



LED Display Product Data Sheet LTS-5824CB

Spec No.: DS30-2006-036

Effective Date: 03/25/2006

Revision: -

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

FEATURES

- * 0.56 inch (14.25 mm) DIGIT HEIGHT
- * EXCELLENT SEGMENT UNIFORMITY
- * LOW POWER REQUIREMENT
- * HIGH BRIGHTNESS AND HIGH CONTRAST
- * WIDE VIEWING ANGLE
- * SOLID STATE RELIABILITY
- * BINNED FOR LUMINOUS INTENSITY
- * **LEAD-FREE PACKAGE (ACCORDING TO ROHS)**

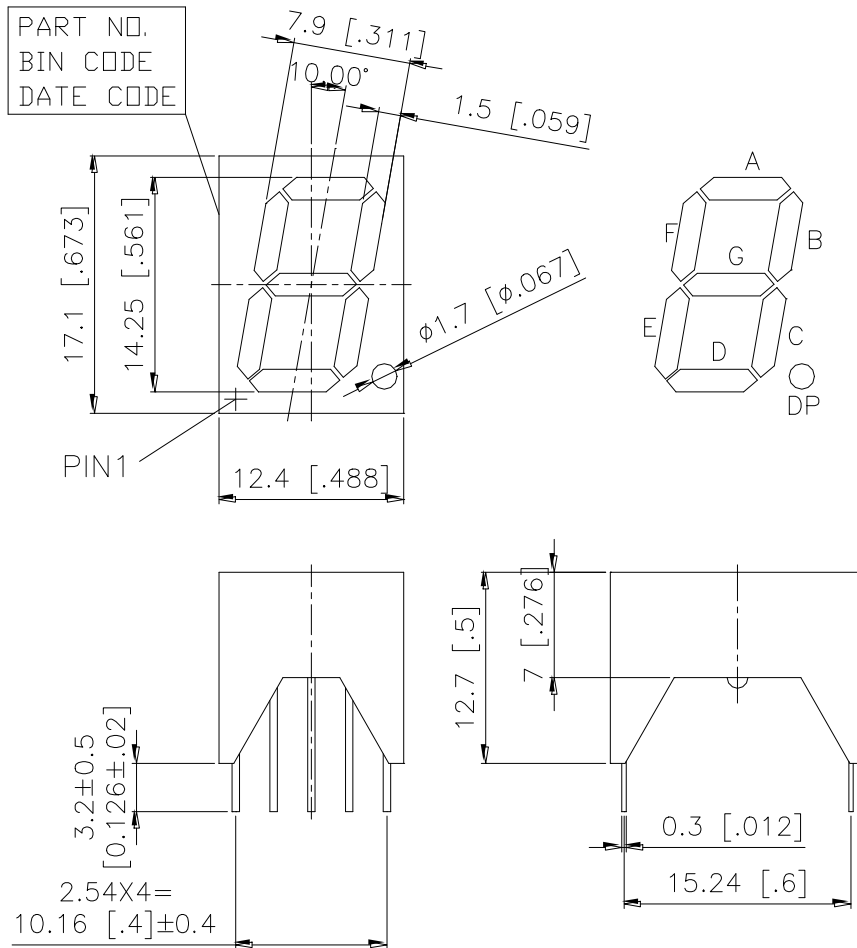
DESCRIPTION

The LTS-5824CB is a 0.56 inch (14.25 mm) digit height single digit display. This device uses InGaN Blue LED chips (GaN epi on SiC substrate). The display has black face and white segments.

DEVICE

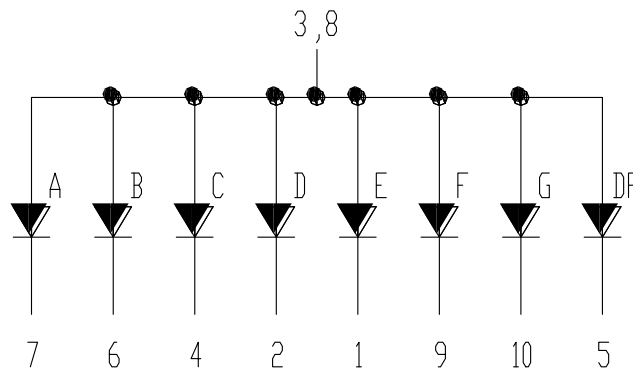
| PART NO. | DESCRIPTION |
|-----------------|--------------------|
| InGaN Blue | Common Anode |
| LTS-5824CB | Rt. Hand Decimal |

PACKAGE DIMENSIONS



NOTES: 1. All dimensions are in millimeters. Tolerances are $\pm 0.25\text{mm}$ (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 | 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, 10% duty cycle) | 100 | mA |
| Continuous Forward Current Per Segment | 30 | mA |
| Derating Linear From 25°C Per Segment | 0.4 | mA/°C |
| Reverse Voltage Per Segment | 5 | V |
| Operating Temperature Range | -35°C to +105°C | |
| Storage Temperature Range | -35°C to +105°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 | I _v | 3400 | 7500 | | 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 | | 3.3 | 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)

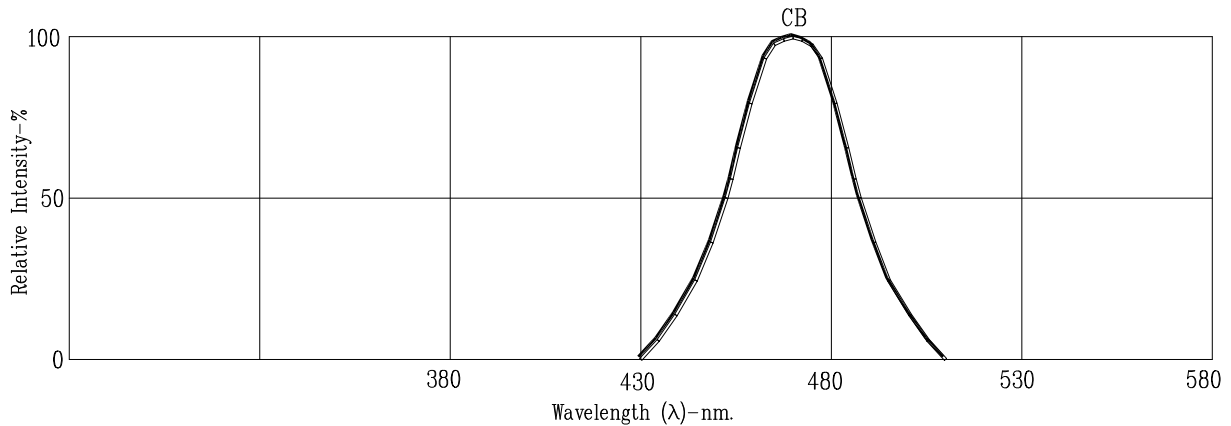


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

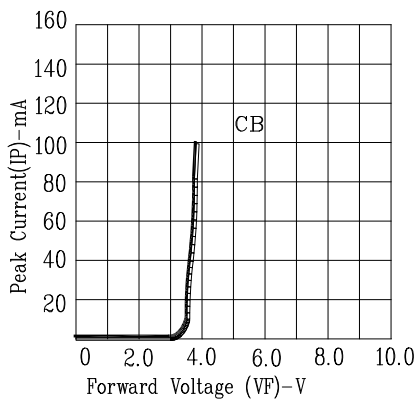


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

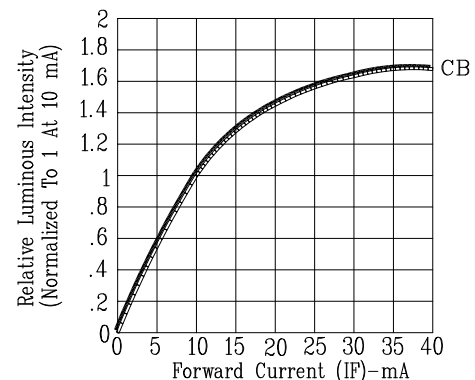


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

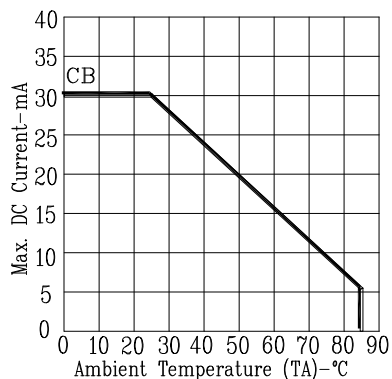


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

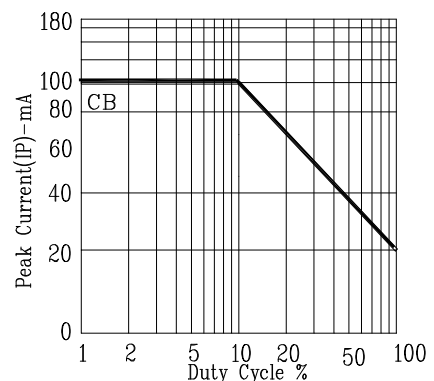


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: CB=InGaN Blue