LITEON
OPTOELECTRONICS

LED Display

Product Data Sheet

LTS-5503AJE-H1

Spec No.: DS30-2005-051

Effective Date: 03/09/2005

Revision: -

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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

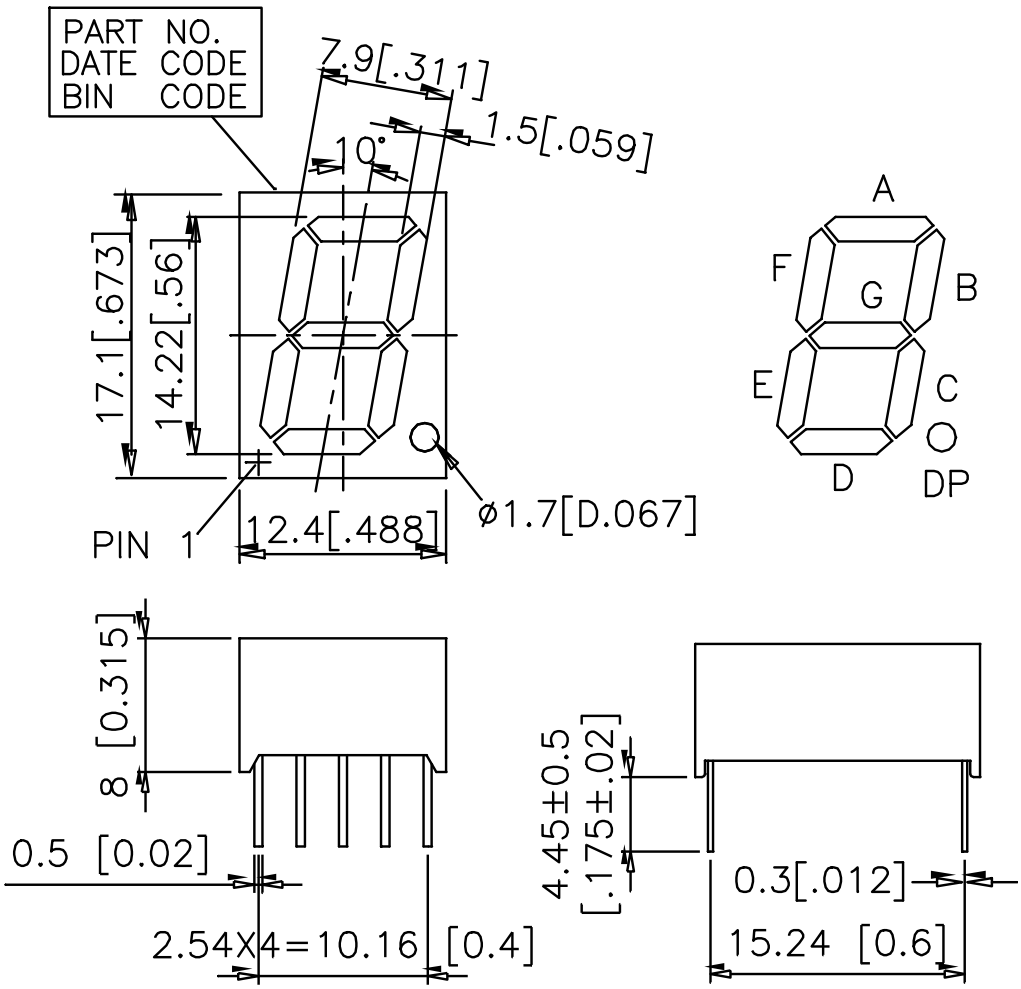
DESCRIPTION

The LTS-5503AJE-H1 is a 0.56 inch (14.22 mm) digit height single digit display. This device uses AS-AlInGaP RED LED chips (AlInGaP epi on GaAs substrate). The display has a light gray face and white segments.

DEVICE

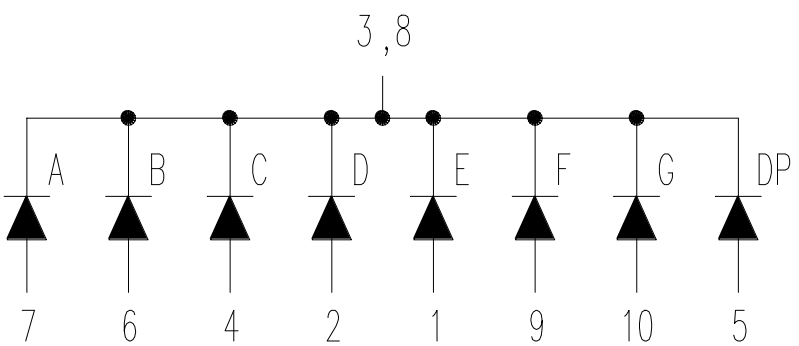
PART NO.	DESCRIPTION
AlInGaP RED	Common Cathode
LTS-5503AJE-H1	Rt. Hand Decimal

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
1	ANODE E
2	ANODE D
3	COMMON CATHODE
4	ANODE C
5	ANODE D.P
6	ANODE B
7	ANODE A
8	COMMON CATHODE
9	ANODE F
10	ANODE G

ABSOLUTE MAXIMUM RATING

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation Per Segment	70	mW
Peak Forward Current Per Segment (Frequency 1Khz, 15% duty cycle)	90	mA
Continuous Forward Current Per Segment Derating Linear From 25^0C Per Segment	25 0.33	mA mA/^{0}C
Reverse Voltage Per Segment	5	V
Operating Temperature Range	-35^{0}C to +85^{0}C	
Storage Temperature Range	-35^{0}C to +85^{0}C	
Solder Temperature 1/16 inch Below Seating Plane for 3 Seconds at 260^{0}C		

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25^{o}C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	320	1282		μcd	I_F=1mA
Peak Emission Wavelength	λp		632		nm	I_F=20mA
Spectral Line Half-Width	Δλ		20		nm	I_F=20mA
Dominant Wavelength	λd		624		nm	I_F=20mA
Forward Voltage Per Segment	V_F		2.05	2.6	V	I_F=20mA
Reverse Current Per Segment	I_R			100	μA	V_R=5V
Luminous Intensity Matching Ratio (Same Light Area)	I_V-m			2:1		I_F=1mA

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

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

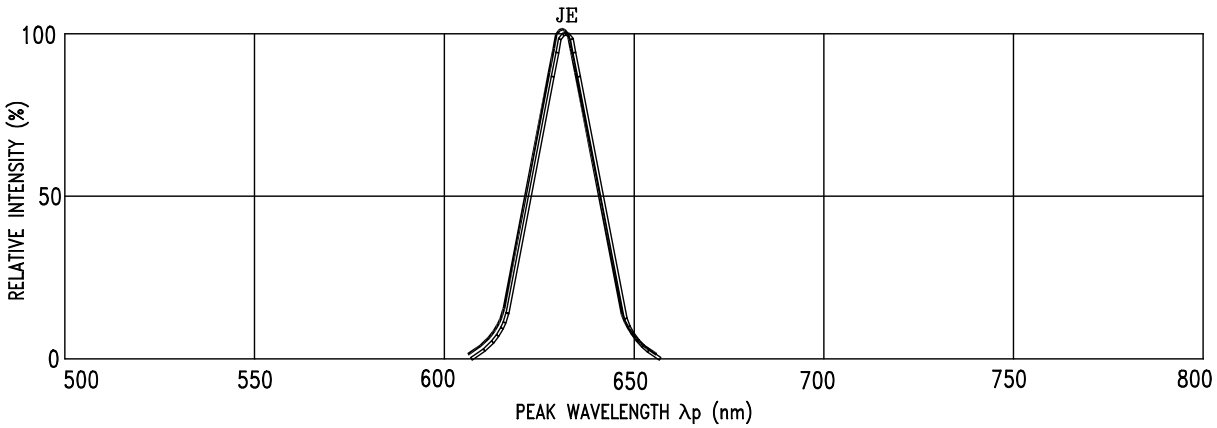


Fig1.Spectral Emission

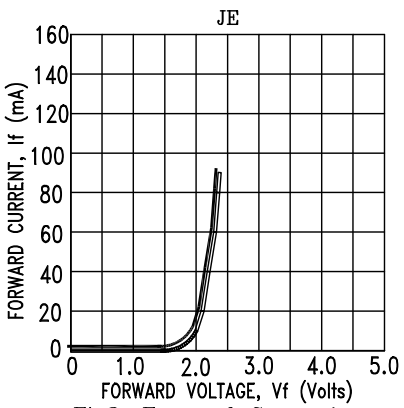


Fig2. Forward Current vs. Forward Voltage

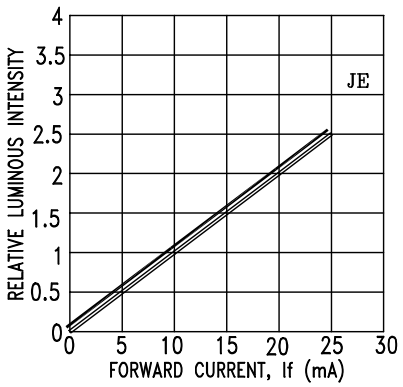


Fig3. Relative Luminous Intensity vs. DC Forward Current

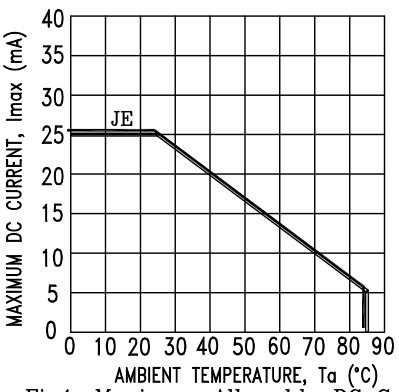


Fig4. Maximun Allowable DC Current vs. Ambient Temperature

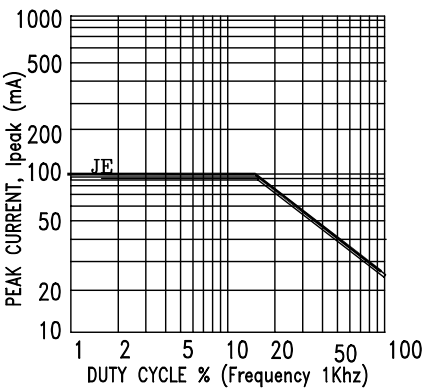


Fig5. Maximum Peak Current vs. Duty Cycle %

NOTE : JE=AlInGaP RED