

FEATURES

- * 1.85 inch (47 mm) MATRIX HEIGHT.
- * LOW POWER REQUIREMENT.
- * SINGLE PLANE, WIDE VIEWING ANGLE
- * SOLID STATE RELIABILITY.
- * 8x8 ARRAY WITH X-Y SELECT.
- * COMPATIBLE WITH USASCLL AND EBCDIC CODES.
- * STACKABLE HORIZONTALLY.
- * CATEGORIZED FOR LUMINOUS INTENSITY.

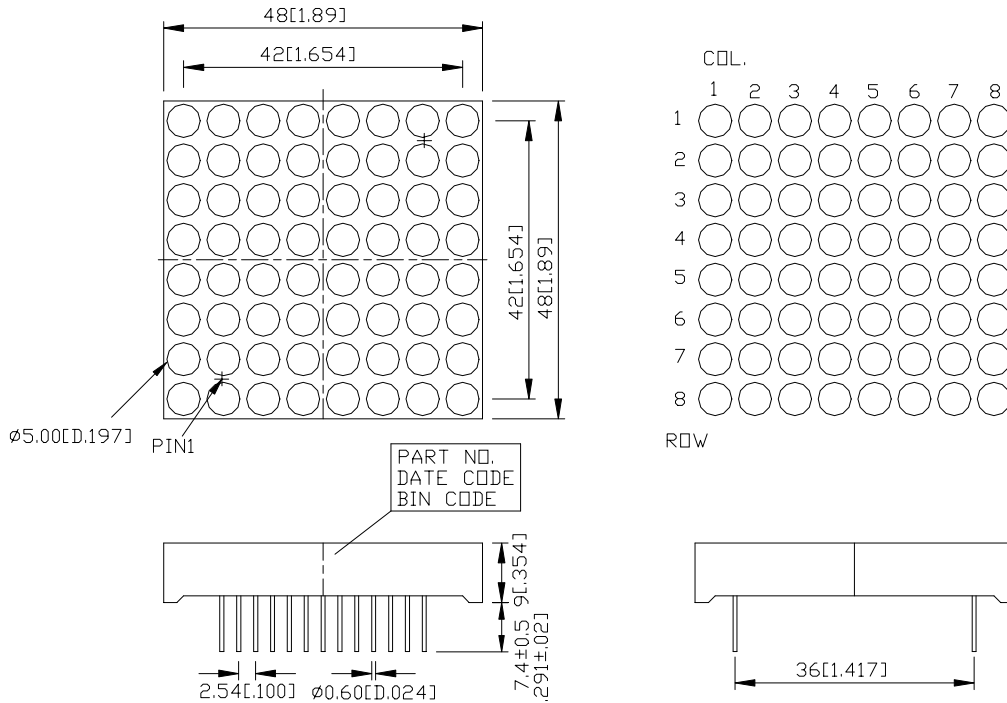
DESCRIPTION

The LTP-18088G is a 1.85 inch (47 mm) matrix height 8x8 dot matrix display. This device utilizes green LED chips, which are made from GaP on a transparent GaP substrate, and has a black face and white segments.

DEVICE

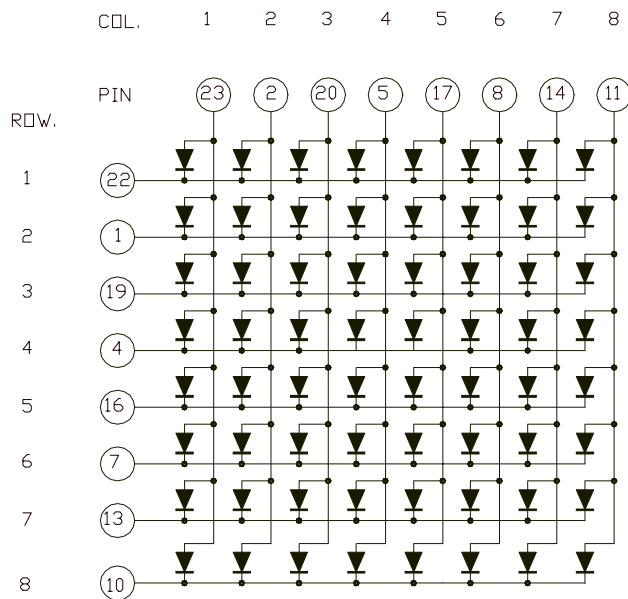
PART NO.	DESCRIPTION
Green	Anode Column
LTP-18088G	Cathode Row

PACKAGE DIMENSIONS



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

INTERNAL CIRCUIT DIAGRAM



PIN CONNECTION

NO	CONNECTION	NO	CONNECTION
1	CATHODE ROW 2	13	CATHODE ROW 7
2	ANODE COLUMN 2	14	ANODE COLUMN 7
3	NO PIN	15	NO PIN
4	CATHODE ROW 4	16	CATHODE ROW 5
5	ANODE COLUMN 4	17	ANODE COLUMN 5
6	NO PIN	18	NO PIN
7	CATHODE ROW 6	19	CATHODE ROW 3
8	ANODE COLUMN 6	20	ANODE COLUMN 3
9	NO PIN	21	NO PIN
10	CATHODE ROW 8	22	CATHODE ROW 1
11	ANODE COLUMN 8	23	ANODE COLUMN 1
12	NO PIN	24	NO PIN

ABSOLUTE MAXIMUM RATING AT T_A=25°C

PARAMETER	MAXIMUM RATING	UNIT
Average Power Dissipation Per Dot	36	mW
Peak Forward Current Per Dot	100	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_A=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I _v	1780	4800		μcd	I _p =80mA 1/16DUTY
Peak Emission Wavelength	λ _p		565		nm	I _F =20mA
Spectral Line Half-Width	Δλ		30		nm	I _F =20mA
Dominant Wavelength	λ _d		569		nm	I _F =20mA
Forward Voltage any Dot	V _F		2.1	2.6	V	I _F =20mA
			3	3.7	V	I _F =80mA
Reverse Current any Dot	I _R			100	μA	V _R =5V
Luminous Intensity Matching Ratio	I _v -m			2:1		I _p =80mA 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)

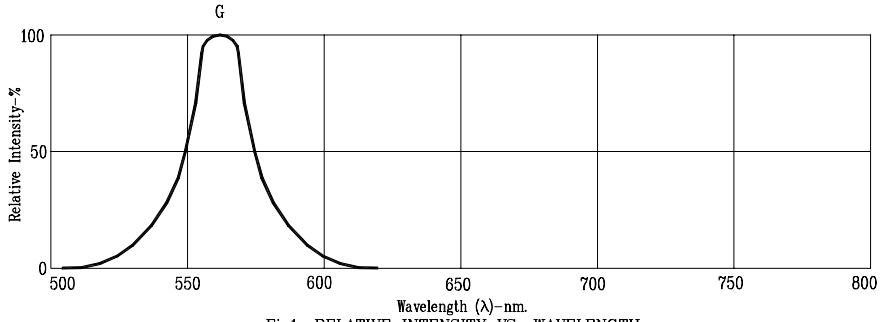


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

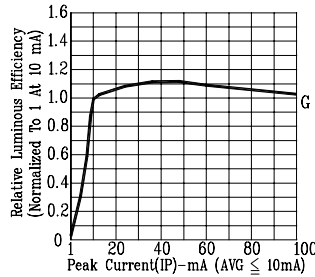


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT (REFRESH RATE 1KHz)

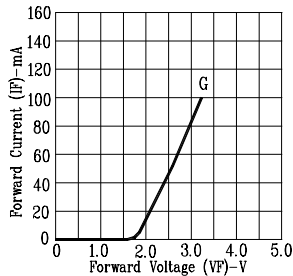


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

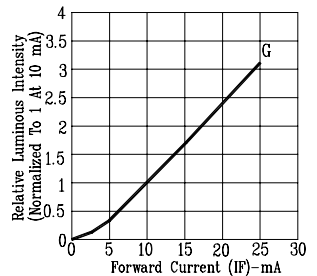


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

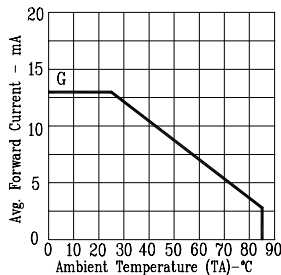


Fig5. MAX. AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE.

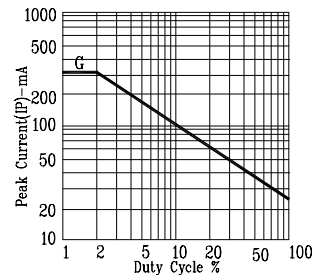


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: G=GREEN