



# **LED Display**

## **Product Data Sheet**

### **LTP-7357AG**

Spec No.: DS30-2001-456

Effective Date: 11/11/2006

Revision: A

**LITE-ON DCC**

**RELEASE**

**BNS-OD-FC001/A4**

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## **FEATURES**

- \* 0.678 inch ( 17.22 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 LTP-7357AG is a 0.678 inch (17.22 mm) matrix height 5×7 dot matrix display. This device utilizes Green LED chips, which are made from GaP on GaP substrate, and has a black face and white dots.

## **DEVICE**

<b>PART NO.</b>	<b>DESCRIPTION</b>
GREEN	CATHODE COLUMN ANODE ROW
LTP-7357AG	

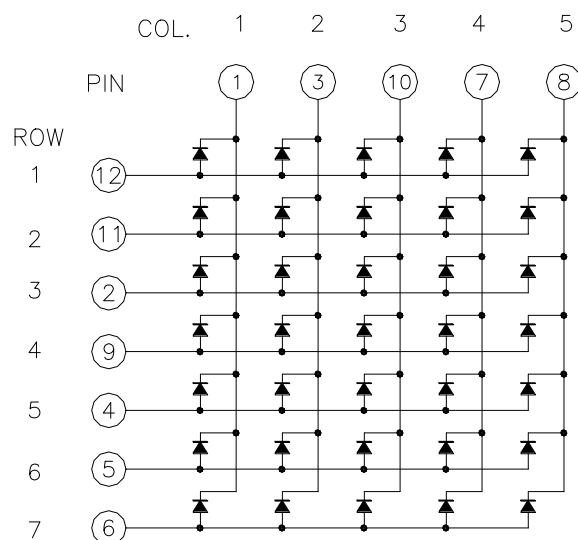
The drawing illustrates the mechanical specifications of a 7x5 pin connector. It includes three views: a top view, a side view, and a detail view of the pin.

**Top View:** Shows a 7x5 grid of pins. Dimensions include a total width of 12.66 [0.498] and a pin pitch of 10.16 [0.4]. The total height is 17.74 [0.698], with a pin-to-pin distance of 15.24 [0.6]. The pin diameter is specified as  $\phi 1.98 [0.078]$ . A callout box indicates fields for PART NO., DATE CODE, and BIN CODE.

**Side View:** Shows the profile of the connector. The total height is 12.7 [0.5]. The base width is 7.65 [0.301]. The pin height is 3.2  $\pm$  0.5 [0.126  $\pm$  0.02]. The pin width is 0.3 [0.012].

**Detail View:** Shows the pin profile with a height of 8.1 [0.319] and a base width of 0.5 [0.02]. The pin pitch is 2.54  $\times$  5 = 12.7 [0.5].

## INTERNAL CIRCUIT DIAGRAM



**PIN CONNECTION**

<b>No.</b>	<b>CONNECTION</b>
1	CATHODE COLUMN 1
2	ANODE ROW 3
3	CATHODE COLUMN 2
4	ANODE ROW 5
5	ANODE ROW 6
6	ANODE ROW 7
7	CATHODE COLUMN 4
8	CATHODE COUUMN 5
9	ANODE ROW 4
10	CATHODE COLUMN 3
11	ANODE ROW 2
12	ANODE ROW 1

**ABSOLUTE MAXIMUM RATING AT Ta=25°C**

PARAMETER	MAXIMUM RATING	UNIT
Average Power Dissipation Per Dot	75	mW
Peak Forward Current Per Dot	100	mA
Average Forward Current Per Dot	25	mA
Derating Linear From 25°C Per Dot	0.33	mA/°C
Reverse Voltage Per Segment	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 <sup>0</sup> 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 <sub>v</sub>	630	2000		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
			3.0	3.7	V	I <sub>F</sub> =80mA
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 , 1/16Duty

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)

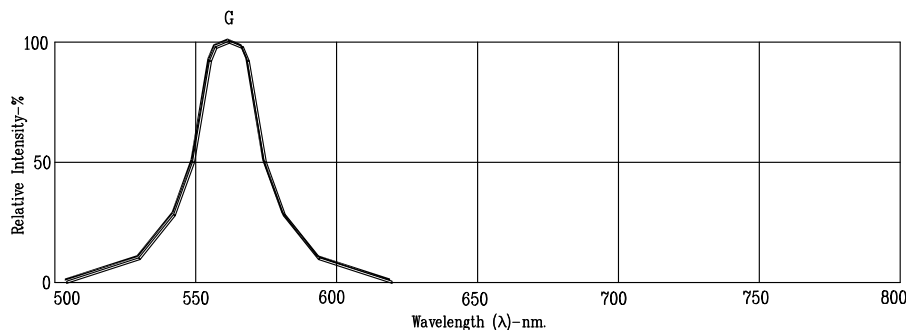


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

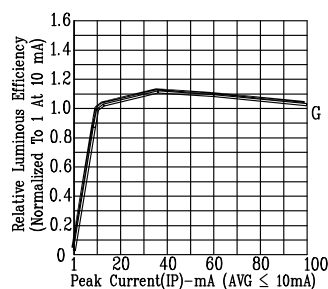


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT (REFRESH RATE 1KHz)

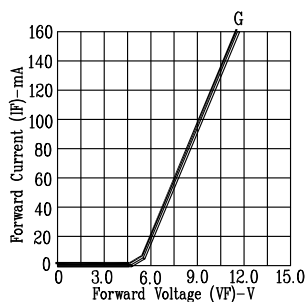


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

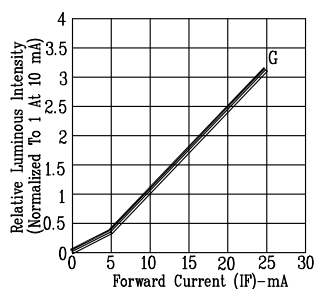


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

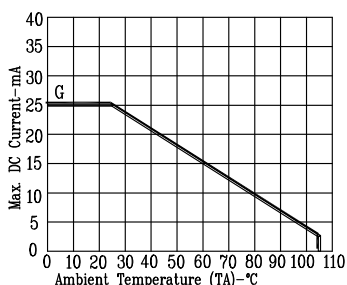


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

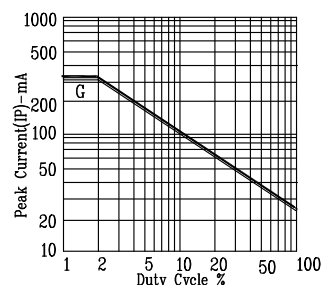


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: G=GREEN (REFRESH RATE 1KHz)