LITEON®
OPTOELECTRONICS

LED Display

Product Data Sheet

LTS-50801KE

Spec No.: DS30-2008-0049

Effective Date: 03/21/2008

Revision: -

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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LED DISPLAY

LTS-50801KE
DATASHEET

Rev	Description	By
01	ORIGINAL (Refer to contour drawing Revision (-))	WARIN
(Above data for PD and Customer tracking only)		
-	NPPR Received and Upload on OPNC	KITTISAK Mar 08/2008

SPEC. NO.: DS30-2008-0049

D A T E : Mar 08/2008

REV. NO. : -

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FEATURES

∗5-INCH (127.0 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)**

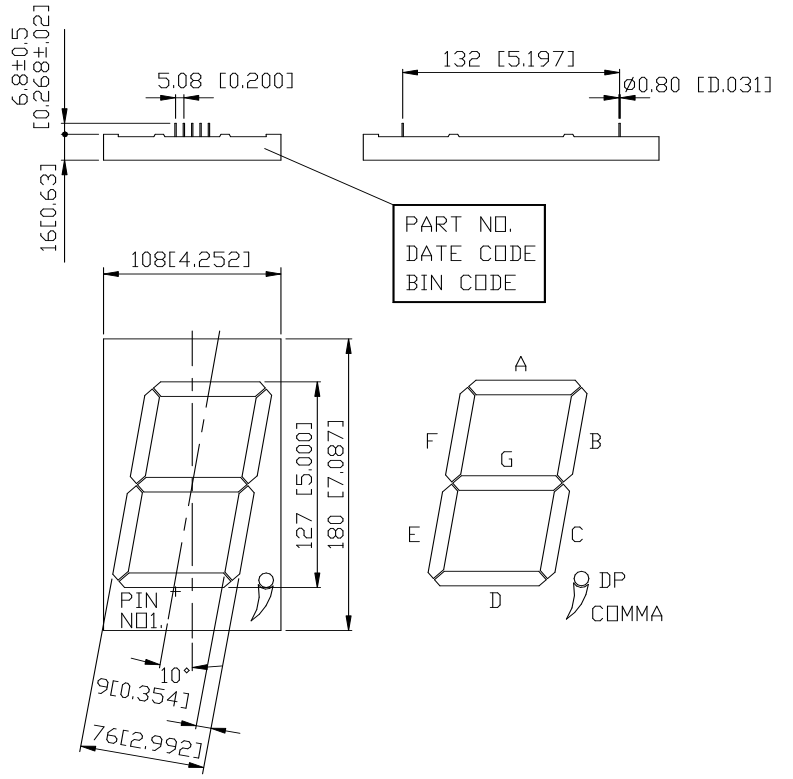
DESCRIPTION

The LTS-50801KE is a 5-inch (127.0-mm) digit height single digit seven-segment display. This device uses AS-AlInGaP RED LED chips (AlInGaP epi on GaAs substrate). The display has a black face and white segments.

DEVICE

PART NO.	DESCRIPTION
AlInGaP RED	Common Anode
LTS-50801KE	

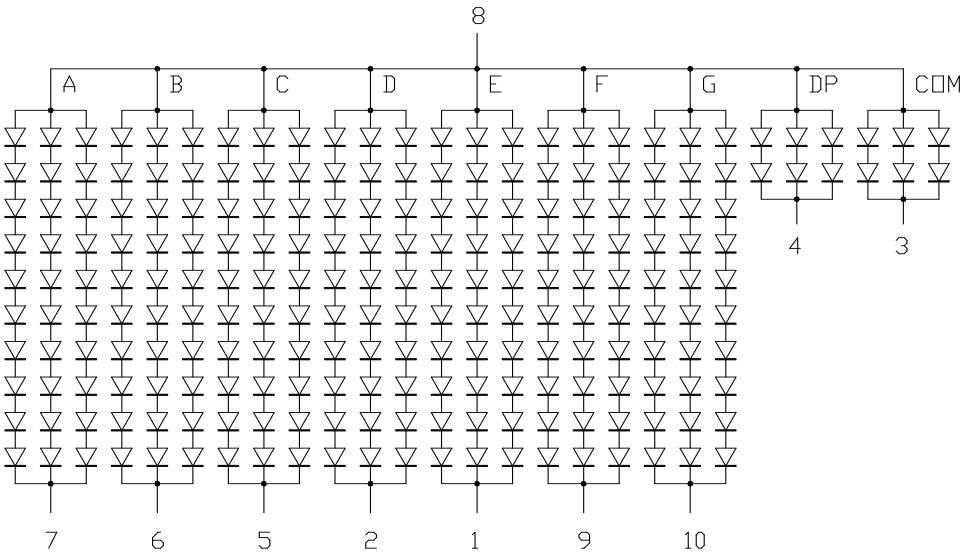
PACKAGE DIMENSIONS



NOTES: 1.All dimensions are in millimeters. Tolerance is ± 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	SEGMENT E CATHODE
2	SEGMENT D CATHODE
3	COMMA CATHODE
4	D.P. CATHODE
5	SEGMENT C CATHODE
6	SEGMENT B CATHODE
7	SEGMENT A CATHODE
8	COMMON ANODE
9	SEGMENT F CATHODE
10	SEGMENT G CATHODE

ABSOLUTE MAXIMUM RATING AT Ta=25°C

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation Per Segment	1400	mW
Peak Forward Current Per Segment (1/10 Duty Cycle, 0.1ms Pulse Width)	270	mA
Continuous Forward Current Per Segment Derating Linear From 25^0C Per Segment	75	mA mA/^{0}C
Reverse Voltage Per Segment	50	V
Operating Temperature Range	-35^{0}C to +105^{0}C	
Storage Temperature Range	-35^{0}C to +105^{0}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		242		mcd	I_F=30mA
Peak Emission Wavelength	λp		632		nm	I_F=60mA
Spectral Line Half-Width	$\Delta\lambda$		20		nm	I_F=60mA
Dominant Wavelength	λd		624		nm	I_F=60mA
Forward Voltage Per Segment	V_F		20 (4)	26 (5.2)	V	I_F=60mA
Reverse Current Per Segment	I_R			300	μA	V_R=50V
Luminous Intensity Matching Ratio (Similar Light Area)	I_V-m			2:1		I_F=30mA

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)

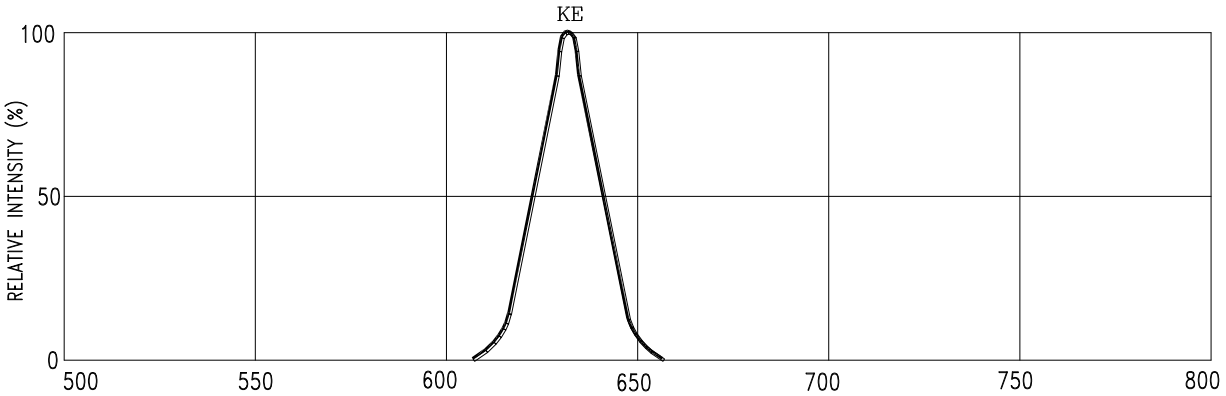


Fig1.Spectral Emission

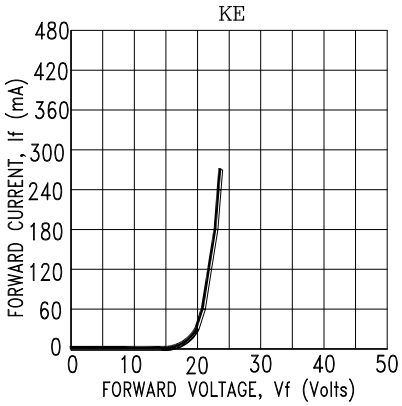


Fig2. Forward Current vs. Forward Voltage

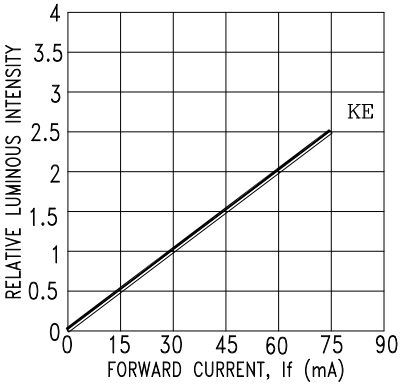


Fig3. Relative Luminous Intensity vs. DC Forward Current

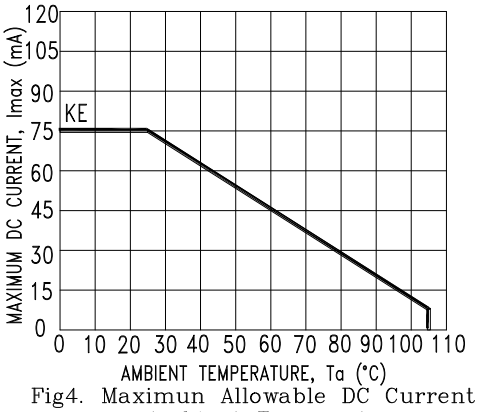


Fig4. Maximun Allowable DC Current vs. Ambient Temperature

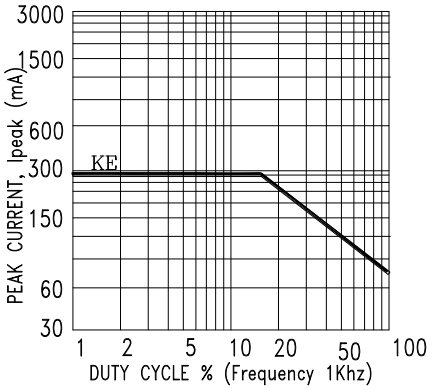


Fig5. Maximum Peak Current vs. Duty Cycle %

NOTE : KE=AlInGaP RED