LITEON®
OPTOELECTRONICS



LED Display

Product Data Sheet

LTS-10804P

Spec No.: DS-30-99-665

Effective Date: 05/20/2000

Revision: -

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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FEATURES

∗1.0 inch (25.4 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.

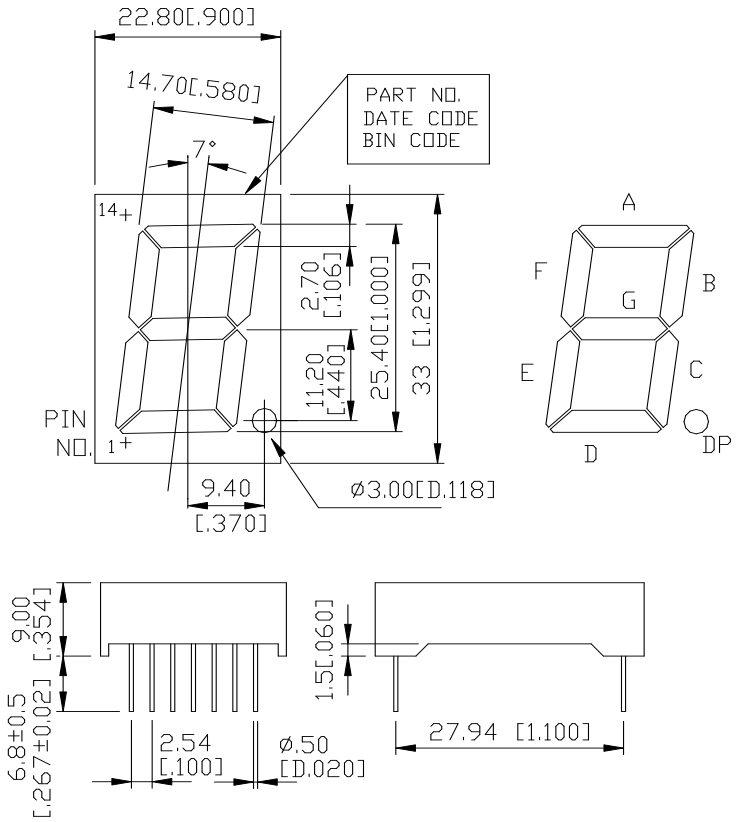
DESCRIPTION

The LTS-10804P is a 1.0 inch (25.4 mm) digit height single 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 white segments.

DEVICE

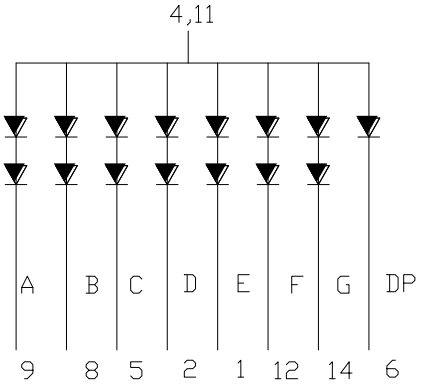
PART NO.	DESCRIPTION
BRIGHT RED	COMMON ANODE
LTS-10804P	RT. HAND DECIMAL

PACKAGE DIMENSIONS



NOTES: All dimensions are in millimeters. Tolerance is ± 0.25 mm (0.01“) unless otherwise noted.

INTERNAL CIRCUIT DIAGRAM



PIN CONNECTION

No.	CONNECTION
1	CATHODE E
2	CATHODE D
3	NO PIN
4	COMMON ANODE
5	CATHODE C
6	CATHODE D.P.
7	NO PIN
8	CATHODE B
9	CATHODE A
10	NO PIN
11	COMMON ANODE
12	CATHODE F
13	NO PIN
14	CATHODE G

ABSOLUTE MAXIMUM RATING AT Ta=25°C

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation Per Segment	70(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 0.20	mA mA/℃
Reverse Voltage Per Segment	10(5)	V
Operating Temperature Range	-35℃ to +85℃	
Storage Temperature Range	-35℃ to +85℃	
Solder Temperature: max 260℃ for max 3sec at 1.6mm[1/16inch] below seating plane.		

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	1200	2500		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		4.2 (2.1)	5.2 (2.6)	V	I_F=20mA
Reverse Current Per Segment	I_R			100	μA	V_R=10V(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)

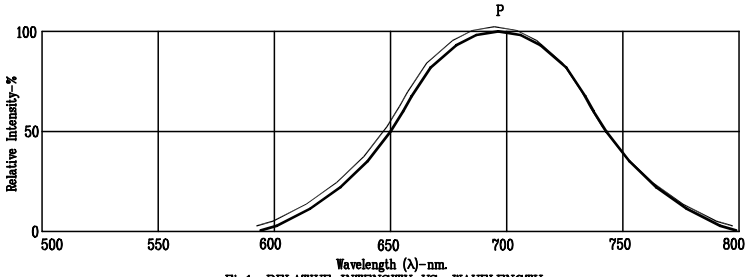


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

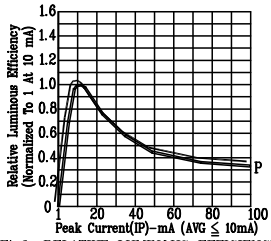


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT (REFRESH RATE 1KHz)

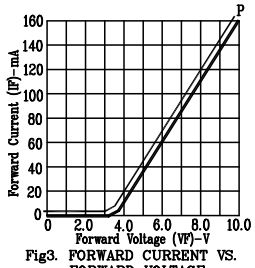


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

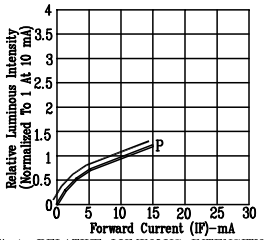


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

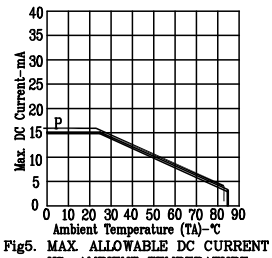


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

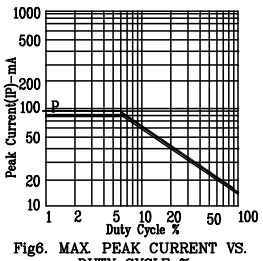


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: P=BRIGHT RED