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Revision: -

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

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FEATURES

- *0.52 -INCH (13.2-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-546AHR is a 0.52 -inch (13.2 -mm) digit height single digit seven-segment display. This device utilizes Hi-eff. Red LED chips, which are made from GaAsP on GaP substrate, and has a red face and red segments.

DEVICE

PART NO.	DESCRIPTION		
HI-EFF. RED	Common Anode		
LTS-546AHR	Rt. Hand Decimal		

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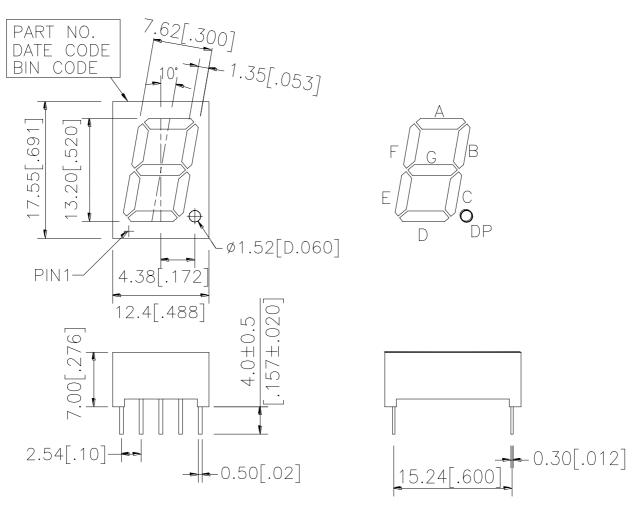
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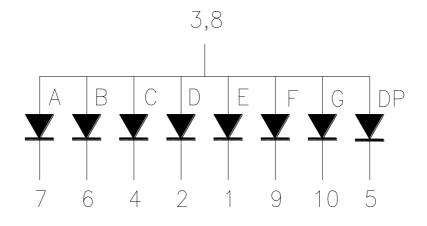
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PACKAGE DIMENSIONS



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

INTERNAL CIRCUIT DIAGRAM



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PIN CONNECTION

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

NOTE: PIN 3 & PIN 8 ARE INTERNALLY CONNECTED.

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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 (1/10 Duty Cycle, 0.1ms Pulse Width)	100	mA			
Continuous Forward Current Per Segment	25	mA			
Derating Linear From 25 ^o C Per Segment	0.33	mA/ ⁰ C			
Reverse Voltage Per Segment	5	V			
Operating Temperature Range	-35°C to +85°C				
Storage Temperature Range	-35^{0} C to $+85^{0}$ C				
Solder Temperature 1/16 inch Below Seating Plane for 3 Seconds at 260°C					

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C

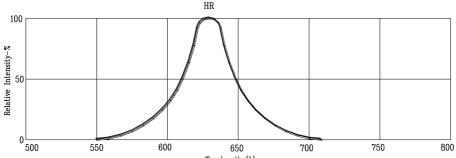
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	Iv	870	2200		μcd	I _F =10mA
Peak Emission Wavelength	λр		635		nm	I _F =20mA
Spectral Line Half-Width	Δλ		40		nm	I _F =20mA
Dominant Wavelength	λd		623		nm	I _F =20mA
Forward Voltage Per Segment	VF		2.0	2.6	V	I _F =20mA
Reverse Current Per Segment	Ir			100	μΑ	V _R =5V
Luminous Intensity Matching Ratio	Iv-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'Eclariage) eye-response curve.

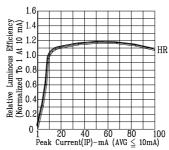
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TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

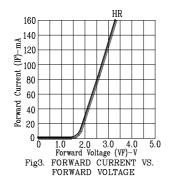
(25°C Ambient Temperature Unless Otherwise Noted)

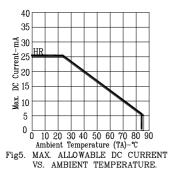


Wavelength (λ)-nm.
Fig1. RELATIVE INTENSITY VS. WAVELENGTH



0 1 20 40 60 80 100
Peak Current(IP)-ma (AVG \(\) 10mA)
RELATIVE LUMINOUS EFFICIENCY
(LUMINOUS INTENSITY PER UNIT
CURRENT) VS. PEAK CURRENT
(REFRESH RATE 1KHz)





HR ≘ 3 10 15 20 Forward Current (IF)-mA
Fig4. RELATIVE LUMINOUS INTENSITY
VS. FORWARD CURRENT

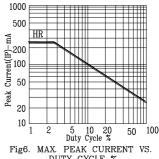


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: HR=HI.-EFF.RED

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