



Spec No.: DS-30-99-102Effective Date: 12/24/2008

Revision: A

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

Property of Lite-On Only

LED DISPLAY

LTC-5653HR

DATA SHEET

Rev	Description	By		
01	ORIGINAL (Refer to contour drawing Revision (-))			
	(Above data for PD and Customer tracki	ng only)		
-	NPPR Received and Upload on OPNC	Vanessa 4/11/2000		
A	Add width dimension of reflector	KITTISAK B. Nov 28/08		

 SPEC. NO.:
 DS-30-99-102

 D A T E :
 Nov 28/08

 REV. NO. :
 A

 PAGE NO. :
 0 OF 6

PART NO.:LTC-5653HR PAGE: 0 of 6

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FEATURES

- *0.56 INCH (14.22 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-5653HR is a 0.56-inch (14.22-mm) height quadruple digit seven-segment display. This device utilizes high efficiency red LED chips, which are made from GaAsP on a transparent GaP substrate, and has a red face and red segments.

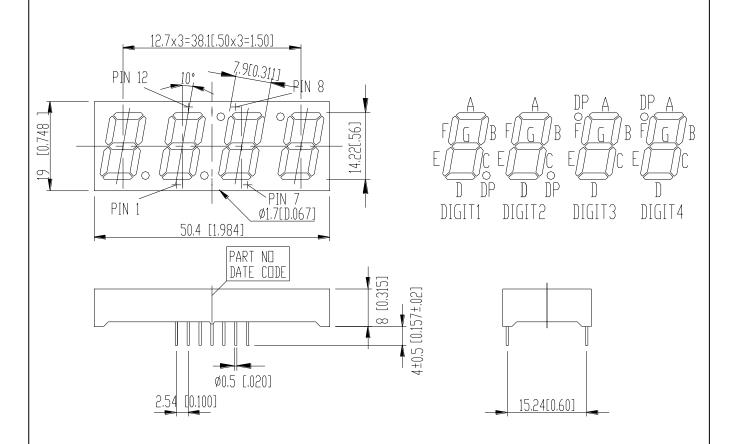
DEVICE

PART NO.	DESCRIPTION		
HI. – EFF. RED	Multiplex		
LTC-5653HR	Common Anode		

PART NO.:LTC-5653HR PAGE: 1 of 6

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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 is \pm 0.4 mm.

PART NO.:LTC-5653HR PAGE: 2 of 6

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INTERNAL CIRCUIT DIAGRAM DIGIT 1 DIGIT 2 DIGIT 3 DIGIT 4 12 8 6 11 7 4 2 1 10 5 3

PART NO.:LTC-5653HR PAGE: 3 of 6

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PIN CONNECTION

No	CONNECTION				
1	CATHODE E				
2	CATHODE D				
3	CATHODE D.P.				
4	CATHODE C				
5	CATHODE G				
6	COMMON ANODE (DIGIT 4)				
7	CATHODE B				
8	COMMON ANODE (DIGIT 3)				
9	COMMON ANODE (DIGIT 2)				
10	CATHODE F				
11	CATHODE A				
12	COMMON ANODE (DIGIT 1)				

PART NO.:LTC-5653HR PAGE: 4 of 6

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ABSOLUTE MAXIMUM RATING AT Ta=25°C

PARAMETER	MAXIMUM RATING	UNIT		
Power Dissipation Per Segment	75	mW		
Peak Forward Current Per Segment	100	mA		
(1/10 Duty Cycle, 0.1ms Pulse Width)	100			
Continuous Forward Current Per Segment	25	mA		
Derating Linear From 25 [°] C Per Segment	0.28	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: max 260° C for max 3sec at 1.6mm[1/16inch] below seating plane. or temperature of 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	Iv	800	2400		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		621		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	μΑ	V _R =5V
Luminous Intensity Matching Ratio	I _V -m			2:1		I _F =10mA

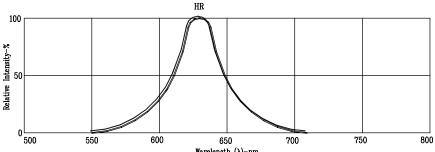
Note: Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commision Internationale De L'Eclairage) eye-response curve.

PART NO.:LTC-5653HR PAGE: 5 of 6

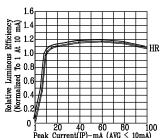
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TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

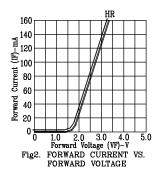


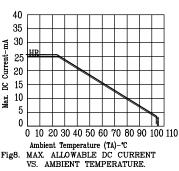
 $\label{eq:wavelength} \mbox{Wavelength } (\lambda)-\mbox{nm.} \\ \mbox{Fig1. RELATIVE INTENSITY VS. WAVELENGTH}$



0 T 1 20 40 60 80 100
Peak Current(IP)-mA (AVG \(\) 10mA)

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

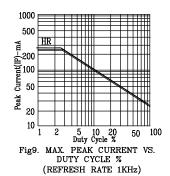




HR 3.5

HR 3.5

HR 9.2



NOTE: HR=HI.-EFF.RED

PART NO.:LTC-5653HR PAGE: 6 of 6

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1624 LTC-2621JD LTC-2623WC LTC-4627JD LTD-322G LTD-482PC LTP-1057AHR LTP-1457AKR LTP-3784G-01 LTS-313AP LTS4812SKR-P LTS-547AE LTS-6780P 446010401-3 HV-7W30-6829 DA43-11GWA LDD-A516RI-17 LDD-E305RI LDQ-N3402RI LDQN3606RI LDT-M2804RI 86004CB830 LTP-3862JD LTP-2088AKD LTD-6740P LTS-6880Y LDS-SMC3002RISUGTR LTC-2623E
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