

LED DISPLAY

LPTL12157AFBK1

DATA SHEET

Rev	Description	By
-	Original Spec	<u>Phanomkorn J.</u>

SPEC. NO.: DS30-2007-0115

DATE : 12/JUNE/'07

REV. NO.: -

LITEON LITE-ON TECHNOLOGY CORPORATION

Property of Lite-On Only

FEATURES

- * 1.2 inch (30.42 mm) MATRIX HEIGHT.
- * LOW POWER REQUIREMENT.
- * HIGH BRIGHTNESS & HIGH CONTRAST
- * SINGLE PLANE, WIDE VIEWING ANGLE.
- * SOLID STATE RELIABILITY.
- * 5×7 ARRAY WITH X-Y SELECT.
- * COMPATIBLE WITH USASCII AND EBCDIC CODES.
- * STACKABLE HORIZONTALLY.
- * CATEGORIZED FOR LUMINOUS INTENSITY.
- * **LEAD-FREE PACKAGE (ACCORDING TO ROHS)**

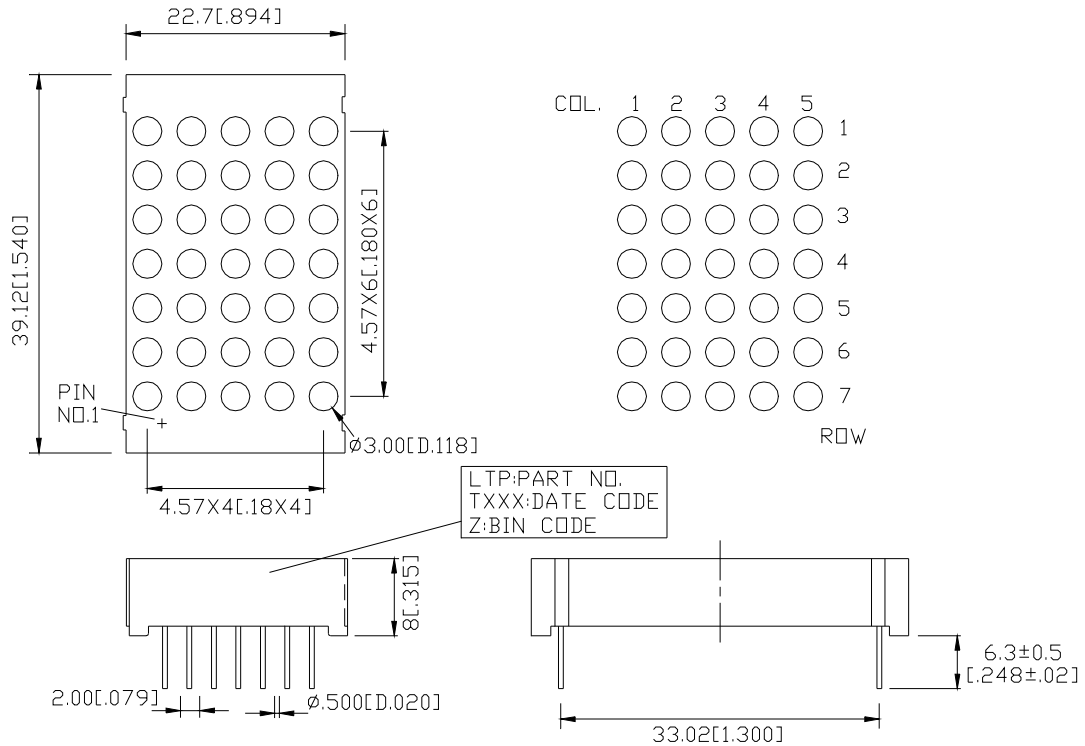
DESCRIPTION

The LPTL12157AFBK1 is a 1.2 inch (30.42 mm) matrix height 5×7 dot matrix display. This device utilizes AlInGaP Red LED chips, which are made from AlInGaP on a GaAsP substrate, and has a black face and white dot.

DEVICE

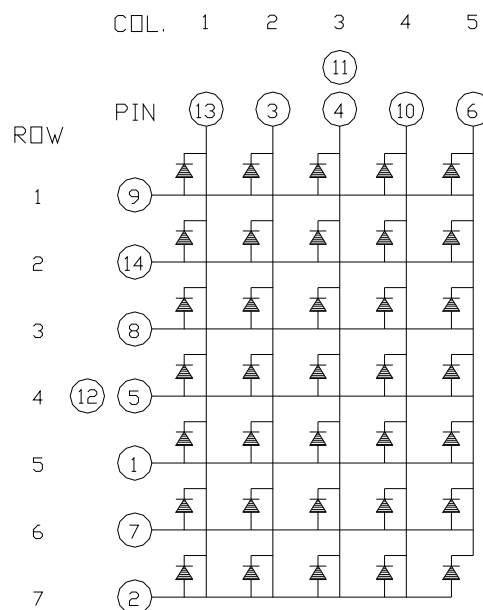
PART NO.	DESCRIPTION
AlInGaP Red	CATHODE COLUMN
LPTL12157AFBK1	ANODE ROW

PACKAGE DIMENSIONS



- NOTES: 1. All dimensions are in millimeters. Tolerances are ± 0.25 mm unless otherwise note.
 2. Pin tip's shift tolerance is ± 0.4 mm.

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

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ABSOLUTE MAXIMUM RATING AT Ta=25°C

PARAMETER	MAXIMUM RATING	UNIT
Average Power Dissipation Per Dot	70	mW
Peak Forward Current Per Dot	90	mA
Average Forward Current Per Dot	25	mA
Derating Linear From 25°C Per Dot	0.33	mA/°C
Reverse Voltage Per Dot	5	V
Operating Temperature Range	-35°C to +105°C	
Storage Temperature Range	-35°C to +105°C	

Soldering Conditions: 1/16 inch below seating plane for 3 seconds at 260°C
or of temperature unit (during assembly) not over max. temperature rating above.

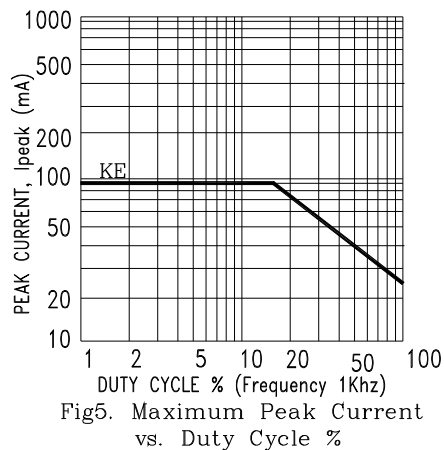
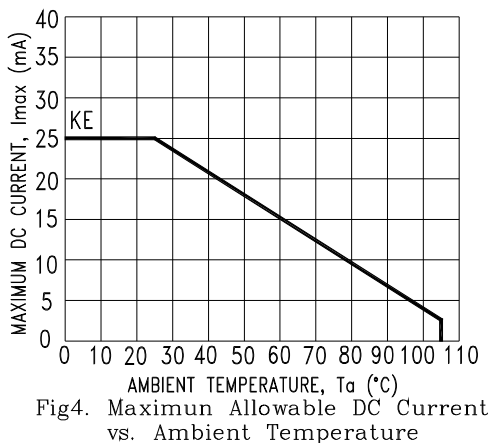
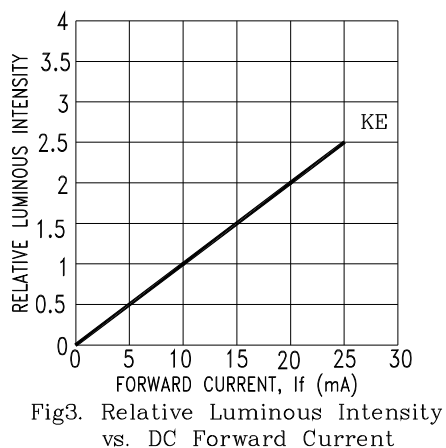
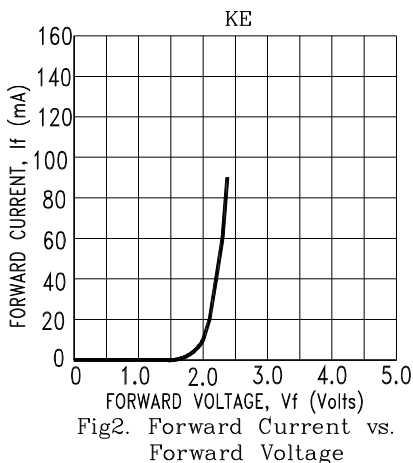
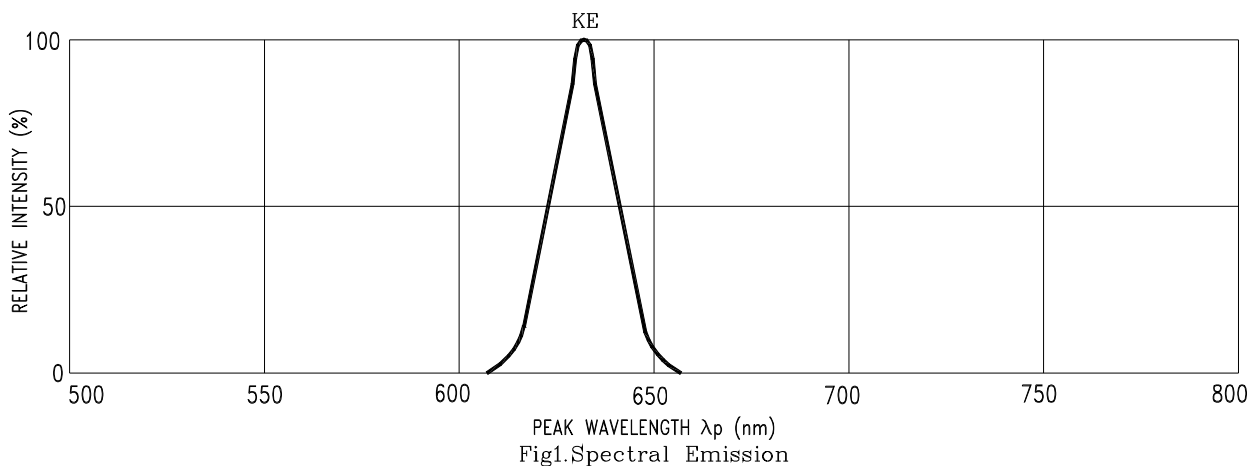
ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I _v	630	3300		ucd	I _p =32mA 1/16Duty
Peak Emission Wavelength	λ _p		632		nm	I _F =20mA
Spectral Line Half-Width	Δλ		20		nm	I _F =20mA
Dominant Wavelength	λ _d		624		nm	I _F =20mA
Forward Voltage any Dot	V _F		2.05	2.6	V	I _F =20mA
Reverse Current any Dot	I _R			100	μA	V _R =5V
Luminous Intensity Matching Ratio (Similar Light Area)	I _v -m			2:1		I _p =32mA 1/16Duty

Note: Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commission Internationale De L'Eclairage) eye-response curve.

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)



NOTE : KE=AlInGaP RED