

FEATURES

- * 2.3 inch (58.42 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.

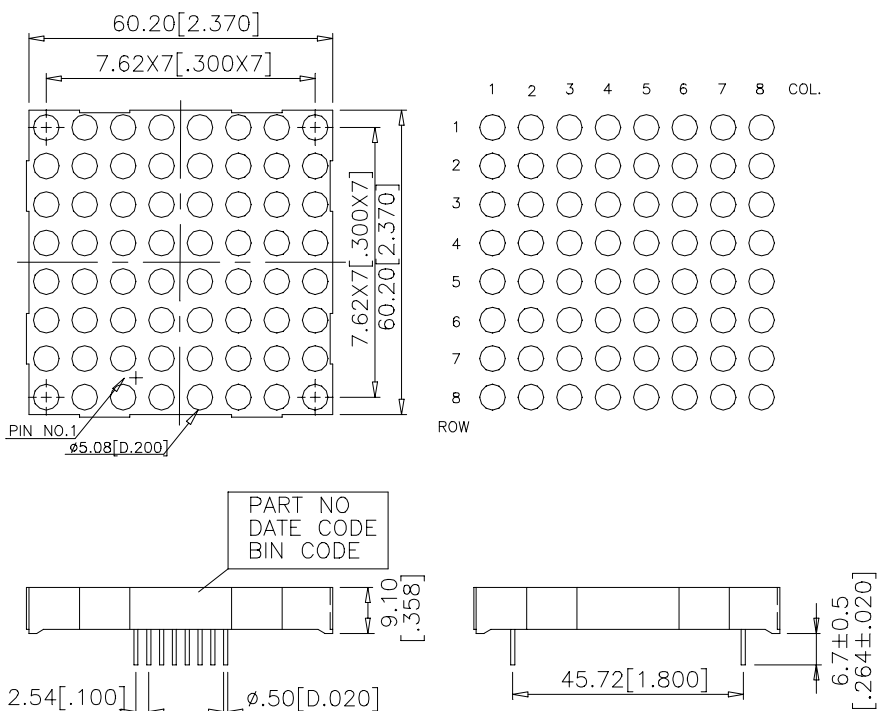
DESCRIPTION

The LTP-2B88AG-NB is a 2.3 inch (58.42 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 dot color.

DEVICE

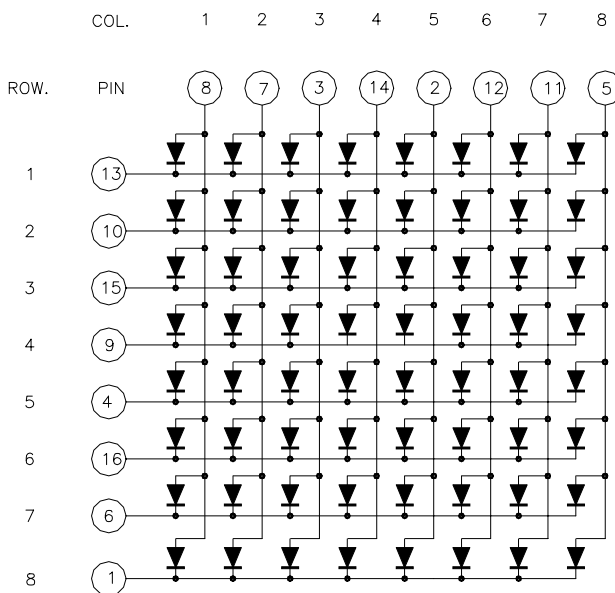
| PART NO. | DESCRIPTION |
|-----------------|--------------------|
| Green | Anode Column |
| LTP-2B88AG-NB | Cathode Row |

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 8 |
| 2 | ANODE COL. 5 |
| 3 | ANODE COL. 3 |
| 4 | CATHODE ROW 5 |
| 5 | ANODE COL. 8 |
| 6 | CATHODE ROW 7 |
| 7 | ANODE COL. 2 |
| 8 | ANODE COL. 1 |
| 9 | CATHODE ROW 4 |
| 10 | CATHODE ROW 2 |
| 11 | ANODE COL. 7 |
| 12 | ANODE COL. 6 |
| 13 | CATHODE ROW 1 |
| 14 | ANODE COL. 4 |
| 15 | CATHODE ROW 3 |
| 16 | CATHODE ROW 6 |

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)

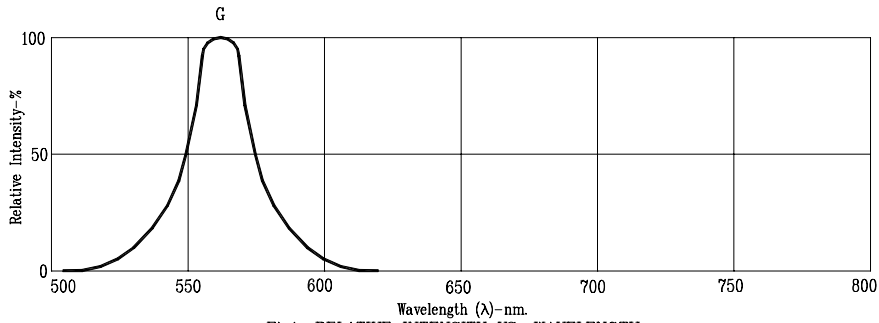


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

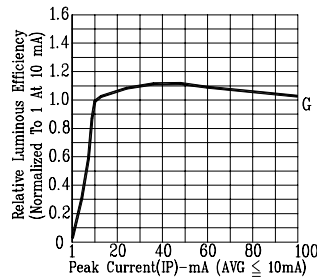


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT (REFRESH RATE 1KHz)

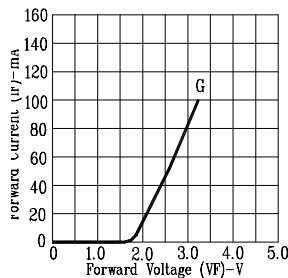


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

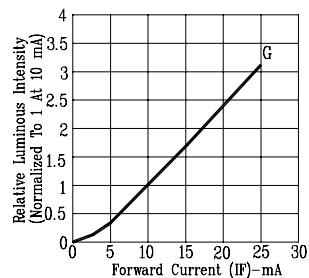


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

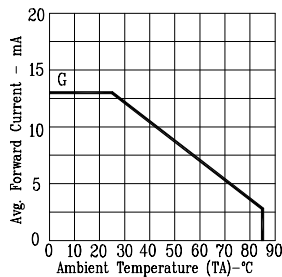


Fig5. MAX. AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE.

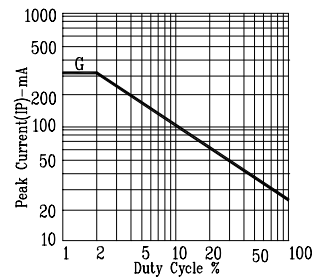


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: G= GREEN