

FEATURES

- *4.0INCH (101.6 mm) MATRIX HEIGHT.
- *CONTINUOUS UNIFORM SEGMENTS.
- *LOW POWER REQUIREMENT.
- *EXCELLENT CHARACTERS APPEARANCE.
- *HIGH BRIGHTNESS & HIGH CONTRAST.
- *WIDE VIEWING ANGLE.
- *SOLID STATE RELIABILITY.
- *CATEGORIZED FOR LUMINOUS INTENSITY

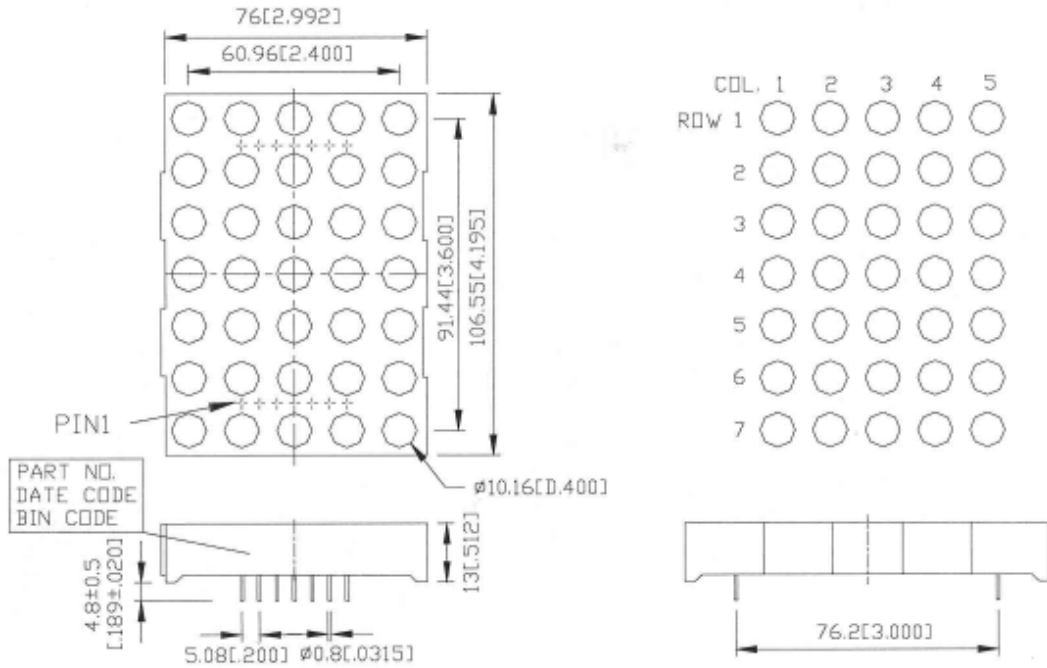
DESCRIPTION

The LTPL-42557AC is a 4.0 inch (101.6 mm) matrix height 5 x 7 dot matrix display. This device utilizes AlGaAs red LED chips, which are made from AlGaAs on a non-transparent GaAs substrate, and has a black face and white dot.

DEVICE

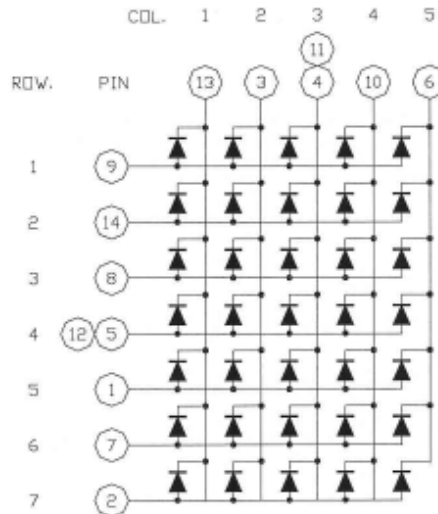
PART NO.	DESCRIPTION
AlGaAs	Cathode Column
LTPL42557ACBW1	Anode Row

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 ROW 5
2	ANODE ROW 7
3	CATHODE COLUMN 2
4	CATHODE COLUMN 3
5	ANODE ROW 4
6	CATHODE COLUMN 5
7	ANODE ROW 6
8	ANODE ROW 3
9	ANODE ROW 1
10	CATHODE COLUMN 4
11	CATHODE COLUMN 3
12	ANODE ROW 4
13	CATHODE COLUMN 1
14	ANODE ROW 2

ABSOLUTE MAXIMUM RATING AT $T_A=25^{\circ}\text{C}$

PARAMETER	MAXIMUM RATING	UNIT
Average Power Dissipation Per dot	64	mW
Peak Forward Current Per dot	110	mA
Average Forward Current Per dot	14	mA
Derating Linear from 25°C Per dot	0.19	mA/ $^{\circ}\text{C}$
Reverse Voltage Per dot	10	V
Operating Temperature Range	-35 $^{\circ}\text{C}$ to +85 $^{\circ}\text{C}$	
Storage Temperature Range	-35 $^{\circ}\text{C}$ to +85 $^{\circ}\text{C}$	
Solder Temperature 1/16 inch Below Seating Plane for 3 Seconds at 260 $^{\circ}\text{C}$		

ELECTRICAL / OPTICAL CHARACTERISTICS AT $T_A=25^{\circ}\text{C}$

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	11600	20000		μcd	$I_F=80\text{mA}$, 1/16 Duty
Peak Emission Wavelength	λ_p		660		nm	$I_F=20\text{mA}$
Spectral Line Half-Width	$\Delta\lambda$		35		nm	$I_F=20\text{mA}$
Dominant Wavelength	λ_d		638		nm	$I_F=20\text{mA}$
Forward Voltage Per dot	V_F		3.6	4.8	V	$I_F=20\text{mA}$
			4	5.4	V	$I_F=80\text{mA}$
Reverse Current Per dot	I_R			100	μA	$V_R=10\text{V}$
Luminous Intensity Matching Ratio	$I_V\text{-m}$			2:1		$I_F=10\text{mA}$

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

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

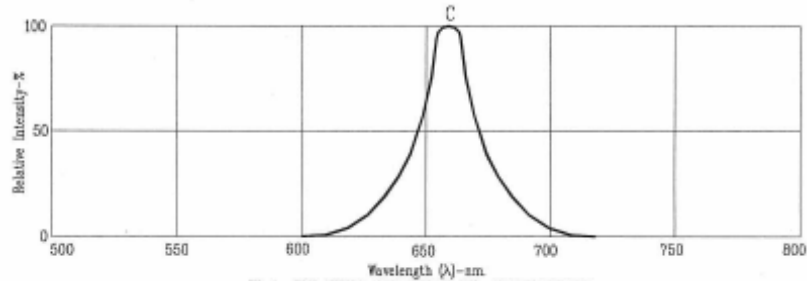


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

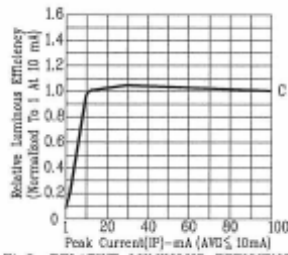


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT (REFRESH RATE 1KHz)

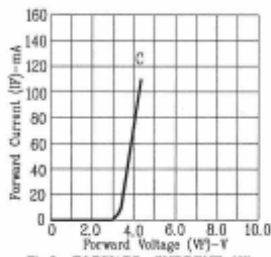


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

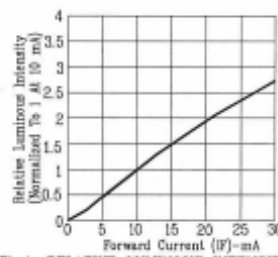


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

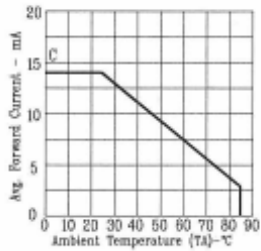


Fig5. MAX. AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE.

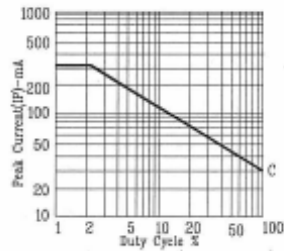


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE : C=ALGaAs RED