LED DISPLAY

LPTL15357AFBK1
DATA SHEET

Rev	Description	By
-	Original Spec	Phanomkorn J.

SPEC. NO.: DS30-2007-0193

D A T E : 05/November/'07

REV. NO. : -

PAGE NO. : 0 OF 5

FEATURES

- 1.40 inch (35.62 mm) MATRIX HEIGHT.
- LOW POWER REQUIREMENT.
- 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)**

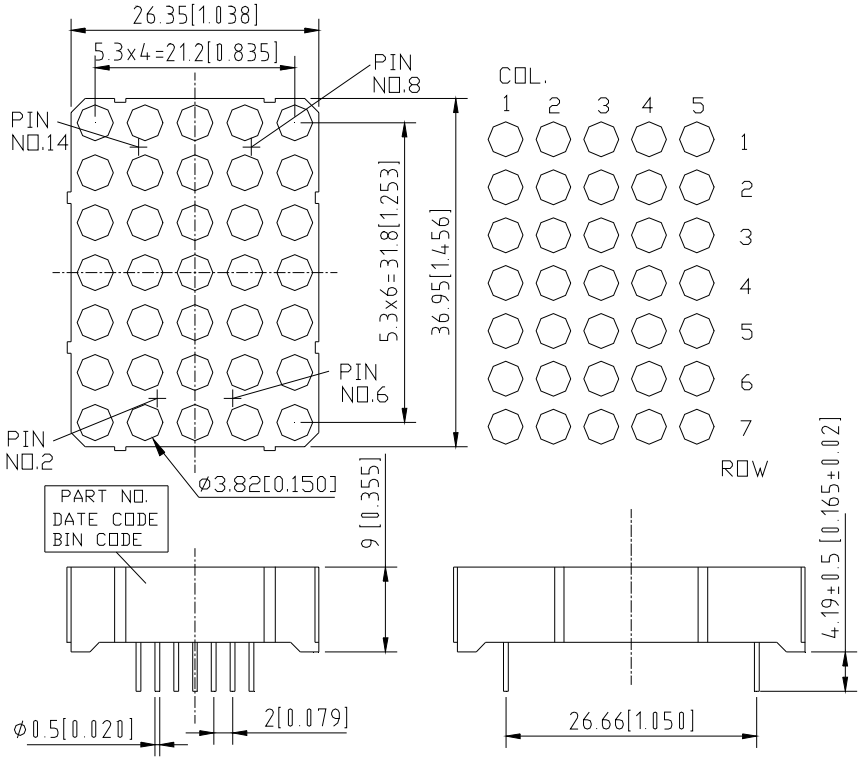
DESCRIPTION

The LPTL15357AFBK1 is a 1.40 inch (35.62 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 transparent dot.

DEVICE

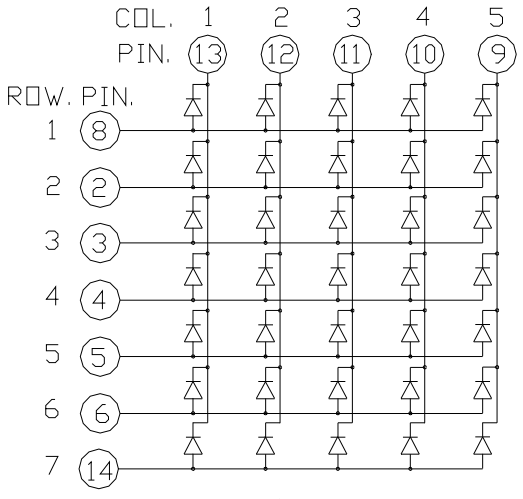
PART NO.	DESCRIPTION
AlInGaP Red	CATHODE COLUMN
LPTL15357AFBK1	ANODE ROW

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	NO PIN
2	ANODE ROW 2
3	ANODE ROW 3
4	ANODE ROW 4
5	ANODE ROW 5
6	ANODE ROW 6
7	NO PIN
8	ANODE ROW 1
9	CATHODE COLUMN 5
10	CATHODE COLUMN 4
11	CATHODE COLUMN 3
12	CATHODE COLUMN 2
13	CATHODE COLUMN 1
14	ANODE ROW 7

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 Derating Linear From 25℃ Per Dot	25 0.33	mA mA/℃
Reverse Voltage Per Dot	5	V
Operating Temperature Range	-35℃ to +105℃	
Storage Temperature Range	-35℃ to +105℃	
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	800	3300		ucd	I_p=32mA 1/16Duty
Peak Emission Wavelength	λp		632		nm	I_F=20mA
Spectral Line Half-Width	$\Delta\lambda$		20		nm	I_F=20mA
Dominant Wavelength	λd		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 (Commision Internationale De L'Eclairage) eye-response curve.

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

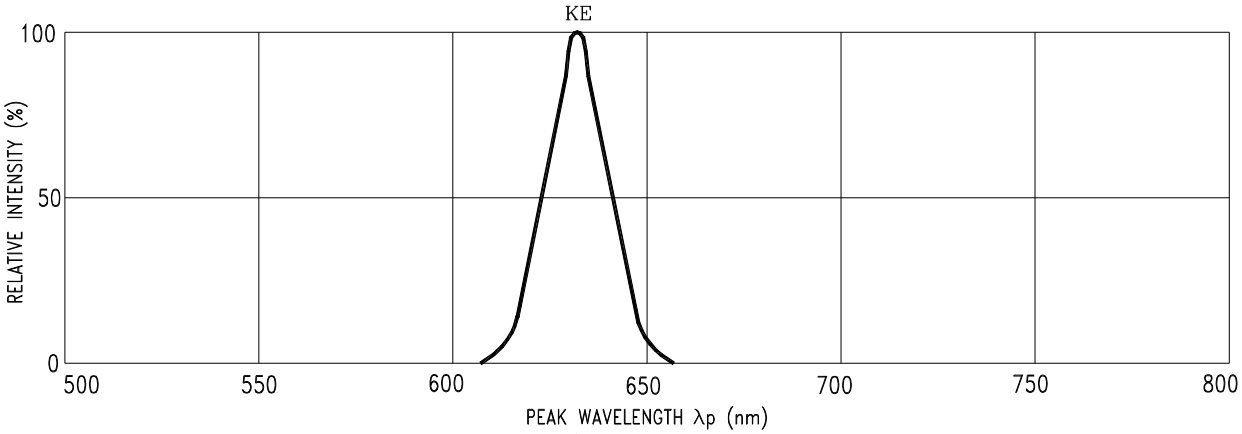


Fig1.Spectral Emission

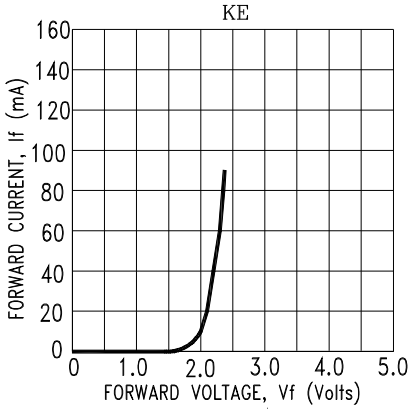


Fig2. Forward Current vs. Forward Voltage

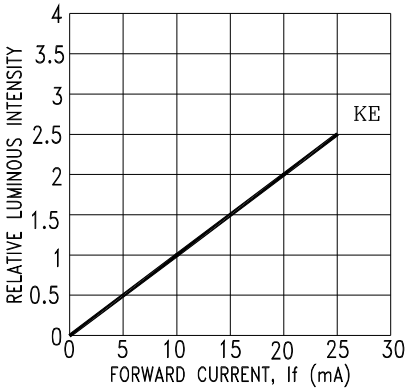


Fig3. Relative Luminous Intensity vs. DC Forward Current

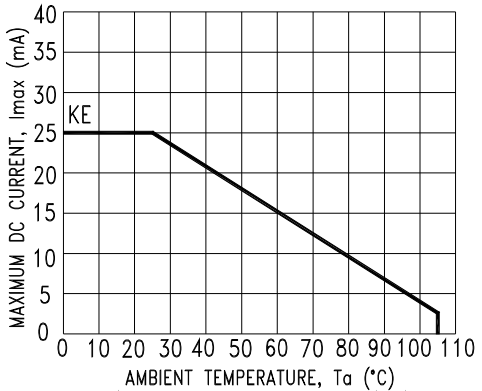


Fig4. Maximun Allowable DC Current vs. Ambient Temperature

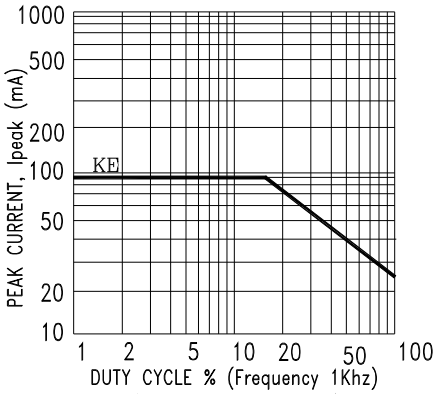


Fig5. Maximum Peak Current vs. Duty Cycle %

NOTE : KE=AlInGaP RED