



LED Display

Product Data Sheet

LTS-10314KG-01J

Spec No.: DS30-2006-098

Effective Date: 08/01/2006

Revision: -

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

FEATURES

- * 1.0 inch (25.4 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.**

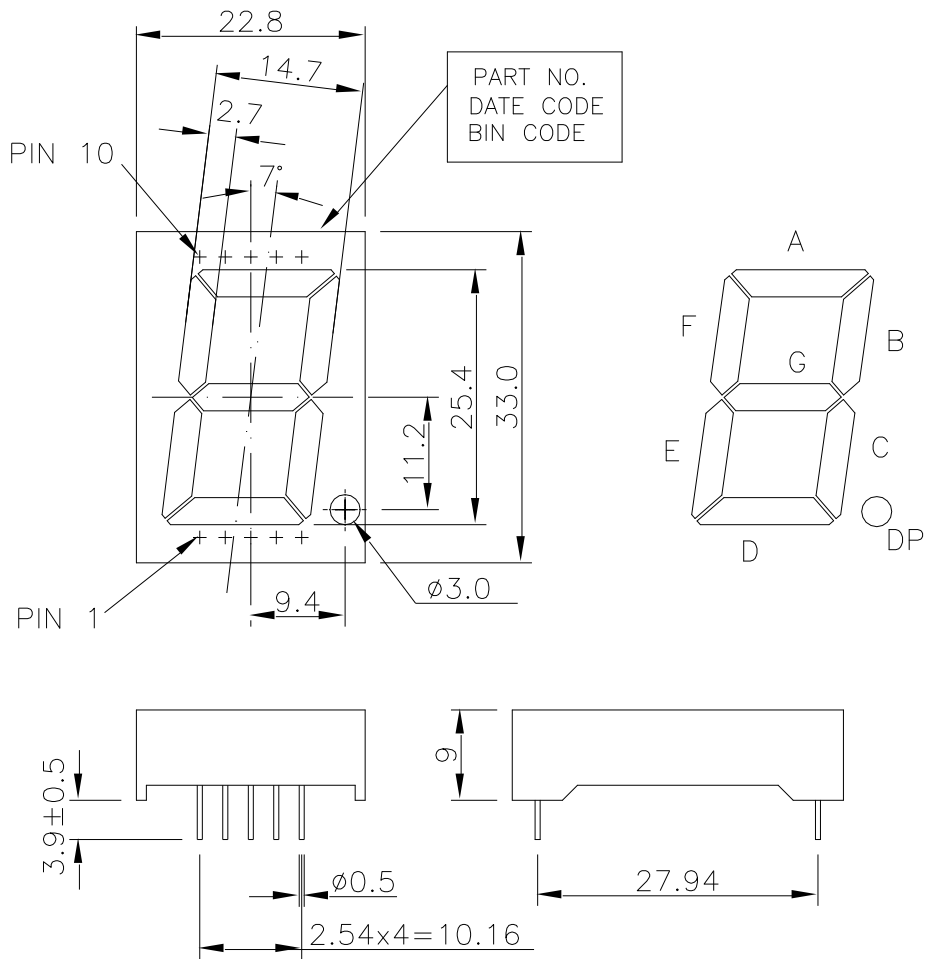
DESCRIPTION

The LTS-10314KG-01J is a 1.0 inch (25.4 mm) digit height single digit display. This device uses AS-AllnGaP GREEN LED chips (AllnGaP epi on GaAs substrate). The display has black face and green segments.

DEVICE

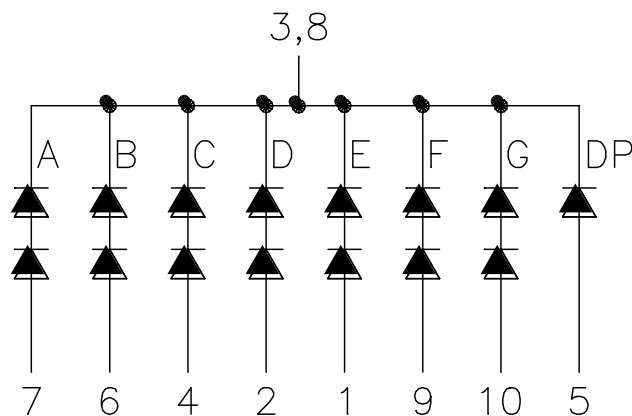
| PART NO. | DESCRIPTION |
|-----------------|--------------------|
| AllnGaP GREEN | Common Cathode |
| LTS-10314KG-01J | |

PACKAGE DIMENSIONS



NOTES: 1. All dimensions are in millimeters. Tolerances are ± 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 | Anode E |
| 2 | Anode D |
| 3 | Common Cathode |
| 4 | Anode C |
| 5 | Anode DP |
| 6 | Anode B |
| 7 | Anode A |
| 8 | Common Cathode |
| 9 | Anode F |
| 10 | Anode G |

ABSOLUTE MAXIMUM RATING

| PARAMETER | MAXIMUM RATING | UNIT |
|--|-----------------|-------|
| Power Dissipation Per Segment | 134 (70) | mW |
| Peak Forward Current Per Segment (Frequency 1Khz, 25% duty cycle) | 60 | mA |
| Continuous Forward Current Per Segment | 24 | mA |
| Derating Linear From 25°C Per Segment | 0.31 | mA/°C |
| Reverse Voltage Per Segment | 10(5) | V |
| Operating Temperature Range | -35°C to +105°C | |
| Storage Temperature Range | -35°C to +105°C | |
| Solder Conditions : 1/16 inch below seating plane for 3 seconds at 260°C, or temperature of unit (during assembly) not over max. temperature rating above | | |

ELECTRICAL / OPTICAL CHARACTERISTICS

| PARAMETER | SYMBOL | MIN | TYP | MAX | UNIT | TEST CONDITION |
|--|-------------------|-----|---------------|--------------|------|-----------------------|
| Average Luminous Intensity Per Segment | I _v | 900 | 3375 33750 | | ucd | IF = 1mA IF = 10mA |
| Peak Emission Wavelength | λ _p | | 571 | | nm | IF = 20mA |
| Spectral Line Half-Width | Δλ | | 15 | | nm | IF = 20mA |
| Dominant Wavelength | λ _d | | 572 | | nm | IF = 20mA |
| Forward Voltage Per Segment | V _F | | 4.1 (2.05) | 5.2 (2.6) | V | IF = 20mA |
| Reverse Current Per Segment | I _R | | | 100 | μA | V _R = 5V |
| Luminous Intensity Matching Ratio (Same Light Area) | I _v -m | | | 2 : 1 | | IF = 1mA |

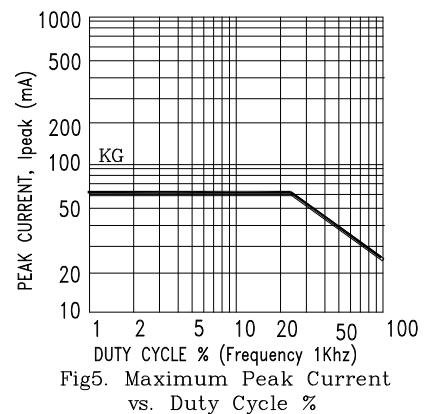
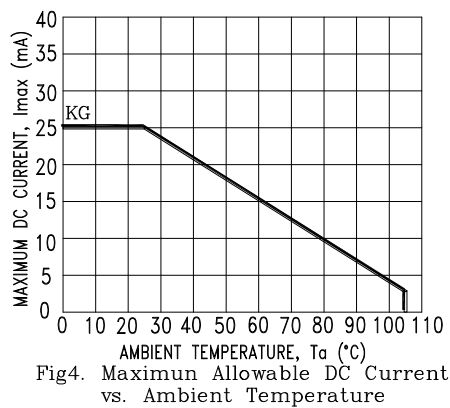
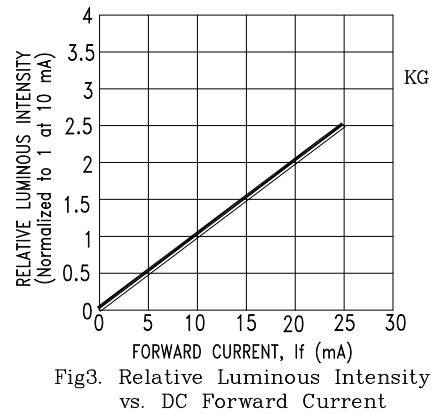
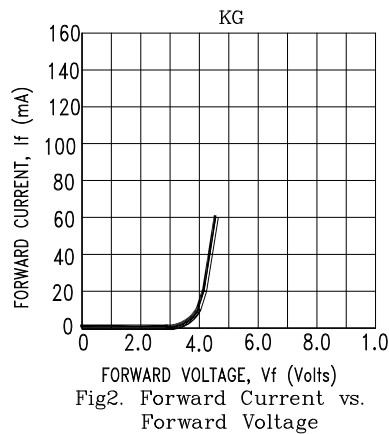
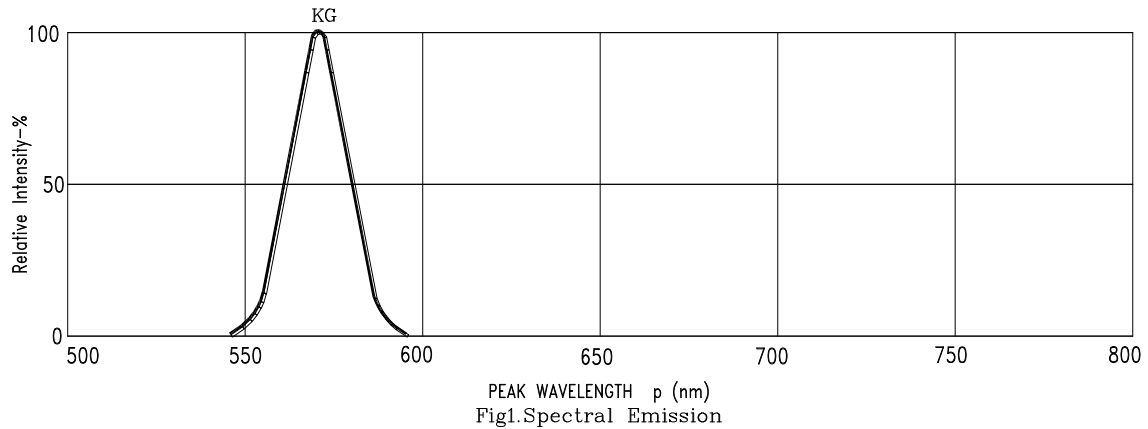
Note: Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commision Internationale De L'Eclairage) eye-response curve.

| BIN TABLE 2 | BIN RANK TABLE | | | | | UNIT : ucd/seg @(IF=1mA.) |
|-------------|----------------|-----------|-----------|-----------|-----------|---------------------------------|
| BIN GRADE | H | J | K | L | M | |
| RANGE | 801~1300 | 1301~2100 | 2101~3400 | 3401~5400 | 5401~8600 | |

| HUE TABLE 5 | HUE TABLE | | | UNIT : nm@20mA. |
|-------------|-----------|-----------|-----------|--------------------|
| HUE CODE | 5 | 6 | 7 | |
| RANGE | 568.1~570 | 570.1~572 | 572.1~574 | |

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)



NOTE : KG=AlInGaP Green