



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: [info@chipsmall.com](mailto:info@chipsmall.com) Web: [www.chipsmall.com](http://www.chipsmall.com)

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



**LED DISPLAY****LTP-305G**  
**DATA SHEET**

Rev	Description	By
-	NPPR Original Spec	Erin Cheng 07/20/2004
A	Revise height of package from 3.05 ±0.5mm to 3.50 ±0.5mm Add more the product's spec	Phanomkorn J 02/15/2012

Spec No.	DS30-2004-145
Date	02/15/2012
Revision No.	A
Page No.	0 OF 5
Customer Approval	
Date	

## **FEATURES**

- \* 0.3 inch (7.62 mm) MATRIX HEIGHT
- \* LOW POWER REQUIREMENT
- \* SINGLE PLANE, WIDE VIEWING ANGLE
- \* SOLID STATE RELIABILITY
- \* 5X7 ARRAY WITH X-Y SELECT
- \* COMPATIBLE WITH USASCLL AND EBCDIC CODES
- \* STACKABLE HORIZONTALLY
- \* CATEGORIZED FOR LUMINOUS INTENSITY
- \* LEAD-FREE PACKAGE (ACCORDING TO ROHS)

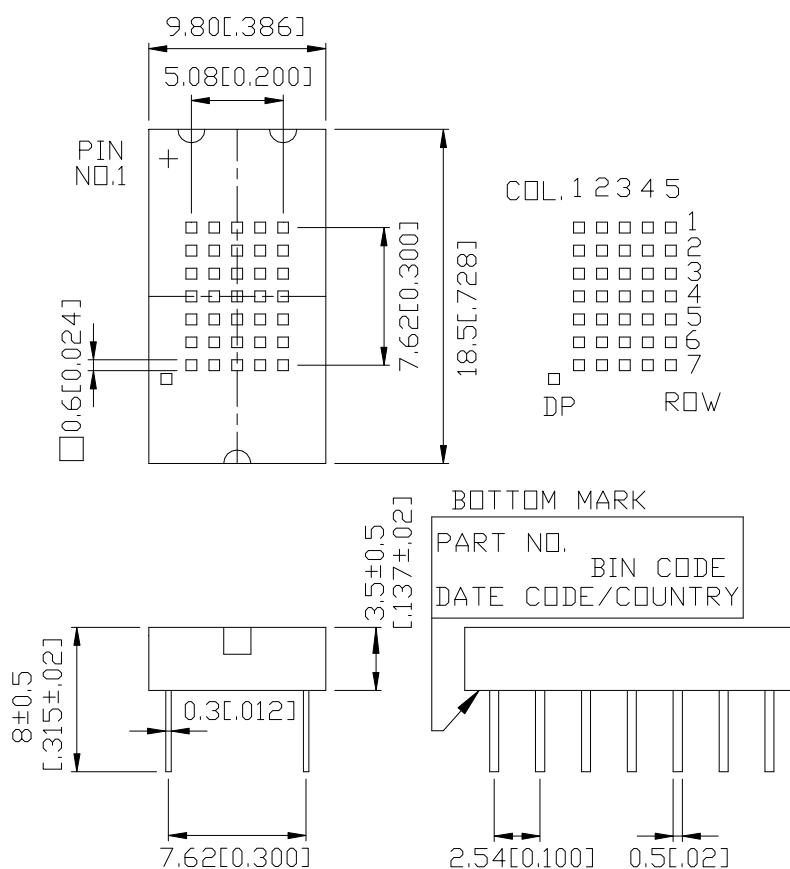
## **DESCRIPTION**

The LTP-305G is a 0.3 inch (7.62 mm) matrix height 5x7 dot matrix display. This device uses GREEN LED chips (GaP epi on GaP substrate). The display has green package.

## **DEVICE**

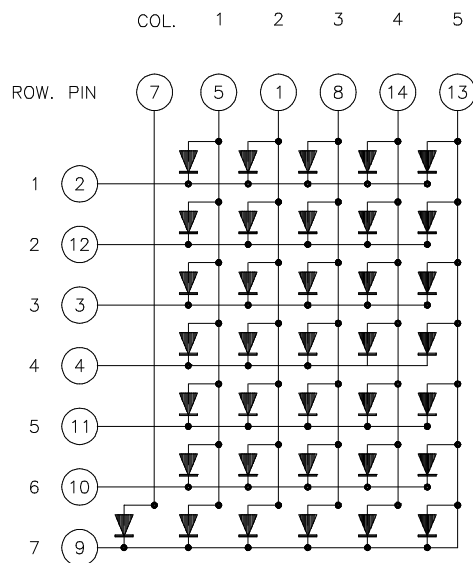
PART NO.	DESCRIPTION
GREEN	ANODE COLUMN
LTP-305G	CATHODE ROW LT. HAND DECIMAL

## PACKAGE DIMENSIONS



NOTES: All dimensions are in millimeters. Tolerances are  $\pm 0.25$  mm (0.01") unless otherwise noted.

## INTERNAL CIRCUIT DIAGRAM



**PIN CONNECTION**

<b>No</b>	<b>CONNECTION</b>
1	ANODE COLUMN 2
2	CATHODE ROW 1
3	CATHODE ROW 3
4	CATHODE ROW 4
5	ANODE COLUMN 1
6	NO PIN
7	ANODE DECIMAL POINT
8	ANODE COLUMN 3
9	CATHODE ROW 7
10	CATHODE ROW 6
11	CATHODE ROW 5
12	CATHODE ROW 2
13	ANODE COLUMN 5
14	ANODE COLUMN 4

**ABSOLUTE MAXIMUM RATING**

PARAMETER	MAXIMUM RATING	UNIT
Average Power Dissipation Per Dot	36	mW
Peak Forward Current Per Dot (Frequency 1Khz, 10% duty cycle)	75*	mA
Average Forward Current Per Dot	10	mA
Forward Current Derating From 25 <sup>0</sup> C	0.14	mA/ <sup>0</sup> C
Reverse Voltage Per Dot	5	V
Operating Temperature Range	-40 <sup>0</sup> C to +85 <sup>0</sup> C	
Storage Temperature Range	-40 <sup>0</sup> C to +85 <sup>0</sup> C	
Soldering Conditions : 1/16 inch below seating plane for 3 seconds at 260 <sup>0</sup> C or of temperature unit (during assembly) not over max. temperature rating.		

\* see figure 5 to establish pulsed condition

**ELECTRICAL / OPTICAL CHARACTERISTICS AT T<sub>A</sub> = 25<sup>0</sup>C**

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity Per Dot	I <sub>v</sub>	630	1600		μcd	I <sub>P</sub> = 80mA , 1/16Duty
Peak Emission Wavelength	λ <sub>p</sub>		565		nm	I <sub>F</sub> = 20mA
Spectral Line Half-Width	Δλ		30		nm	I <sub>F</sub> = 20mA
Dominant Wavelength	λ <sub>d</sub>		569		nm	I <sub>F</sub> = 20mA
Forward Voltage Per Dot	V <sub>F</sub>		2.1	2.6	V	I <sub>F</sub> = 20mA
Reverse Current Per Dot	I <sub>R</sub>			100	μA	V <sub>R</sub> = 5V
Luminous Intensity Matching Ratio (Similar Light Area)	I <sub>v-m</sub>			2 : 1		I <sub>P</sub> = 80mA , 1/16 Duty

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)

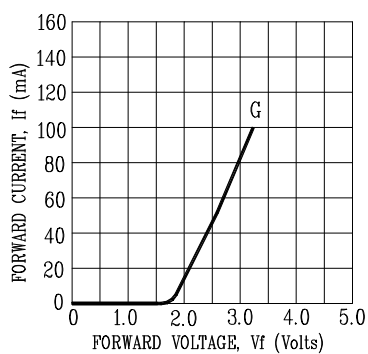
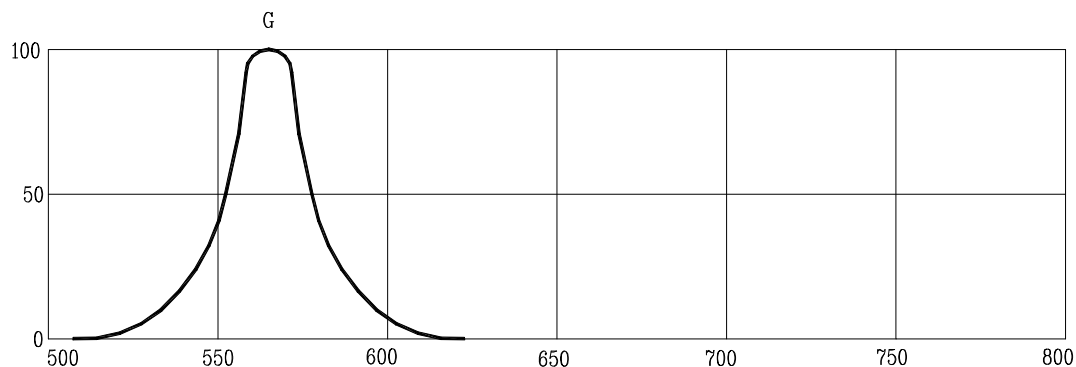


Fig2. Forward Current vs. Forward Voltage

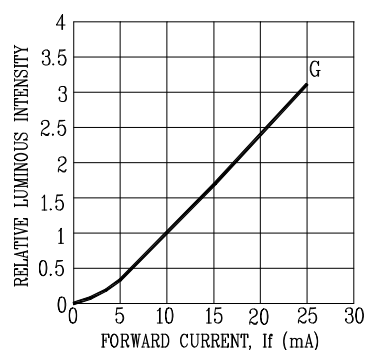


Fig3. Relative Luminous Intensity vs. DC Forward Current

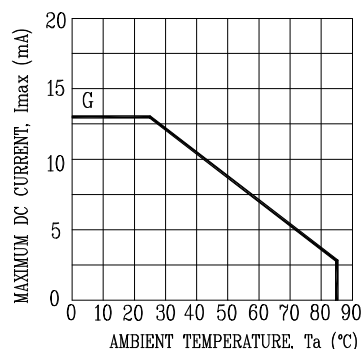


Fig4. Maximum Allowable DC Current vs. Ambient Temperature

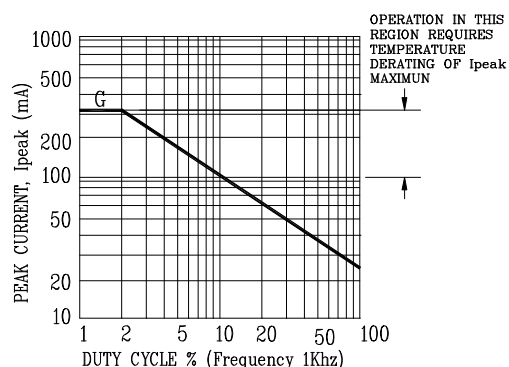


Fig5. Maximum Peak Current vs. Duty Cycle %

NOTE: G=GREEN