LITEON®
OPTOELECTRONICS

LED Display

Product Data Sheet

LTC-3710HR

Spec No.: DS-30-96-182

Effective Date: 01/09/2010

Revision: A

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

LITE-ON Technology Corp. / Optoelectronics
No.90,Chien 1 Road, Chung Ho, New Taipei City 23585, Taiwan, R.O.C.
Tel: 886-2-2222-6181 Fax: 886-2-2221-1948 / 886-2-2221-0660
http://www.liteon.com/opto

FEATURES

∗0.3 INCH (7.6 mm) DIGIT HEIGHT.
∗CONTINUOUS UNIFORM SEGMENTS.
∗LOW POWER REQUIREMENT.
∗EXCELLENT CHARACTERS APPEARANCE.
∗HIGH BRIGHTNESS & HIGH CONTRAST.
∗WIDE VIEWING ANGLE.
∗SOLID STATE RELIABILITY.

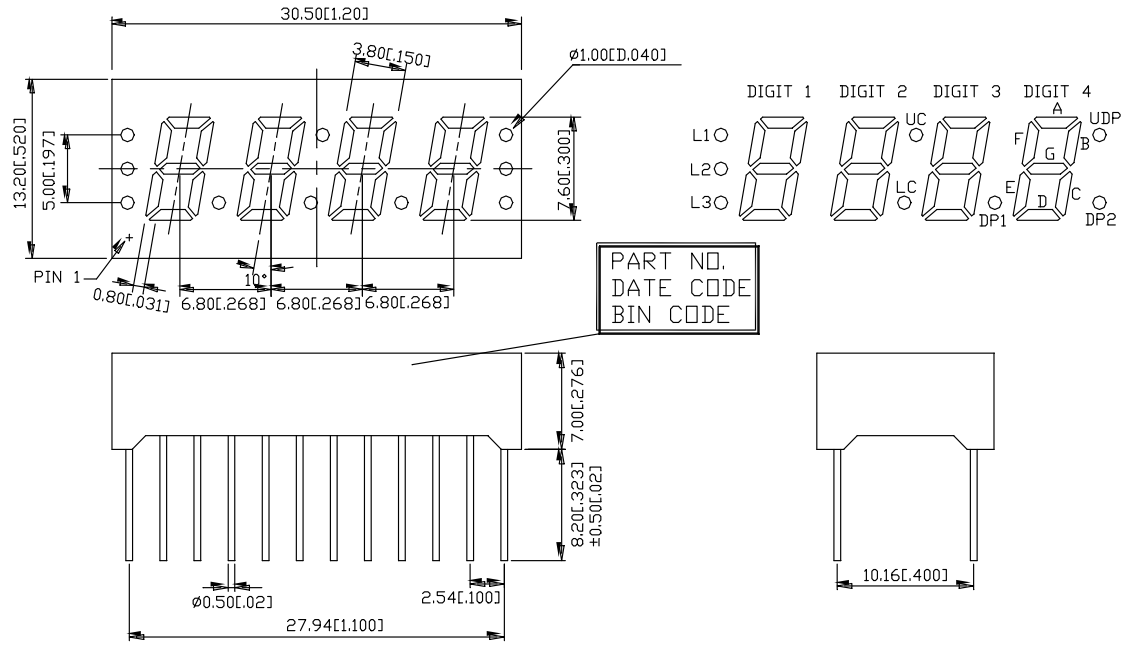
DESCRIPTION

The LTC-3710HR is a 0.3 inch (7.6 mm) height quadruple digit display. The device utilizes high-efficiency red LED chips, which are made from GaAsP on a transparent GaP substrate. High efficiency red displays have red face and red segments.

DEVICE

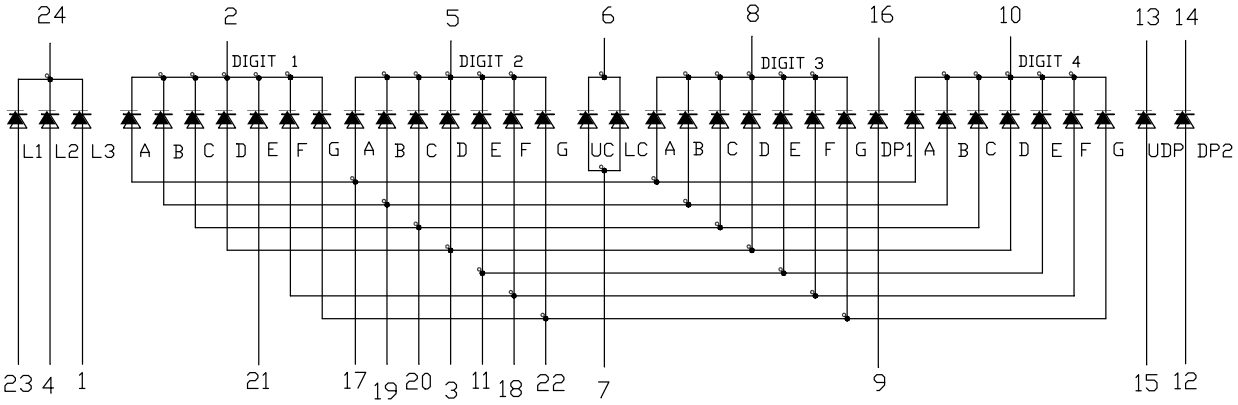
PART NO.	DESCRIPTION
Hi-Eff. Red	Multiplex Common Cathode
LTC-3710HR	Rt. Hand Decimal

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	No	CONNECTION
1	Anode L3	13	Cathode UDP.
2	Common Cathode Digit 1	14	Cathode DP2.
3	Anode D1,D2,D3,D4	15	Anode UDP.
4	Anode L2	16	Cathode DP1
5	Common Cathode Digit 2	17	Anode A1,A2,A3,A4
6	Cathode UC,LC	18	Anode F1,F2,F3,F4
7	Anode UC ,LC	19	Anode B1,B2,B3,B4
8	Common Cathode Digit 3	20	Anode C1,C2,C3,C4
9	Anode DP1	21	Anode E1
10	Common Cathode Digit 4	22	Anode G1,G2,G3,G4
11	Anode E2,E3,E4	23	Anode L1
12	Anode DP2	24	Cathode L1,L2,L3

ABSOLUTE MAXIMUM RATING AT T_A=25°C

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation Per Segment	75	mW
Peak Forward Current Per Segment (1/10 Duty Cycle, 0.1ms Pulse Width)	100	mA
Continuous Forward Current Per Segment Derating Linear From 25°C Per Segment	25 0.28	mA mA/°C
Reverse Voltage Per Segment	5	V
Operating Temperature Range	-35°C to +105°C	
Storage Temperature Range	-35°C to +105°C	
Solder Temperature 1/16 inch Below Seating Plane for 3 Seconds at 260°C		

ELECTRICAL / OPTICAL CHARACTERISTICS AT T_A=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	800	2000		μcd	I_F=10mA
Peak Emission Wavelength	λp		635		nm	I_F=20mA
Spectral Line Half-Width	Δλ		40		nm	I_F=20mA
Dominant Wavelength	λd		623		nm	I_F=20mA
Forward Voltage Per Segment	V_F		2.0	2.6	V	I_F=20mA
Reverse Current Per Segment	I_R			100	μA	V_R=5V
Luminous Intensity Matching Ratio	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.

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES (25℃ Ambient Temperature Unless Otherwise Note)

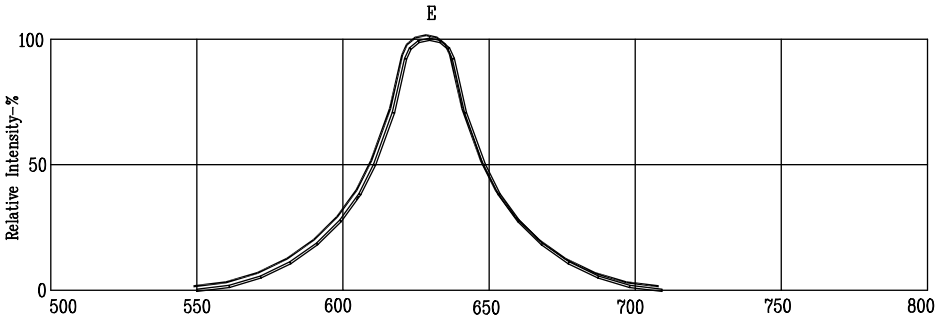


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

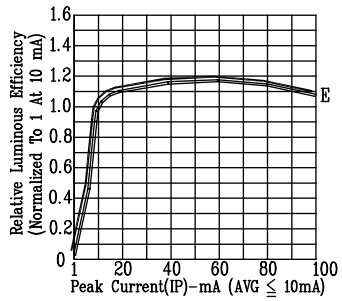


Fig4. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT (REFRESH RATE 1KHz)

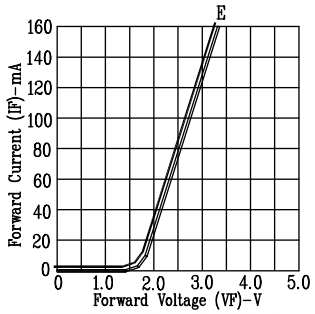


Fig2. FORWARD CURRENT VS. FORWARD VOLTAGE

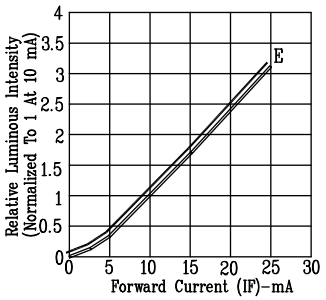


Fig3. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

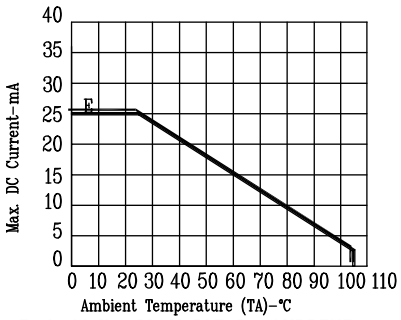


Fig8. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

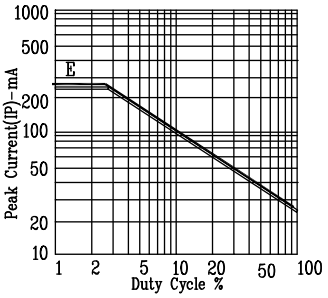


Fig9. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: E=RED ORANGE