



# LED Display Product Data Sheet LTP-7188KE

Spec No.: DS30-2002-283

Effective Date: 12/31/2002

Revision: -

**LITE-ON DCC**

**RELEASE**

BNS-OD-FC001/A4

**FEATURES**

- \* 0.764 inch ( 19.4 mm) MATRIX HEIGHT
- \* LOW POWER REQUIREMENT
- \* SINGLE PLANE, WIDE VIEWING ANGLE
- \* SOLID STATE RELIABILITY
- \* 8 X 8 ARRAY WITH X-Y SELECT
- \* COMPATIBLE WITH USASCLL AND EBCDIC CODES
- \* STACKABLE HORIZONTALLY
- \* CATEGORIZED FOR LUMINOUS INTENSITY

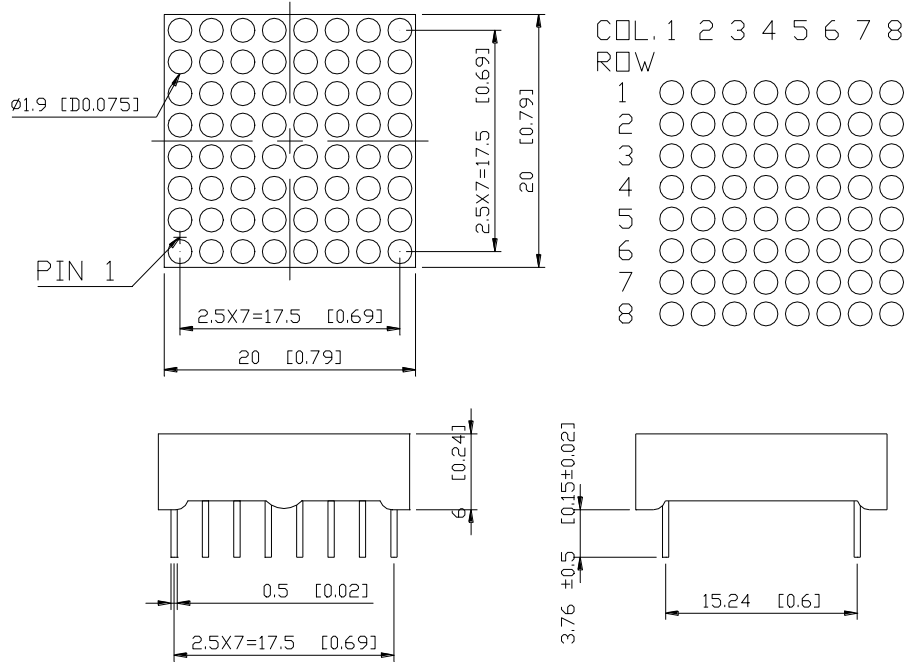
**DESCRIPTION**

The LTP-7188KE is a 0.764 inch (19.4 mm) matrix height 8x8 dot matrix display. This device uses AS-AlInGaP RED LED chips (AlInGaP epi on GaAs substrate). The display has gray face and white segments.

**DEVICE**

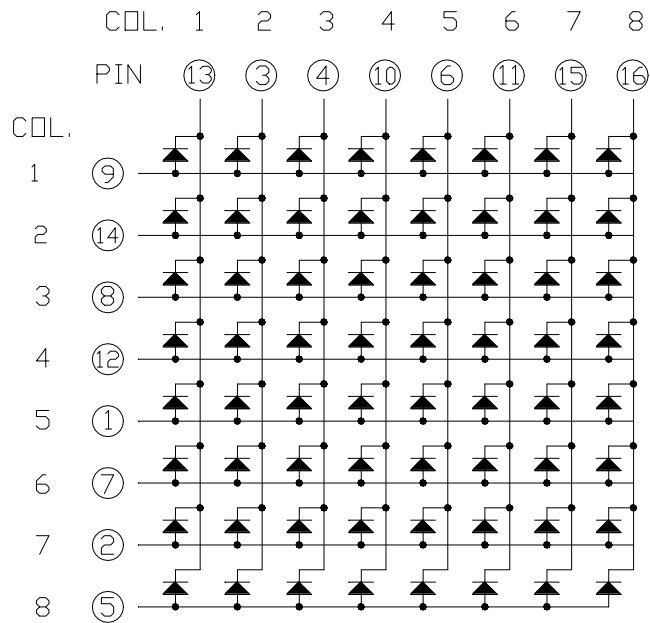
<b>PART NO.</b>	<b>DESCRIPTION</b>
AlInGaP RED	Anode Row,
LTP-7188KE	Cathode Column

### PACKAGE DIMENSIONS



NOTES: All dimensions are in millimeters. Tolerance is  $\pm 0.25$  mm (0.01") unless otherwise noted.

### INTERNAL CIRCUIT DIAGRAM



**PIN CONNECTION**

<b>No.</b>	<b>CONNECTION</b>
1	ANODE ROW 5
2	ANODE ROW 7
3	CATHODE COLUMN 2
4	CATHODE COLUMN 3
5	ANODE ROW 8
6	CATHODE COLUMN 5
7	ANODE ROW 6
8	ANODE ROW 3
9	ANODE ROW 1
10	CATHODE COLUMN 4
11	CATHODE COLUMN 6
12	ANODE ROW 4
13	CATHODE COLUMN 1
14	ANODE ROW 2
15	CATHODE COLUMN 7
16	CATHODE COLUMN 8

**ABSOLUTE MAXIMUM RATING**

PARAMETER	MAXIMUM RATING	UNIT
Average Power Dissipation Per Dot	40	mW
Peak Forward Current Per Dot ( Frequency 1Khz, 18% duty cycle )	90	mA
Average Forward Current Per Dot	15	mA
Forward Current From 25°C	0.2	mA/°C
Reverse Voltage Per Dot	5	V
Operating Temperature Range	-35°C to +85°C	
Storage Temperature Range	-35°C to +85°C	
Soldering Conditions:1/16 inch below seating plane for 3 seconds at 260°C		

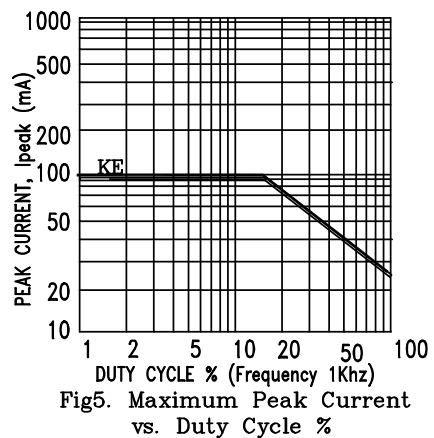
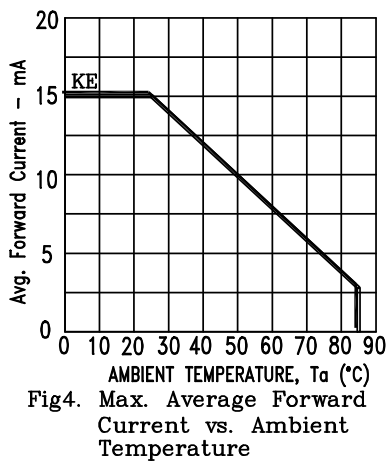
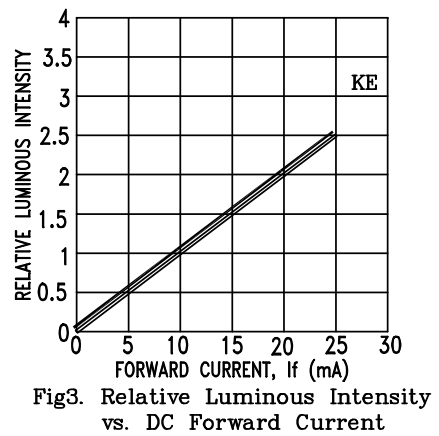
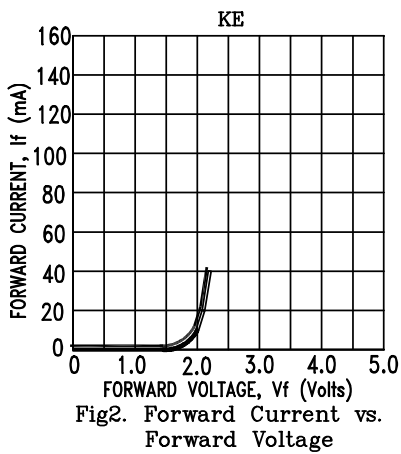
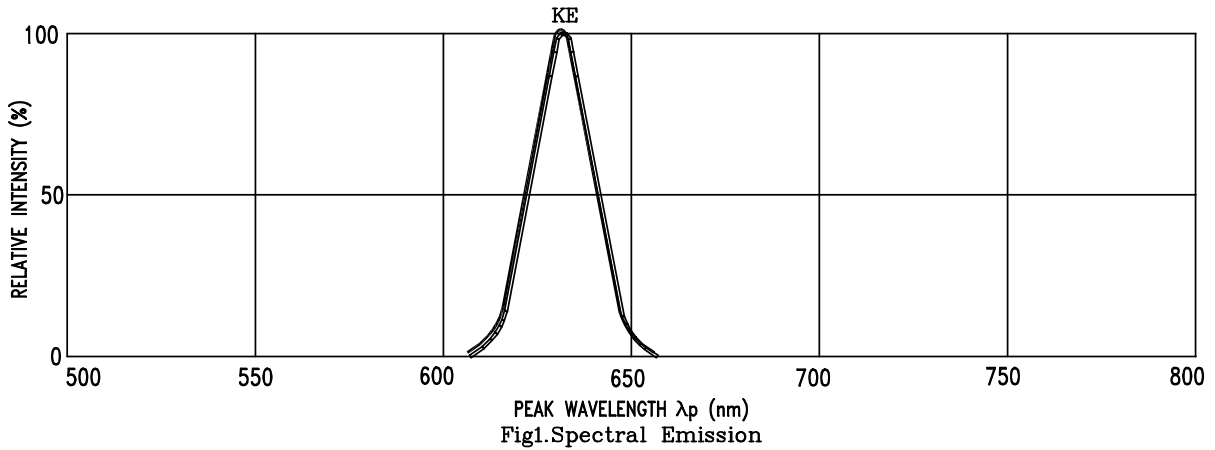
**ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta = 25°C**

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITION
Average Luminous Intensity Per Dot	I <sub>v</sub>	630	1650		μcd	I <sub>p</sub> = 32mA 1/16Duty
Peak Emission Wavelength	λ <sub>p</sub>		632		nm	I <sub>F</sub> = 20mA
Spectral Line Half-Width	Δλ		20		nm	I <sub>F</sub> = 20mA
Dominant Wavelength	λ <sub>d</sub>		624		nm	I <sub>F</sub> = 20mA
Forward Voltage any Dot	V <sub>F</sub>		2.05	2.6	V	I <sub>F</sub> = 20mA
			2.3	2.8		I <sub>F</sub> = 80mA
Reverse Current any Dot	I <sub>R</sub>			100	μA	V <sub>R</sub> = 5V
Luminous Intensity Matching Ratio	I <sub>v-m</sub>			2:1		I <sub>p</sub> = 32mA 1/16Duty

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 : KE=AlInGaP RED