

**FEATURES**

- \* 0.7INCH (17.22mm) 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.

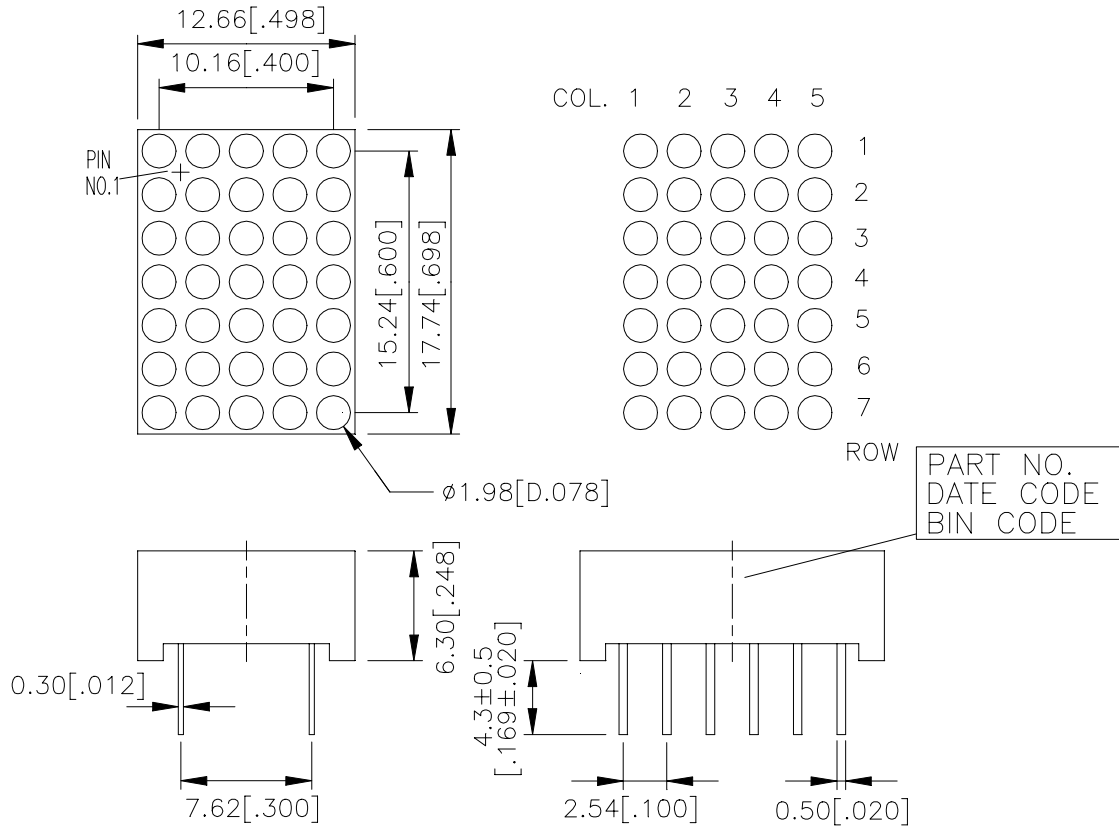
**DESCRIPTION**

The LTP-747KA is a 0.7inch (17.22mm) matrix height 5 x 7 dot matrix display. This device utilizes AllnGap Red Orange LED chips, which are made from AllnGaP on a non-transparent GaAs substrate, and has a gray face and white dots.

**DEVICE**

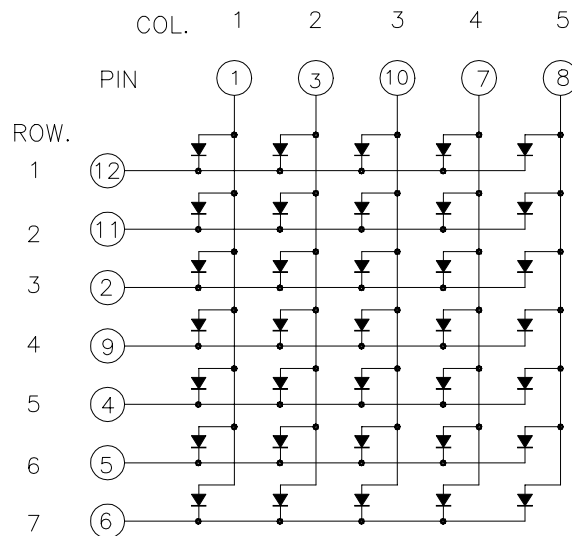
<b>PART NO.</b>	<b>DESCRIPTION</b>
AllnGaP RED ORANGE	Anode Column
LTP-747KA	Cathode Row

## PACKAGE DIMENSIONS



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

## INTERNAL CIRCUIT DIAGRAM



**PIN CONNECTION**

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

**ABSOLUTE MAXIMUM RATING AT T<sub>A</sub>=25°C**

PARAMETER	MAXIMUM RATING	UNIT
Average Power Dissipation Per dot	33	mW
Peak Forward Current Per dot	90	mA
Average Forward Current Per dot	13	mA
Derating Linear From 25°C Per dot	0.17	mA/°C
Reverse Voltage Per dot	5	V
Operating Temperature Range	-35°C to +85°C	
Storage Temperature Range	-35°C to +85°C	
Solder Temperature 1/16 inch Below Seating Plane for 3 Seconds at 260°C		

**ELECTRICAL / OPTICAL CHARACTERISTICS AT T<sub>A</sub>=25°C**

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I <sub>v</sub>	1650	3400		μcd	I <sub>F</sub> =32mA , 1/16Duty
Peak Emission Wavelength	λ <sub>p</sub>		621		nm	I <sub>F</sub> =20mA
Spectral Line Half-Width	Δλ		18		nm	I <sub>F</sub> =20mA
Dominant Wavelength	λ <sub>d</sub>		615		nm	I <sub>F</sub> =20mA
Forward Voltage Per dot	V <sub>F</sub>		2.05	2.6	V	I <sub>F</sub> =20mA
Reverse Current Per dot	I <sub>R</sub>			100	μA	V <sub>R</sub> =5V
Luminous Intensity Matching Ratio	I <sub>v</sub> -m			2:1		I <sub>F</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)

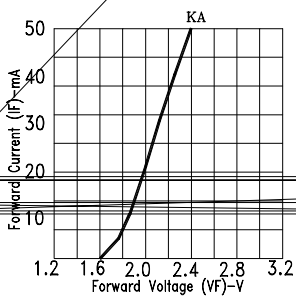
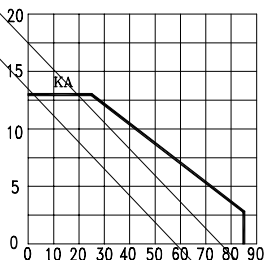


Fig. 3. FORWARD CURRENT VS. FORWARD VOLTAGE



NOTE: KA=AlInGaP Red Orange

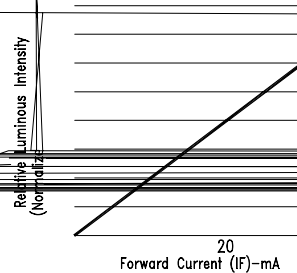


Fig. 4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

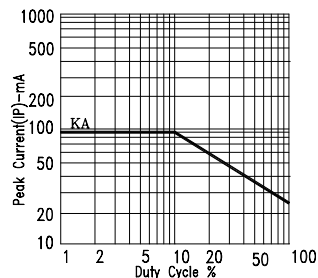


Fig. 6. MAX PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)