LED DISPLAY

LTP-14088KD-J
DATA SHEET

Rev	Description	By
01	RDR Original Spec	Phanomkorn J. December 01, 2008
-	NPPR Original Spec	Phanomkorn J. December 19, 2008

SPEC. NO.: DS30-2008-0194

D A T E : December 19, 2008

REV. NO. : -

PAGE NO. : 0 OF 5

FEATURES

∗1.50 inch (37.0 mm) MATRIX HEIGHT
∗LOW POWER REQUIREMENT
∗SINGLE PLANE, WIDE VIEWING ANGLE
∗SOLID STATE RELIABILITY
∗8 ×8 ARRAY WITH X-Y SELECT
∗COMPATIBLE WITH USASCII AND EBCDIC CODES
∗STACKABLE HORIZONTALLY
∗CATEGORIZED FOR LUMINOUS INTENSITY
∗**LEAD-FREE PACKAGE(ACCORDING TO RoHS)**

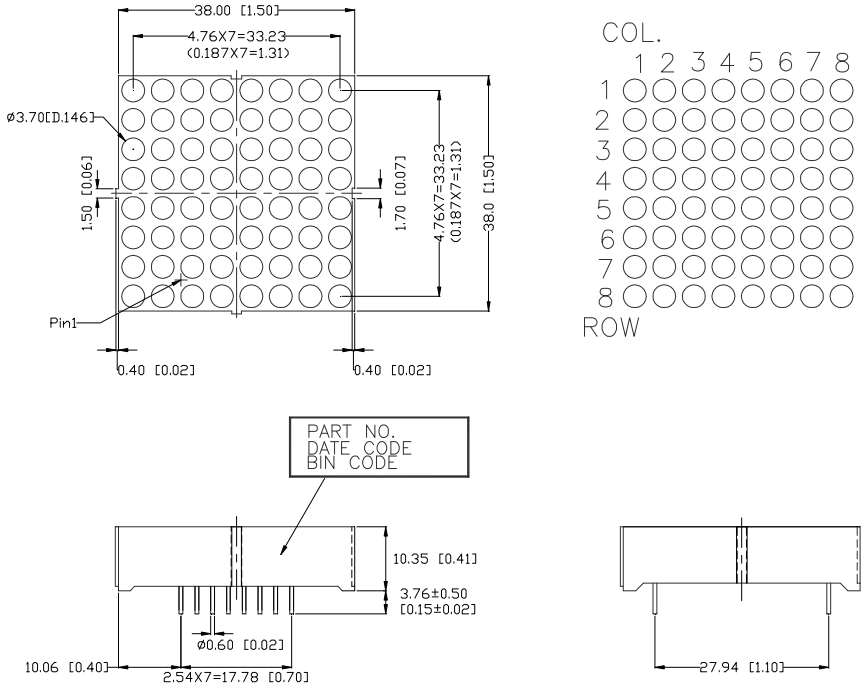
DESCRIPTION

The LTP-14088KD-J is a 1.50 inch (37.0 mm) matrix height 8×8 dot matrix display. This device uses AS-AlInGaP Hyper Red LED chips (AlInGaP epi on GaAs substrate). The matrix display has a black face and white dot color.

DEVICE

PART NO.	DESCRIPTION
AlInGaP Hyper Red	Anode Column
LTP-14088KD-J	Cathode Row

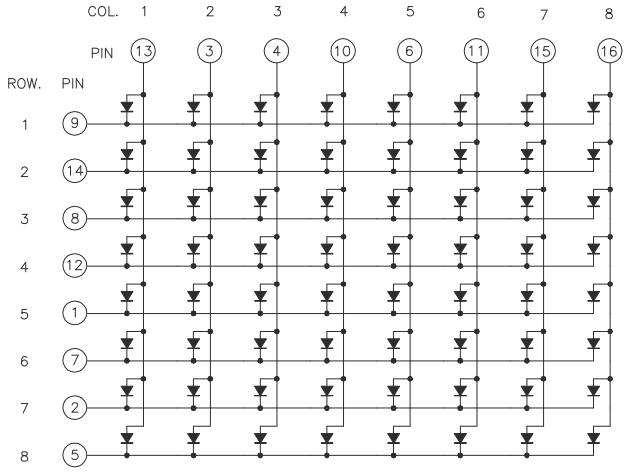
PACKAGE DIMENSIONS



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.
3. Foreign material on segment ≦10mils
4. Ink contamination (surface) ≦20mils
5. Bending≦1/100
6. Bubble in segment ≦10mils

INTERNAL CIRCUIT DIAGRAM



PIN CONNECTION

NO	CONNECTION
1	CATHODE ROW 5
2	CATHODE ROW 7
3	ANODE COLUMN 2
4	ANODE COLUMN 3
5	CATHODE ROW 8
6	ANODE COLUMN 5
7	CATHODE ROW 6
8	CATHODE ROW 3
9	CATHODE ROW 1
10	ANODE COLUMN 4
11	ANODE COLUMN 6
12	CATHODE ROW 4
13	ANODE COLUMN 1
14	CATHODE ROW 2
15	ANODE COLUMN 7
16	ANODE COLUMN 8

ABSOLUTE MAXIMUM RATING

PARAMETER	MAXIMUM RATING	UNIT
Average Power Dissipation Per Dot	70	mW
Peak Forward Current Per Dot (Frequency 1Khz,18% duty cycle)	90	mA
Average Forward Current Per Dot Derating Linear From 25℃ Per Dot	25 0.28	mA mA/℃
Reverse Voltage Per Segment	5	V
Operating Temperature Range	-35℃ to +105℃	
Storage Temperature Range	-35℃ to +105℃	
Soldering Conditions: 1/16 inch below seating plane for 3 seconds at 260^0C or of temperature 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	1020	2475		μcd	I_p=32mA 1/16Duty
Peak Emission Wavelength	λp		650		nm	I_F=20mA
Spectral Line Half-Width	Δλ		20		nm	I_F=20mA
Dominant Wavelength	λd		639		nm	I_F=20mA
Forward Voltage any Dot	V_F		2.1	2.6	V	I_F=20mA
			2.3	2.8		I_F=80mA
Reverse Current any Dot	I_R			100	μA	V_R=5V
Luminous Intensity Matching Ratio (Similar Light Area)	I_V-m			2:1		I_p=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)

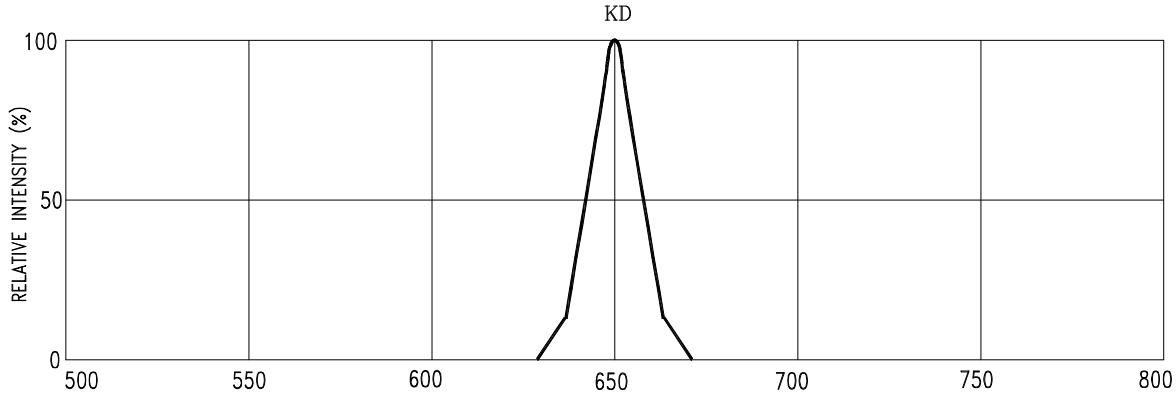


Fig1.Spectral Emission

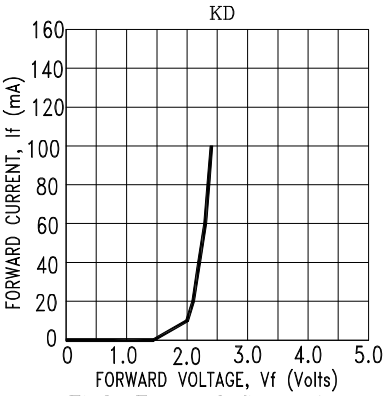


Fig2. Forward Current vs. Forward Voltage

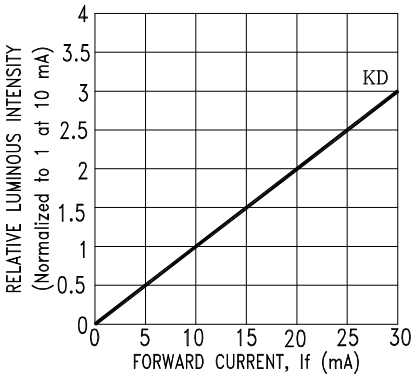


Fig3. Relative Luminous Intensity vs. DC Forward Current

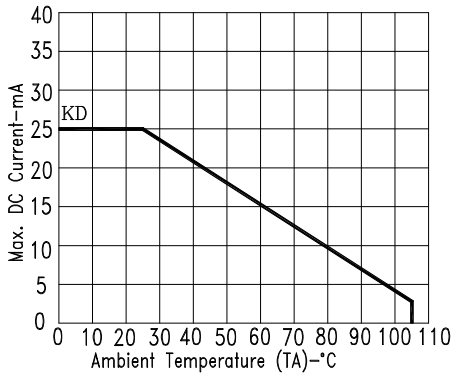


Fig4. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

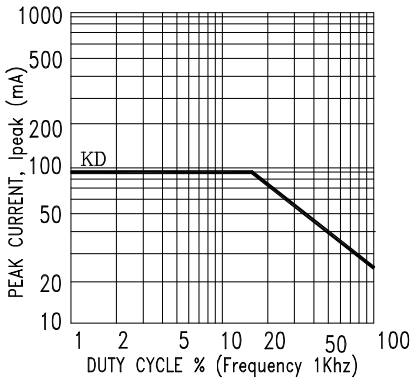


Fig5. Maximum Peak Current vs. Duty Cycle %

NOTE : KD=AlInGaP HYPER RED