FEATURES

* 3.0 -INCH (76.2 -mm) MATRIX HEIGHT.
* LOW POWER REQUIREMENT.
* EXCELLENT CHARACTERS APPEARANCE.
* HIGH BRIGHTNESS & HIGH CONTRAST.
* WIDE VIEWING ANGLE.
* SOLID STATE RELIABILITY.
* CATEGORIZED FOR LUMINOUS INTENSITY.
* STACKABLE VERTICALLY AND HORIZONTALLY.

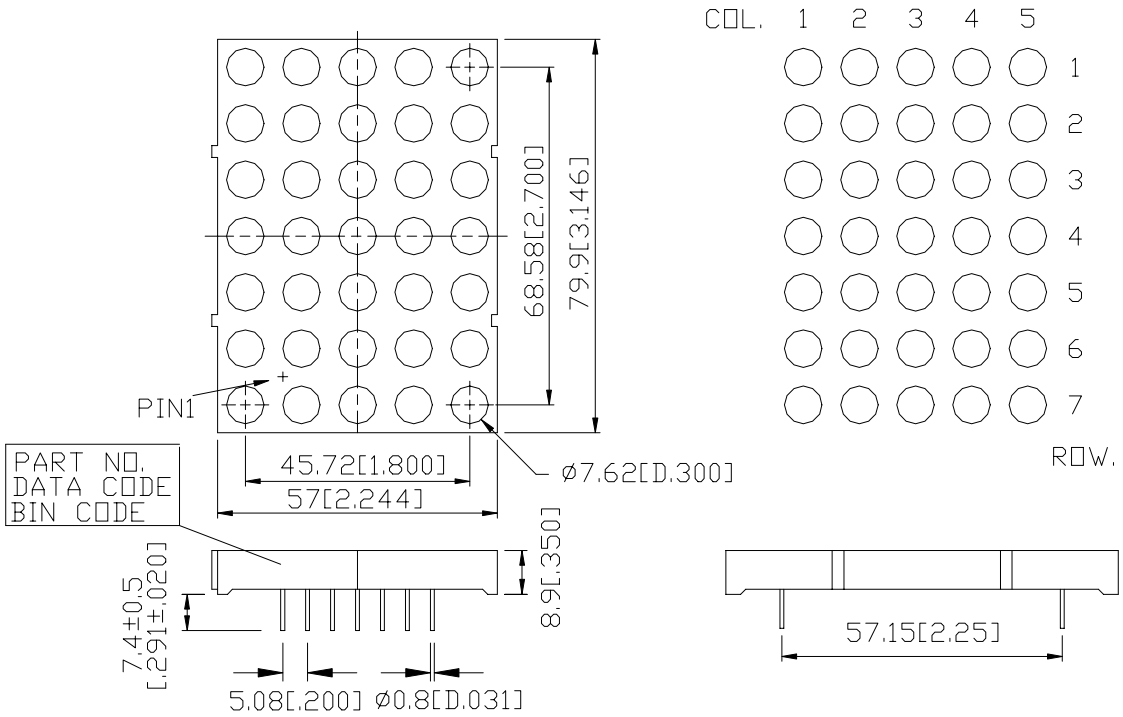
DESCRIPTION

The is a 3.0 -inch (76.2 -mm) matrix height 5 × 7 dot-matrix display. This device utilizes ultra red orange LED chips, which are made from GaAsP on a transparent GaP substrate, and has a gray face and white dots.

DEVICE

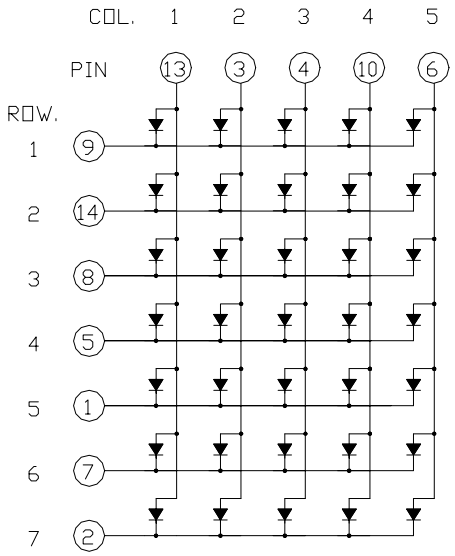
PART NO.	DESCRIPTION
RED ORANGE	ANODE COLUMN
LTP-3057AE	CATHODE ROW

PACKAGE DIMENSIONS



NOTES: All dimensions are in millimeters. Tolerances are ± 0.25-mm (0.01“) unless otherwise noted.

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

ABSOLUTE MAXIMUM RATING AT T_A=25°C

PARAMETER	MAXIMUM RATING	UNIT
Average Power Dissipation Per Dot	64	mW
Peak Forward Current Per Dot	90	mA
Continuous Forward Current Per Dot Derating Linear From 25°C Per Dot	11 0.15	mA mA/°C
Reverse Voltage Per Dot	10	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_A=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	3000	9600		μcd	I_P=80mA, 1/16 Duty
Peak Emission Wavelength	λp		630		nm	I_F=20mA
Spectral Line Half-Width	Δλ		40		nm	I_F=20mA
Dominant Wavelength	λd		621		nm	I_F=20mA
Forward Voltage Per Dot	V_F		4	5.2	V	I_F=20mA
			5.2	6.8	V	I_F=80mA
Reverse Current Per Dot	I_R			100	μA	V_R=10V
Luminous Intensity Matching Ratio	I_V-m			2:1		I_F=10mA

Note: Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (commision internationale DE L'clariage) eye-response curve.

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

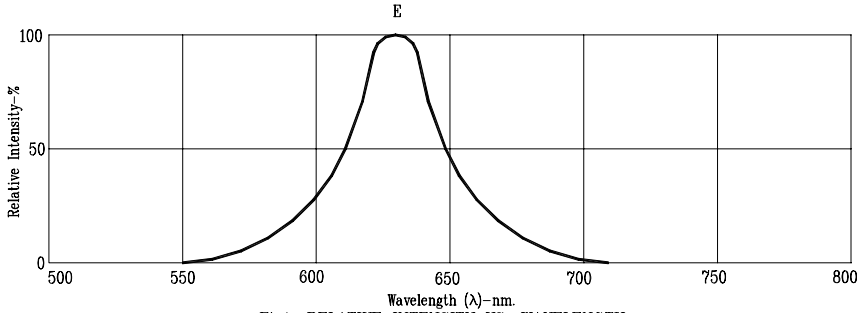


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

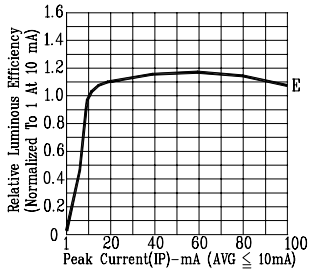


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT (REFRESH RATE 1KHz)

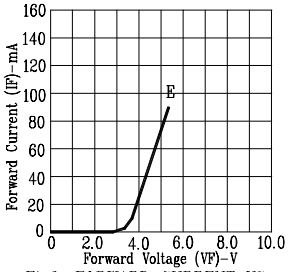


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

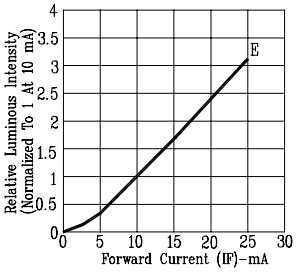


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

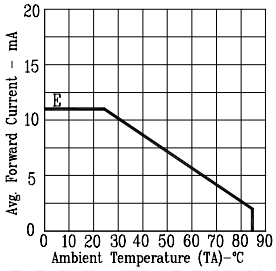


Fig5. MAX. AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE.

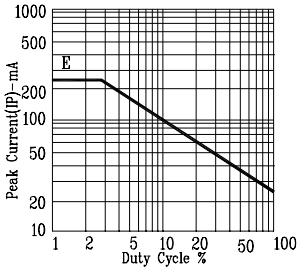


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: E=RED ORANGE