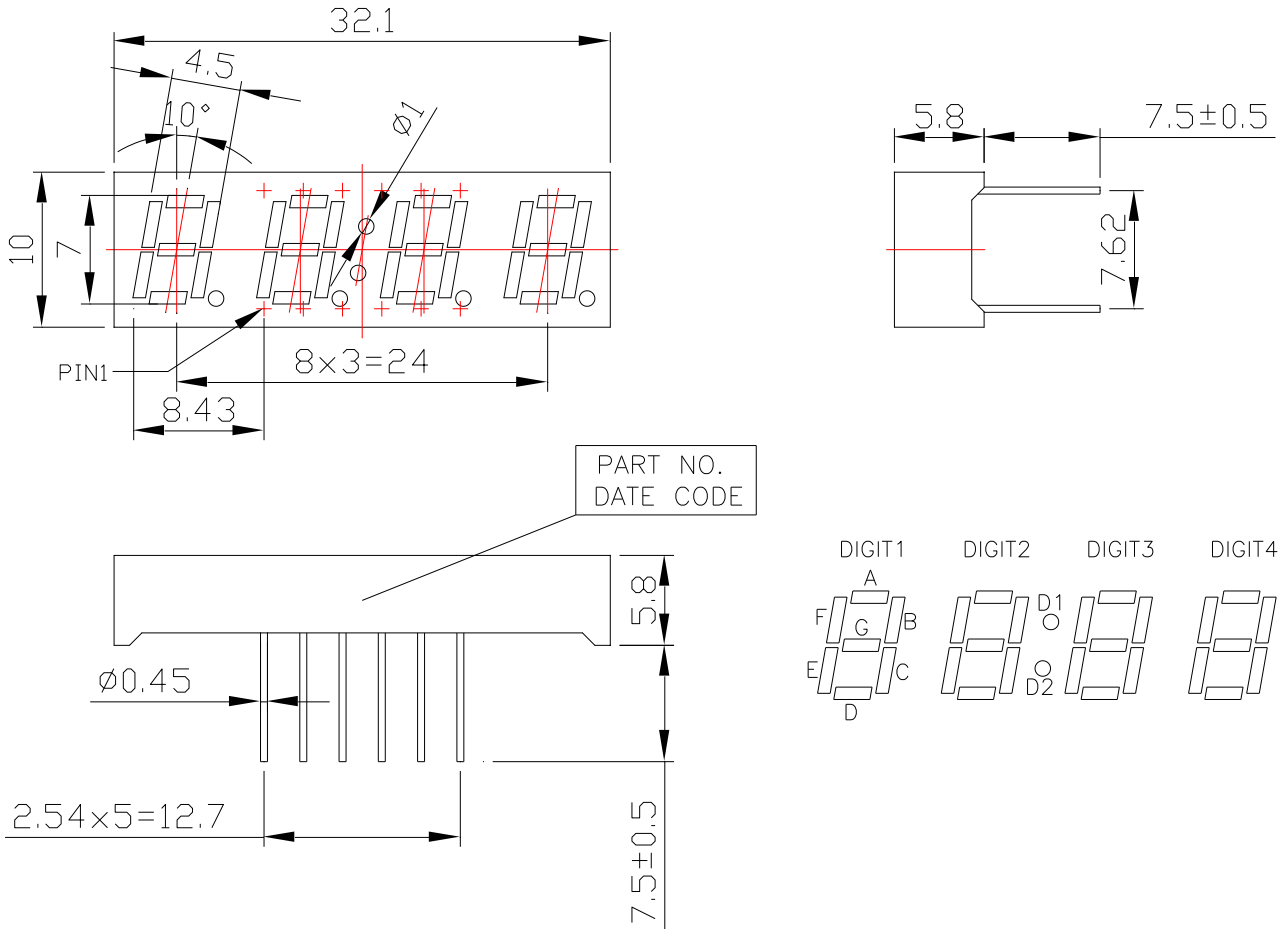
DESCRIPTION

The LTC-2811TBE is a 0.275 inch (7 mm) digit height quadruple digit seven-segment display. This device uses BLUE LED chips(InGaN epi on a Sapphire substrate). The display has black face and white segments.

DEVICE

PART NO.	DESCRIPTION
InGaN BLUE	Multiplex Common Anode
LTC-2811TBE	

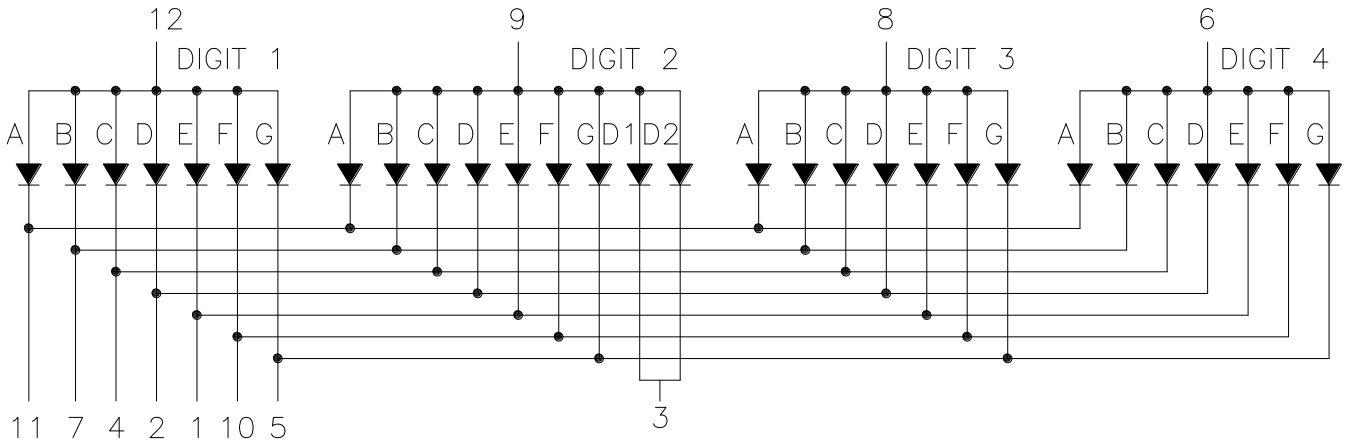
PACKAGE DIMENSIONS



NOTES: 1).All dimensions are in millimeters(inches). Tolerance : ± 0.25 mm (0.01“) unless otherwise noted.

2). Pin tip’s shift tolerance is +/- 0.4 mm.

INTERNAL CIRCUIT DIAGRAM



PIN CONNECTION

No.	CONNECTION
1	Cathode E
2	Cathode D
3	Cathode D1,D2
4	Cathode C
5	Cathode G
6	Common Anode Digit 4
7	Cathode B
8	Common Anode Digit 3
9	Common Anode Digit 2
10	Cathode F
11	Cathode A
12	Common Anode Digit 1

ABSOLUTE MAXIMUM RATING

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation Per Segment	70	mW
Peak Forward Current Per Segment (Frequency 1Khz, 10% duty cycle)	100	mA
Continuous Forward Current Per Segment Forward Current Derating from 25^0C	20 0.21	mA mA/℃
Electrostatic Discharge Threshold(HBM)	2000	V
Operating Temperature Range	-35℃ to +85℃	
Storage Temperature Range	-35℃ to +85℃	
Wave Solder Temperature: max 260℃ for max 5sec at 1.6mm below seating plane. Manual solder Temperature : Max 295℃+/-5℃ for max 3sec at 1.6mm below seating plane.		

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	3400	7600		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	465	470	475	nm	I_F=20mA
Forward Voltage Per Segment	V_F		3.3	3.6	V	I_F=20mA
Reverse Current Per Segment (2)	I_R			100	μA	V_R=5V
Luminous Intensity Matching Ratio (Similar Light Area)	I_V-m			2:1		I_F=10mA

Note:

1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commision Internationale De L'Eclairage) eye-response curve.
2. Reverse voltage is only for IR test. It can not continue to operate at this situation.

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

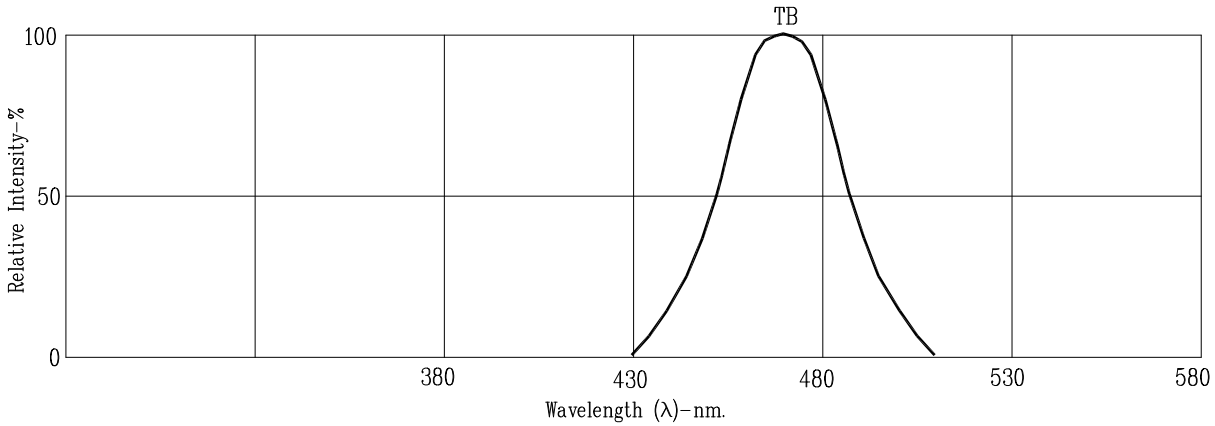


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

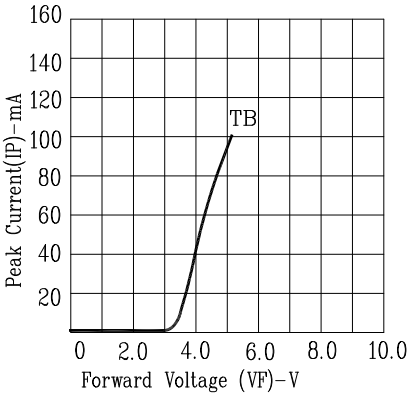


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

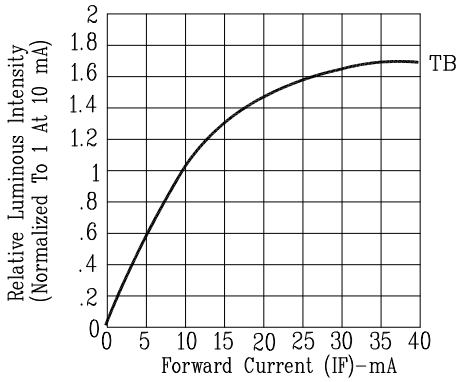


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

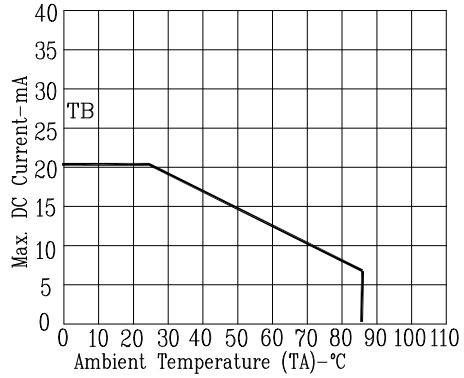


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

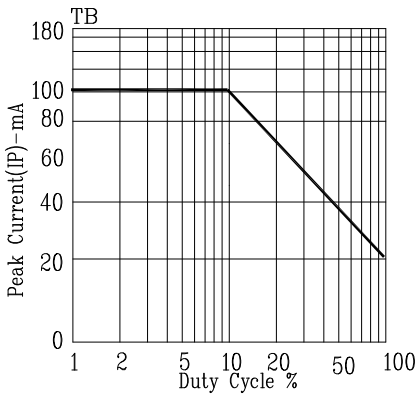


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: TB=InGaN/sapphire Blue