

FEATURES

- * 1.2 inch (30.42 mm) MATRIX HEIGHT
- * LOW POWER REQUIREMENT
- * SINGLE PLANE, WIDE VIEWING ANGLE
- * SOLID STATE RELIABILITY
- * 5x7 ARRAY WITH X-Y SELECT
- * COMPATIBLE WITH USASCII AND EBCDIC CODES
- * STACKABLE HORIZONTALLY
- * CATEGORIZED FOR LUMINOUS INTENSITY
- * **LEAD-FREE PACKAGE (ACCORDING TO ROHS)**

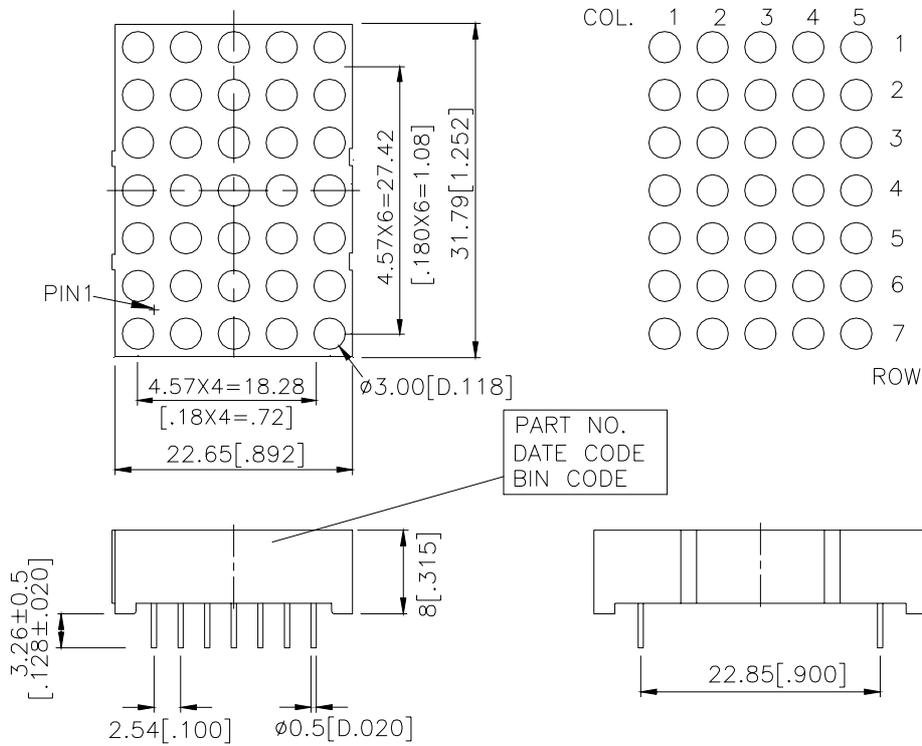
DESCRIPTION

The LTP-1557AKTB-P is a 1.2 inch (30.42 mm) matrix height 5x7 dot matrix displays. This device use InGaN Blue chips (InGaN epi on a non-transparent substrate). The display has a gray face and white dot color.

DEVICE

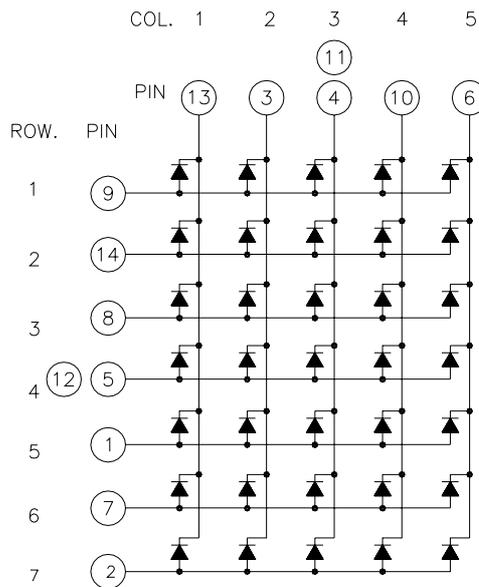
PART NO.	DESCRIPTION
InGaN Blue	CATHODE COLUMN
LTP-1557AKTB-P	ANODE ROW

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

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation Per Segment	76	mW
Peak Forward Current Per Segment (Frequency 1Khz, 10% duty cycle)	100	mA
Continuous Forward Current Per Segment	20	mA
Forward Current Derating from 25 ⁰ C	0.25	mA/ ⁰ C
Reverse Voltage Per Segment	5	V
*Electrostatic Discharge Threshold(HBM)	300	V
Operating Temperature Range	-35 ⁰ C to +85C	
Storage Temperature Range	-35 ⁰ C to +85C	

Soldering Conditions : 1/16 inch below seating plane for 3 seconds at 260⁰C

* HBM:Human Body Model. Seller gives no other assurances regarding the ability of product to withstand ESD.

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25⁰C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I _v	8	14		mcd	I _F =10mA
Peak Emission Wavelength	λ _p		468		nm	I _F =20mA
Spectral Line Half-Width	Δλ		25		nm	I _F =20mA
Dominant Wavelength	λ _d		470		nm	I _F =20mA
Forward Voltage any Dot	V _F	2.8	3.5	4.0	V	I _F =20mA
Reverse Current any Dot	I _R			100	μA	V _R =5V
Luminous Intensity Matching Ratio (Same Light Area)	I _v -m			2:1		I _F =10mA

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

ESD (Electrostatic Discharge)

Static Electricity or power surge will damage the LED.

Suggestions to prevent ESD damage:

- Use of a conductive wrist band or anti-electrostatic glove when handling these LEDs.
- All devices, equipment, and machinery must be properly grounded.
- Work tables, storage racks, etc. should be properly grounded.
- Use ion blower to neutralize the static charge which might have built up on surface of the LED's plastic lens as a result of friction between LEDs during storage and handling.

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

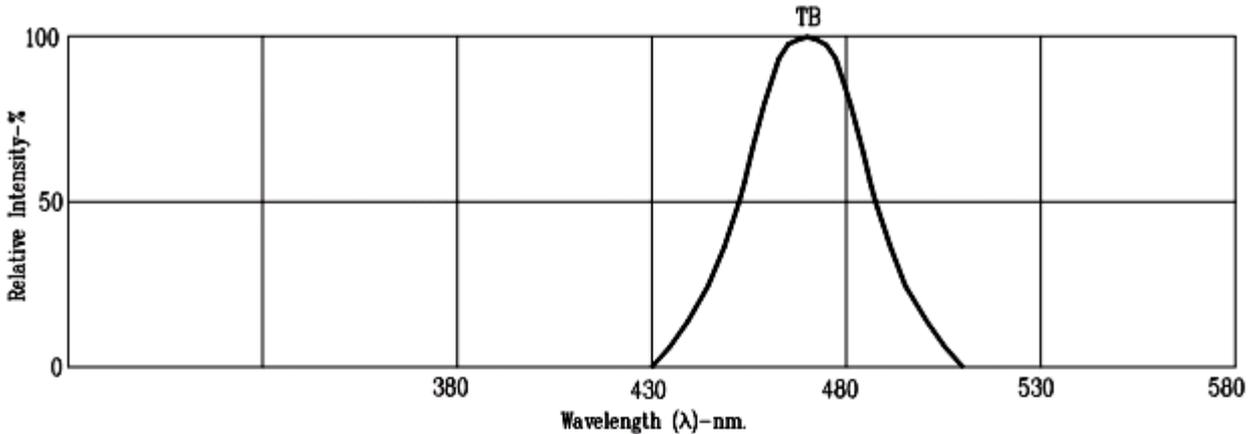


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

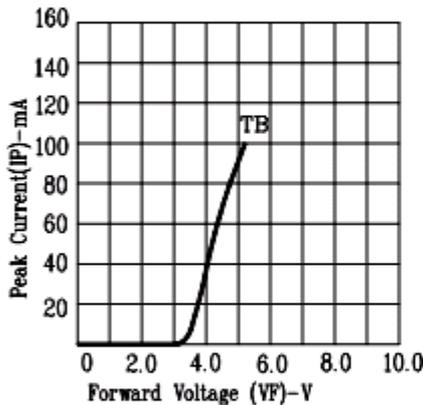


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

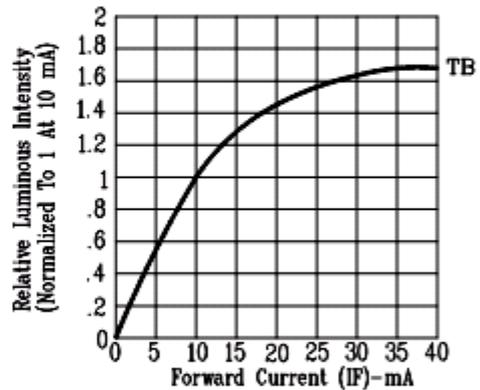


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

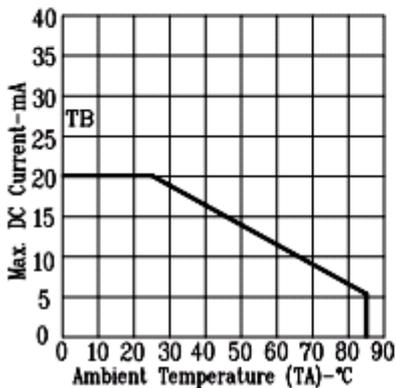


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

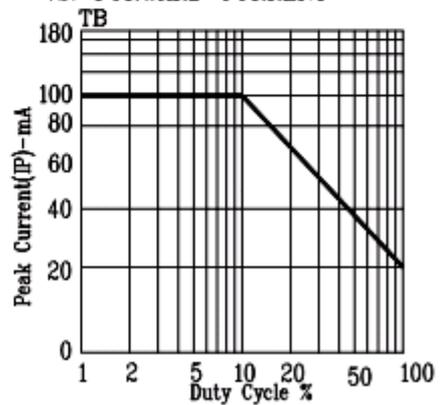


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: TB=InGaN/sapphire Blue