



LED Display Product Data Sheet LTC-5689KD

Spec No.: DS30-2008-0190

Effective Date: 06/04/2010

Revision: A

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

FEATURES

- * 0.56 inch (14.2 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).**

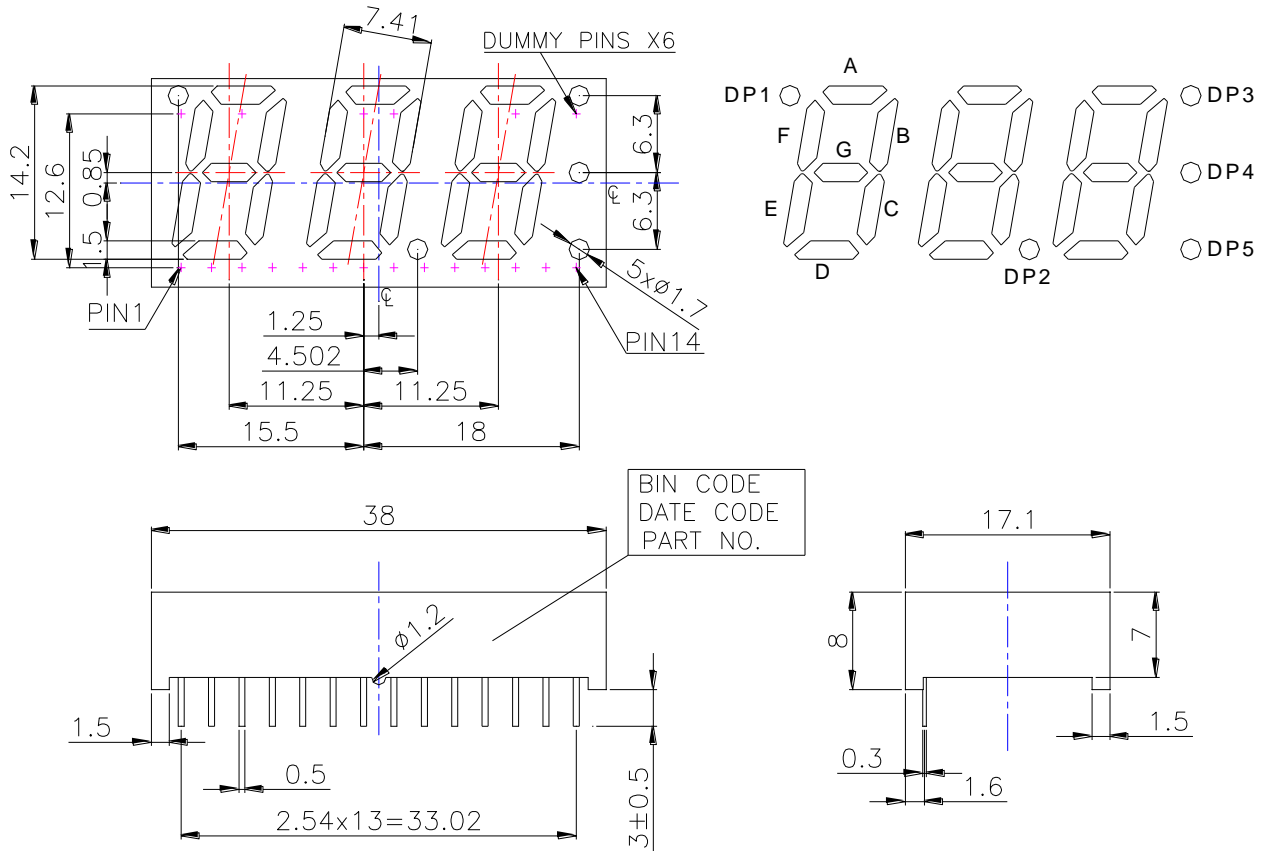
DESCRIPTION

The LTC-5689KD is a 0.56 inch (14.2 mm) digit height triple digit seven-segment display. This device uses AlInGaP HYPER RED LED chips (AlInGaP epi on GaAs substrate). The display has black face and white segments.

DEVICE

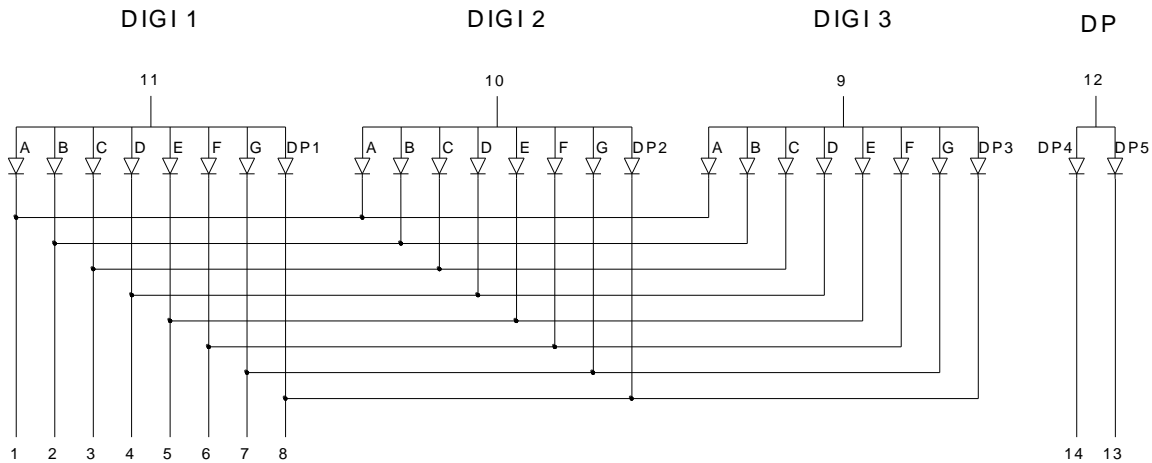
| PART NO. | DESCRIPTION |
|-------------------|------------------------|
| AlInGaP Hyper RED | Multiplex Common Anode |
| LTC-5689KD | Rt. Hand Decimal |

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 | CATHODE A |
| 2 | CATHODE B |
| 3 | CATHODE C |
| 4 | CATHODE D |
| 5 | CATHODE E |
| 6 | CATHODE F |
| 7 | CATHODE G |
| 8 | CATHODE DP1, DP2, DP3 |
| 9 | COMMON ANODE, DIGIT 3 |
| 10 | COMMON ANODE, DIGIT 2 |
| 11 | COMMON ANODE, DIGIT 1 |
| 12 | COMMON ANODE , DP4, DP5 |
| 13 | CATHODE DP5 |
| 14 | CATHODE DP4 |

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ABSOLUTE MAXIMUM RATING AT Ta=25°C

| PARAMETER | MAXIMUM RATING | UNIT |
|--|----------------|-------|
| Power Dissipation Per Segment | 70 | mW |
| Peak Forward Current Per Segment (Frequency 1Khz, 10% duty cycle) | 90 | mA |
| Continuous Forward Current Per Segment | 25 | mA |
| Forward Current Derating from 25°C | 0.28 | mA/°C |
| Reverse Voltage Per Segment | 5 | V |
| Operating Temperature Range | -35°C to +105C | |
| Storage Temperature Range | -35°C to +105C | |
| Solder Temperature 1/16 inch Below Seating Plane for 3 Seconds at 260°C., or temperature of unit (during assembly) not over max. temperature rating above . | | |

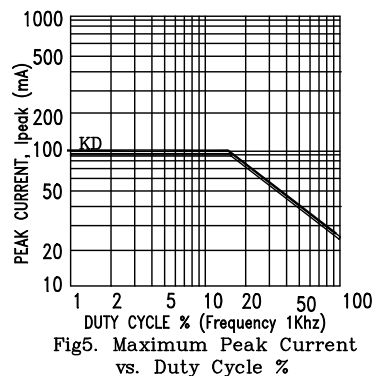
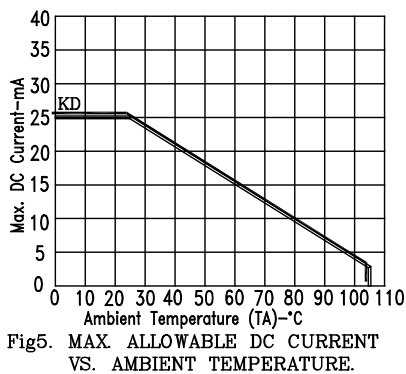
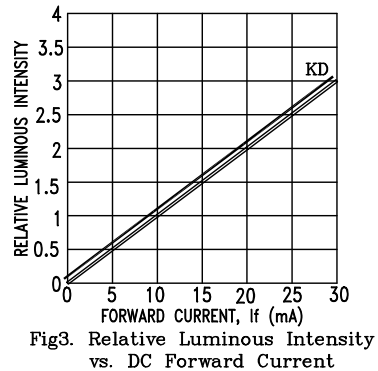
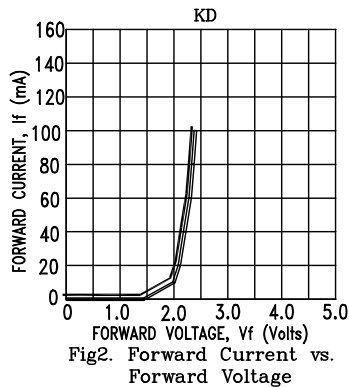
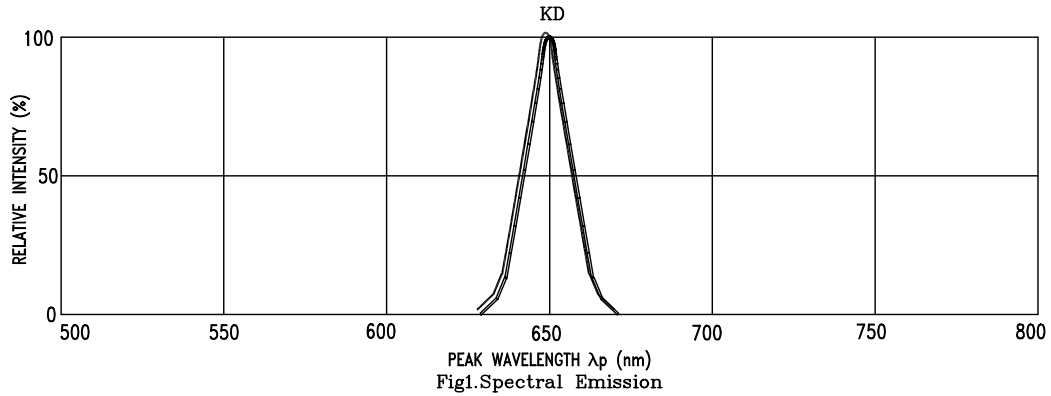
ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C

| PARAMETER | SYMBOL | MIN | TYP | MAX | UNIT | TEST CONDITION |
|---|------------------|-----|------|-------|------|-----------------------|
| Average Luminous Intensity Per Segment | I _v | 320 | 1250 | | μcd | I _F = 1mA |
| Peak Emission Wavelength | λ _p | | 650 | | nm | I _F = 20mA |
| Spectral Line Half-Width | Δλ | | 20 | | nm | I _F = 20mA |
| Dominant Wavelength | λ _d | | 639 | | nm | I _F = 20mA |
| Forward Voltage Per Segment | V _F | | 2.1 | 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 = 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.

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)



NOTE : KD=AlInGaP HYPER RED