



LED Display

Product Data Sheet

LTP-747HR

Spec No.: DS-30-98-378

Effective Date: 12/21/2000

Revision: -

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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FEATURES

- * 0.7 inch (17.22 mm) 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.

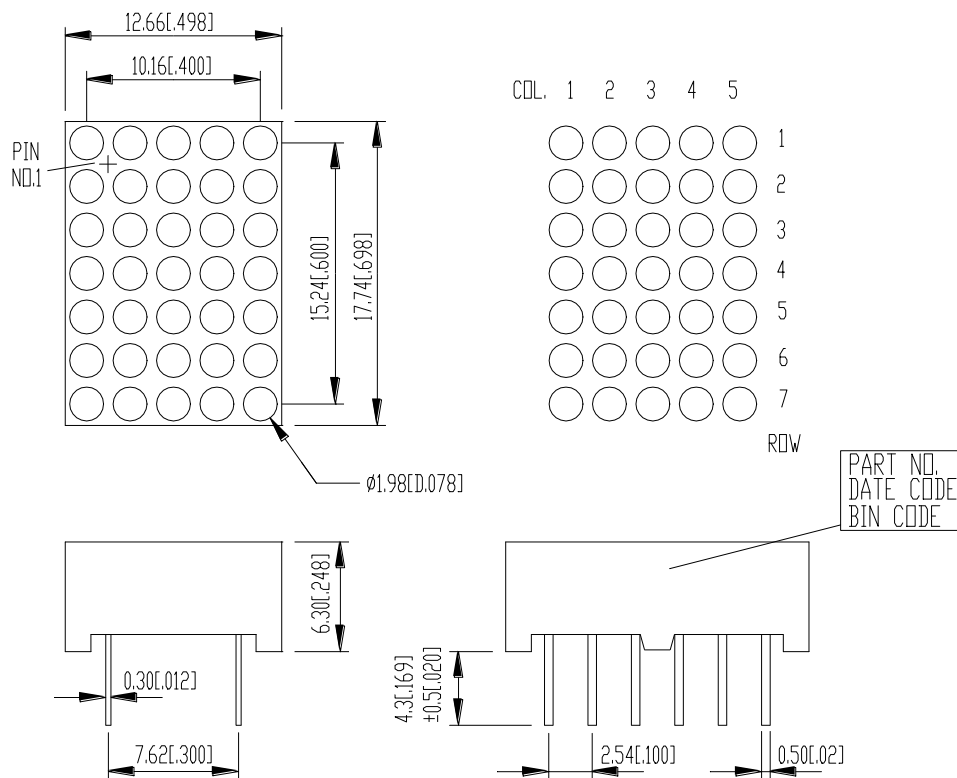
DESCRIPTION

The LTP-747HR is a 0.7 inch (17.22 mm) matrix height 5 x 7 dot matrix display. This device utilizes high efficiency red LED chips, which are made from GaAsP on a transparent GaP substrate, and has a red face and red dots.

DEVICE

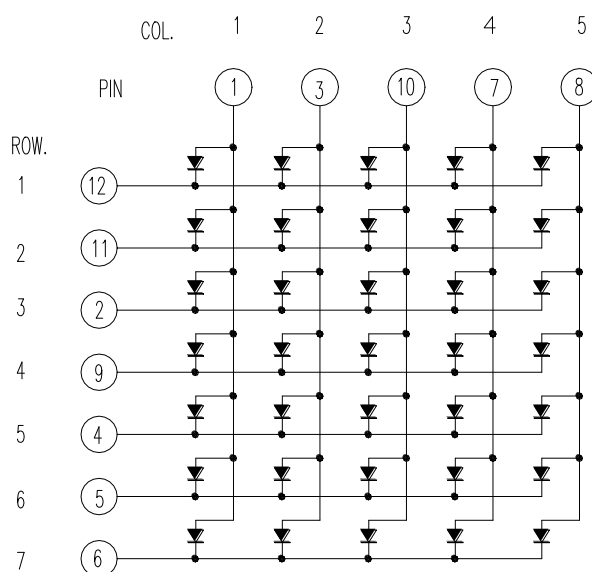
PART NO.	DESCRIPTION
Hi-Eff. Red	Anode Column
LTP-747HR	Cathode Row

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	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_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 ⁰ C Per dot	0.17	mA/ ⁰ C
Reverse Voltage Per dot	5	V
Operating Temperature Range	-35 ⁰ C to +85 ⁰ C	
Storage Temperature Range	-35 ⁰ C to +85 ⁰ C	
Solder Temperature 1/16 inch Below Seating Plane for 3 Seconds at 260 ⁰ C		

ELECTRICAL / OPTICAL CHARACTERISTICS AT T_A=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I _v	630	2000		μcd	I _P =80mA , 1/16Duty
Peak Emission Wavelength	λ _p		635		nm	I _F =20mA
Spectral Line Half-Width	Δλ		40		nm	I _F =20mA
Dominant Wavelength	λ _d		623		nm	I _F =20mA
Forward Voltage Per dot	V _F		2	2.6	V	I _F =20mA
			2.6	3.4	V	I _F =80mA
Reverse Current Per 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)

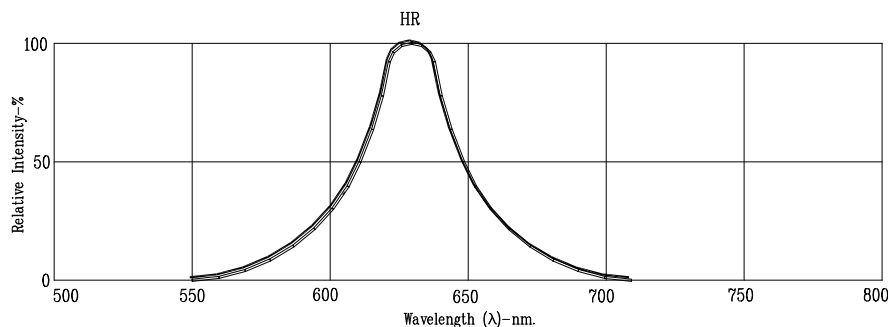


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

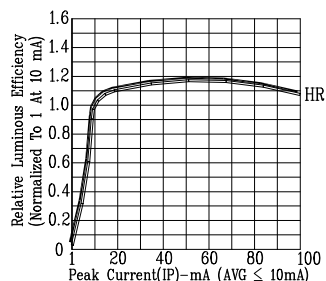


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT (REFRESH RATE 1KHz)

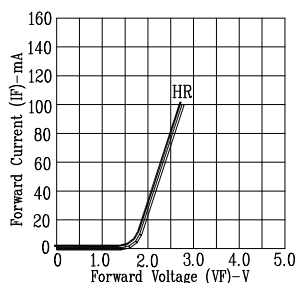


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

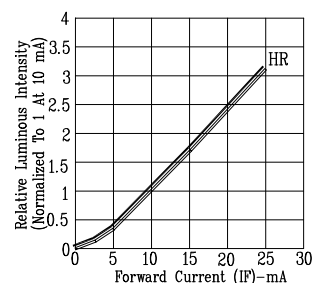


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

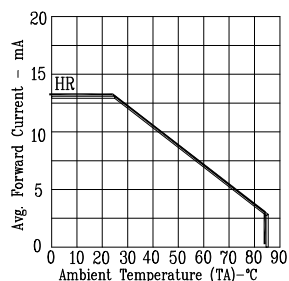


Fig5. MAX. AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE.

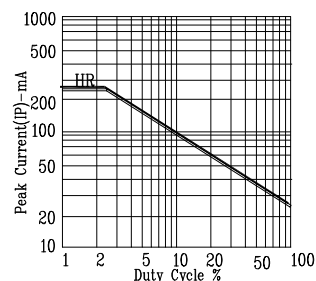


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: HR=HL-EFF. RED