LITEON®
OPTOELECTRONICS

LED Display

Product Data Sheet

LTC-3710P

Spec No.: DS-30-93-156

Effective Date: 01/12/2010

Revision: A

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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FEATURES

∗0.3 inch (7.62 mm) DIGIT HEIGHT.
∗CONTINUOUS UNIFORM SEGMENTS.
∗LOW POWER REQUIREMENT.
∗EXCELLENT CHARACTERS APPEARANCE.
∗HIGH BRIGHTNESS & HIGH CONTRAST.
∗WIDE VIEWING ANGLE.
∗SOLID STATE RELIABILITY.
∗CATEGORIZED FOR LUMINOUS INTENSITY.

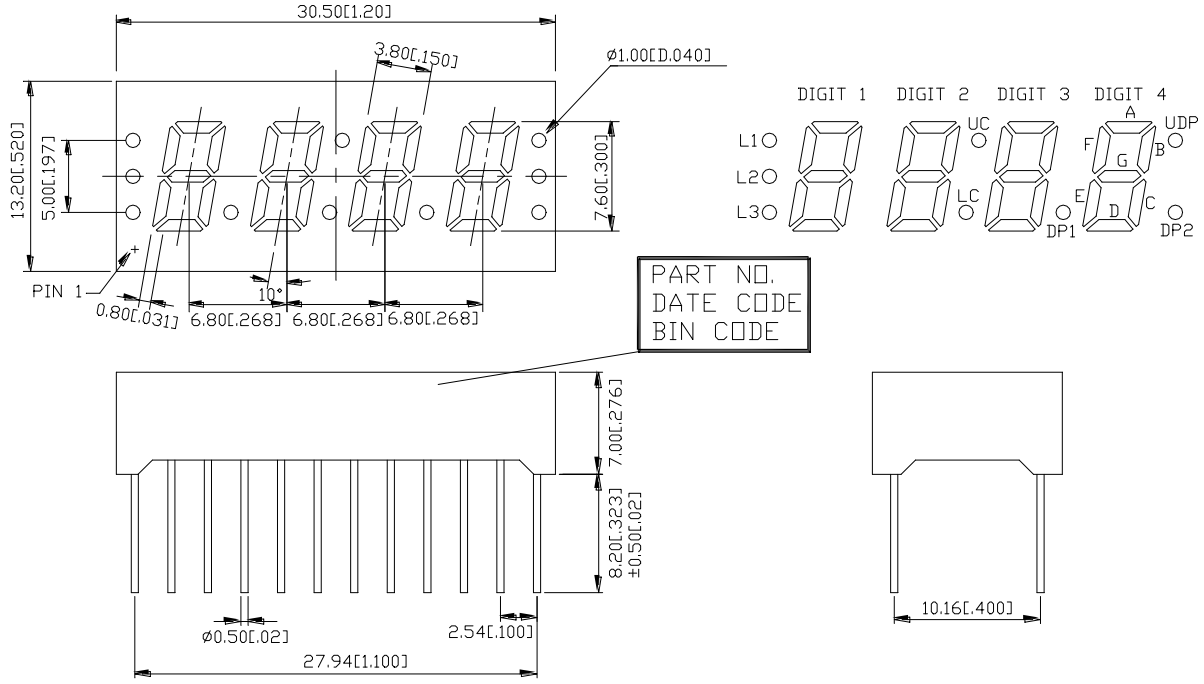
DESCRIPTION

The LTC-3710P is a 0.3inch (7.62mm) digit height quadruple digit seven-segment display. This device utilizes bright red LED chips, which are made from GaP on a transparent GaP substrate, and has a black face and red segments.

DEVICE

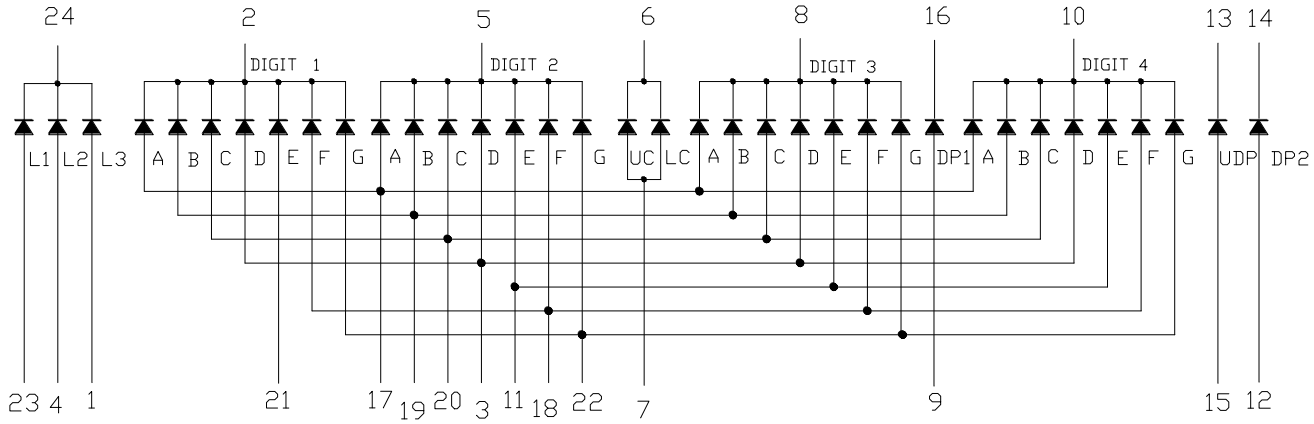
PART NO.	DESCRIPTION
Bright red	Multiplex Common Cathode
LTC-3710P	Rt. Hand Decimal

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 1D,2D,3D,4D	15	ANODE UDP
4	ANODE L2	16	CATHODE DP1
5	COMMON CATHODE DIGIT 2	17	ANODE 1A,2A,3A,4A
6	CATHODE UC,LC	18	ANODE 1F,2F,3F,4F
7	ANODE UC,LC	19	ANODE 1B,2B,3B,4B
8	COMMON CATHODE DIGIT 3	20	ANODE 1C,2C,3C,4C
9	ANODE DP1	21	ANODE 1E
10	COMMON CATHODE DIGIT 4	22	ANODE 1G,2G,3G,4G
11	ANODE 2E,3E,4E	23	ANODE L1
12	ANODE DP2	24	CATHODE L1,L2,L3

ABSOLUTE MAXIMUM RATING AT Ta=25°C

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation Per Segment	40	mW
Peak Forward Current Per Segment (1/10 Duty Cycle, 0.1ms Pulse Width)	60	mA
Continuous Forward Current Per Segment Derating Linear From 25℃ Per Segment	15 0.2	mA mA/℃
Reverse Voltage Per Segment	5	V
Operating Temperature Range	-35℃ to +85℃	
Storage Temperature Range	-35℃ to +85℃	
Solder Temperature: max 260℃ for max 3sec at 1.6mm below seating plane.		

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	200	650		μcd	I_F=10mA
Peak Emission Wavelength	λp		697		nm	I_F=20mA
Spectral Line Half-Width	Δλ		90		nm	I_F=20mA
Dominant Wavelength	λd		657		nm	I_F=20mA
Forward Voltage Per Segment	V_F		2.1	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 CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

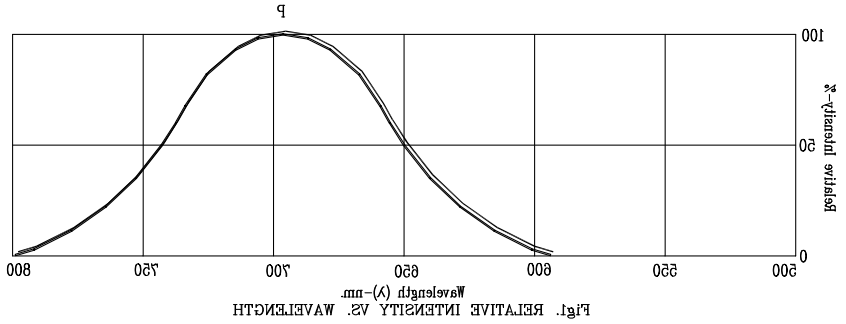


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

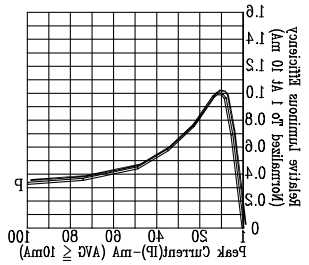


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT (REFRESH RATE 1KHz)

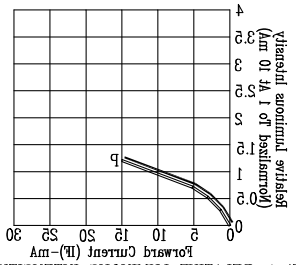


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

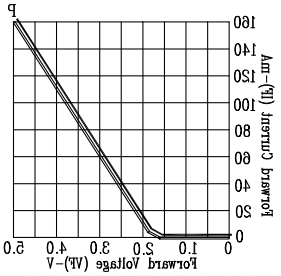


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

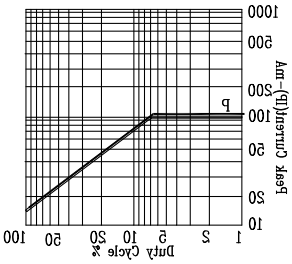


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

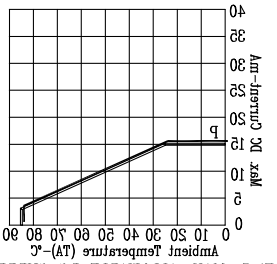


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.