LITEON®
OPTOELECTRONICS

LED Display

Product Data Sheet

LTC-8706HG

Spec No.: DS30-2000-327

Effective Date: 05/23/2009

Revision: A

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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LED DISPLAY

LTC-8706HG

DATA SHEET

Rev	Description	By
01	ORIGINAL (Refer to contour drawing Revision (-))	Meg Huang 03/02/2001
(Above data for PD and Customer tracking only)		
-	NPPR Received and Upload on OPNC	Meg Huang 03/02/2001
A	Update pin length from 8.00mm±0.5mm To 7.5mm±0.5mm as customer approved	KITTISAK B Apr 28/2009

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FEATURES

∗0.8 inch (20.32 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.
∗**LEAD-FREE PACKAGE(ACCORDING TO ROHS)**

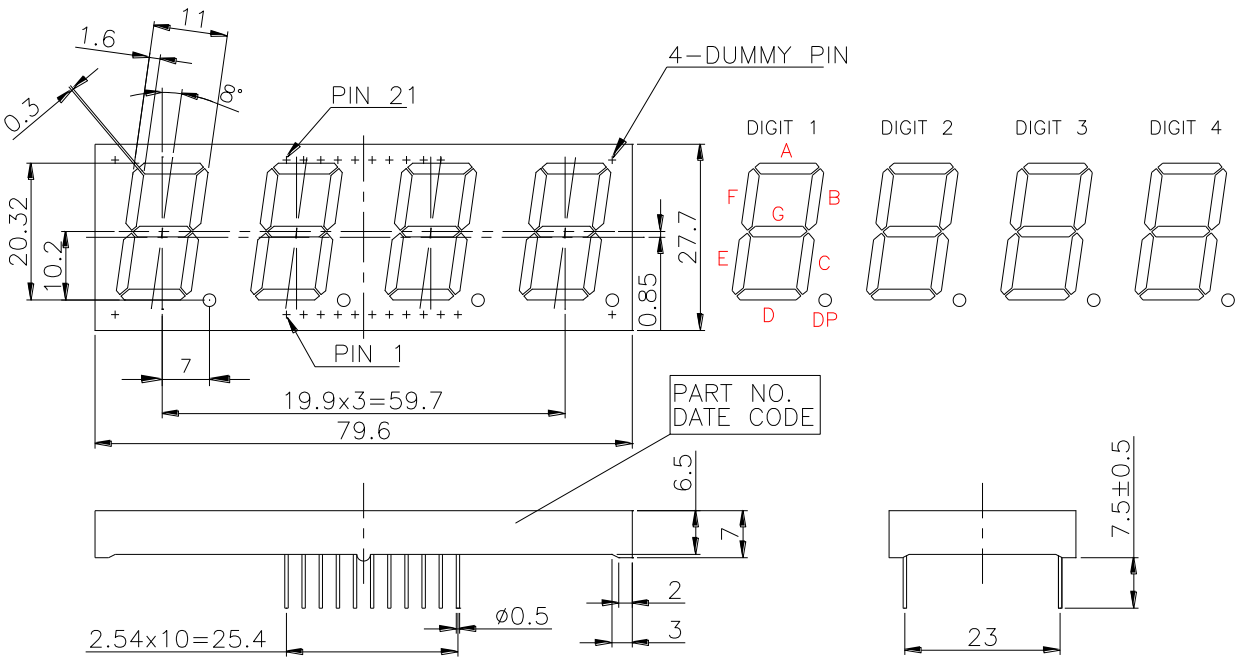
DESCRIPTION

The LTC-8706HG is a 0.8 inch (20.32 mm) digit height quadruple digit seven-segment display. This device utilizes green LED chips, which are made from GaP on GaP substrate, and has gray face and white segments.

DEVICE

PART NO.	DESCRIPTION
Green	Multiplex
LTC-8706HG	Common Cathode

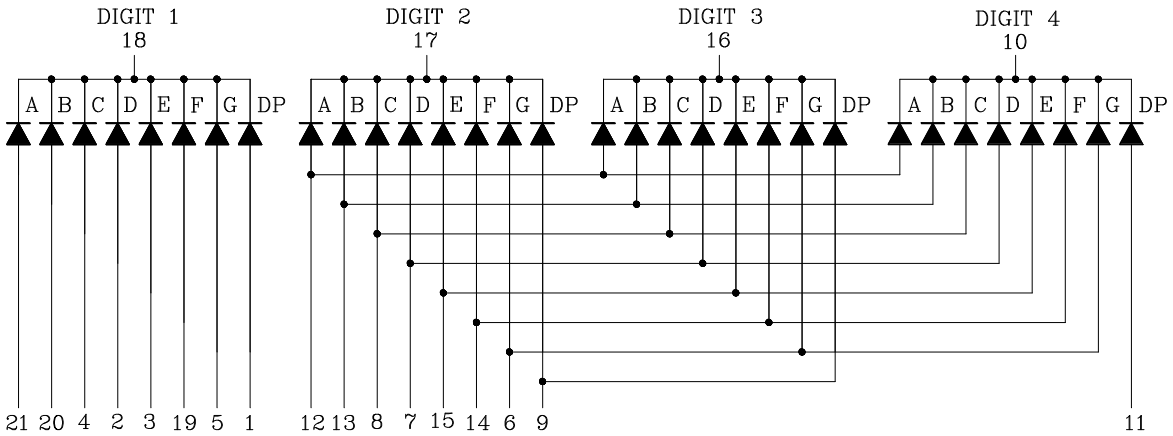
PACKAGE DIMENSIONS



NOTES: 1. All dimensions are in millimeters. Tolerances are ± 0.25 mm (0.01“) unless otherwise noted.

2. Pin tip’s shift tolerance are ± 0.2 mm
3. Foreign material on segment ≦10mils
4. Ink contamination (surface) ≦20mils
5. Bending≦1% of reflector length
6. Bubble in segment ≦10mil

INTERNAL CIRCUIT DIAGRAM



PIN CONNECTION

No.	CONNECTION
1	ANODE DP (DIGIT 1)
2	ANODE D (DIGIT 1)
3	ANODE E (DIGIT 1)
4	ANODE C (DIGIT 1)
5	ANODE G (DIGIT 1)
6	ANODE G (DIGIT 2,3,4)
7	ANODE D (DIGIT 2,3,4)
8	ANODE C (DIGIT 2,3,4)
9	ANODE DP (DIGIT 2,3)
10	COMMON CATHODE DIGIT 4
11	ANODE DP (DIGIT 4)
12	ANODE A (DIGIT 2,3,4)
13	ANODE B (DIGIT 2,3,4)
14	ANODE F (DIGIT 2,3,4)
15	ANODE E (DIGIT 2,3,4)
16	COMMON CATHODE DIGIT 3
17	COMMON CATHODE DIGIT 2
18	COMMON CATHODE DIGIT 1
19	ANODE F (DIGIT 1)
20	ANODE B (DIGIT 1)
21	ANODE A (DIGIT 1)

ABSOLUTE MAXIMUM RATING AT Ta=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℃ Per Segment	25 0.28	mA mA/℃
Reverse Voltage Per Segment	5	V
Operating Temperature Range	-35℃ to +105℃	
Storage Temperature Range	-35℃ to +105℃	
Solder Temperature: max 260℃ for max 3sec at 1.6mm[1/16inch] below seating plane. 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_V	1300	3100		μcd	I_F=10mA
Peak Emission Wavelength	λp		565		nm	I_F=20mA
Spectral Line Half-Width	Δλ		30		nm	I_F=20mA
Dominant Wavelength	λd		569		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: 1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commision Internationale De L'Eclairage) eye-response curve.

2. Cross talk specification ≦2.5%

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

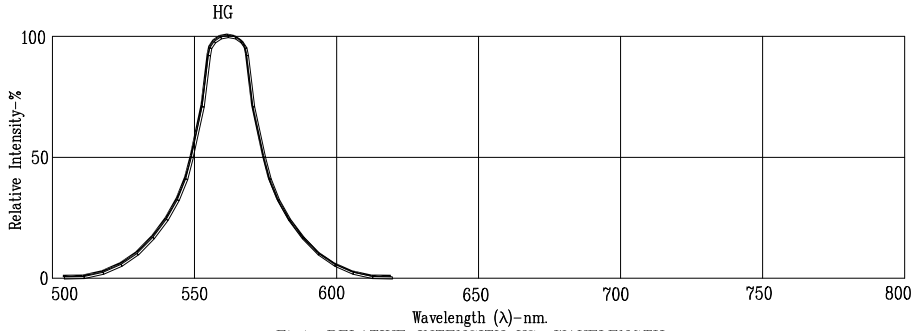


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

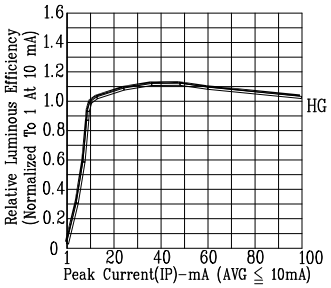


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT (REFRESH RATE 1KHz)

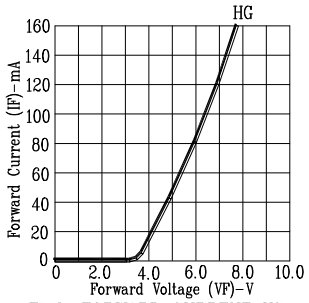


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

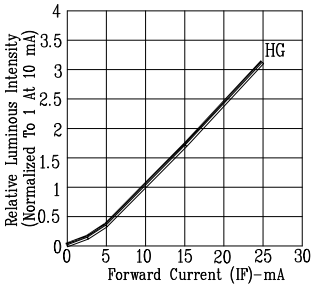


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

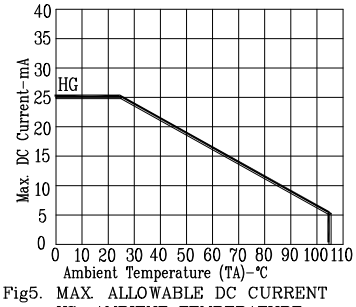


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

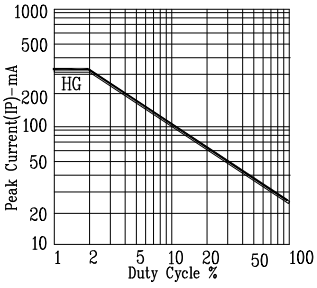


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: HG=HI-EFF (REFRESH RATE 1KHz)