



LED Display

Product Data Sheet

LTD-4608KF

Spec No.: DS30-2006-044

Effective Date: 07/16/2008

Revision: B

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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LED DISPLAY**LTD-4608KF**
DATA SHEET

| Rev | Description | By |
|-----|--|--------------------------------|
| - | ORIGINAL | PHANOMKORN MAY 20,2006 |
| A | REVISE MIN IV ON PAGE 4/5 | PHANOMKORN NOVEMBER 28,2007 |
| B | CHANGE THE TEST CONDITION OF AVERAGE LUMINOUS INTENSITY ON PAGE 4/5 FROM 1mA TO 20 mA | PHANOMKORN JULY 07,2008 |
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PAGE NO. : 0 OF 5

FEATURES

- * 0.4 inch (10 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).**

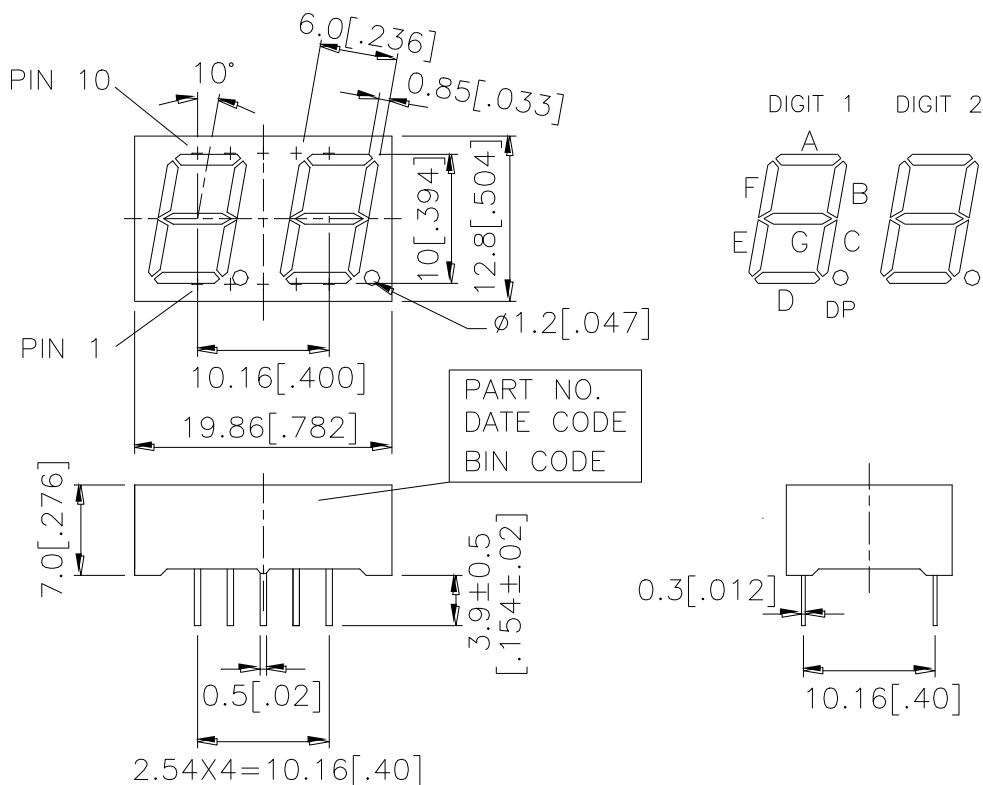
DESCRIPTION

The LTD-4608KF is a 0.4 inch (10 mm) digit height dual digit seven-segment display. This device utilizes AlInGaP yellow orange LED chips, which are made from AlInGaP on a non-transparent GaAs substrate, and has a gray face and white segments.

DEVICE

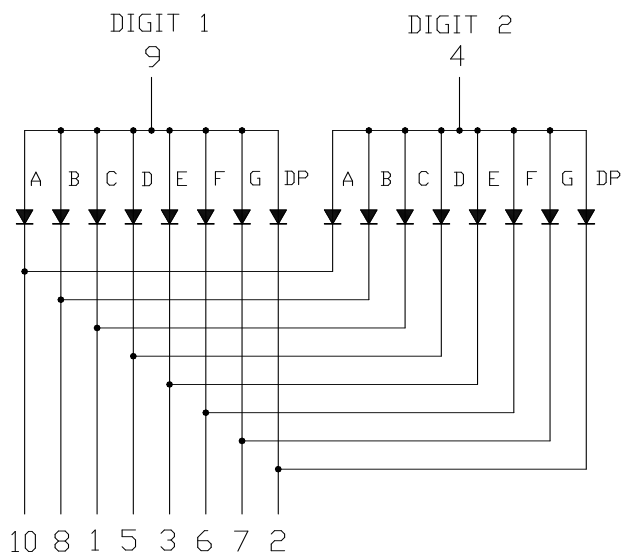
| PART NO. | DESCRIPTION |
|-----------------------|---|
| AlInGaP Yellow Orange | Duplex Common Anode Rt. Hand Decimal |
| LTD-4608KF | |

PACKAGE DIMENSIONS



- NOTES: 1. All dimensions are in millimeters. Tolerances are ± 0.25 mm unless otherwise note.
 2. Pin tip's shift tolerance is ± 0.4 mm.

INTERNAL CIRCUIT DIAGRAM



PIN CONNECTION

| No. | CONNECTION |
|------------|------------------------|
| 1 | CATHODE C |
| 2 | CATHODE D.P. |
| 3 | CATHODE E |
| 4 | COMMON ANODE (DIGIT 2) |
| 5 | CATHODE D |
| 6 | CATHODE F |
| 7 | CATHODE G |
| 8 | CATHODE B |
| 9 | COMMON ANODE (DIGIT 1) |
| 10 | CATHODE A |

ABSOLUTE MAXIMUM RATING AT Ta=25°C

| PARAMETER | MAXIMUM RATING | UNIT |
|--|-----------------|-------|
| Power Dissipation Per Segment | 70 | mW |
| Peak Forward Current Per Segment (1/10 Duty Cycle, 0.1ms Pulse Width) | 60 | mA |
| Continuous Forward Current Per Segment | 25 | mA |
| Derating Linear From 25°C Per Segment | 0.28 | 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 | 27520 | 44000 | | μcd | I _F =20mA |
| Peak Emission Wavelength | λ _p | | 611 | | nm | I _F =20mA |
| Spectral Line Half-Width | Δλ | | 17 | | nm | I _F =20mA |
| Dominant Wavelength | λ _d | | 605 | | nm | I _F =20mA |
| Forward Voltage Per Segment | V _F | | 2.05 | 2.6 | 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 =20mA |

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)

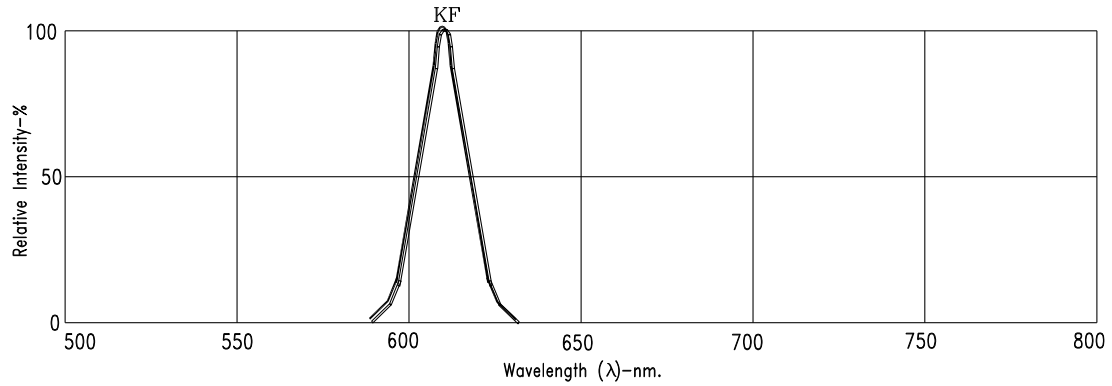


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

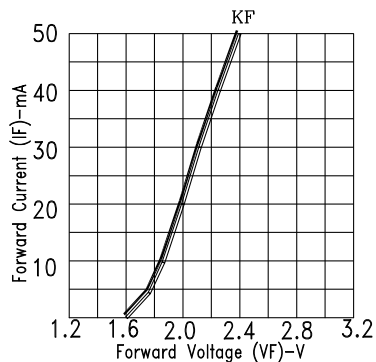


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

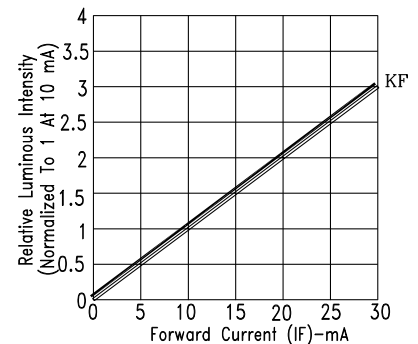


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

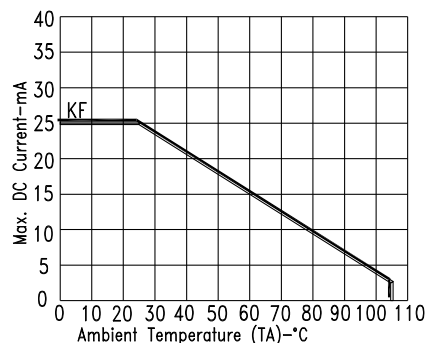


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

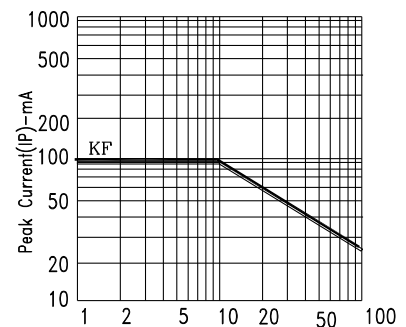


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE %
(REFRESH RATE 1KHz)

NOTE : KF=AlInGap YELLOW ORANGE