LITEON®
OPTOELECTRONICS

LED Display

Product Data Sheet

LTD-5021AJD-J

Spec No.: DS30-2003-155

Effective Date: 07/24/2003

Revision: -

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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FEATURES

* 0.56 inch (14.22 mm) DIGIT HEIGHT
* EXCELLENT SEGMENT UNIFORMITY
* LOW POWER REQUIREMENT
* HIGH BRIGHTNESS AND HIGH CONTRAST
* WIDE VIEWING ANGLE
* SOLID STATE RELIABILITY
* BINNED FOR LUMINOUS INTENSITY

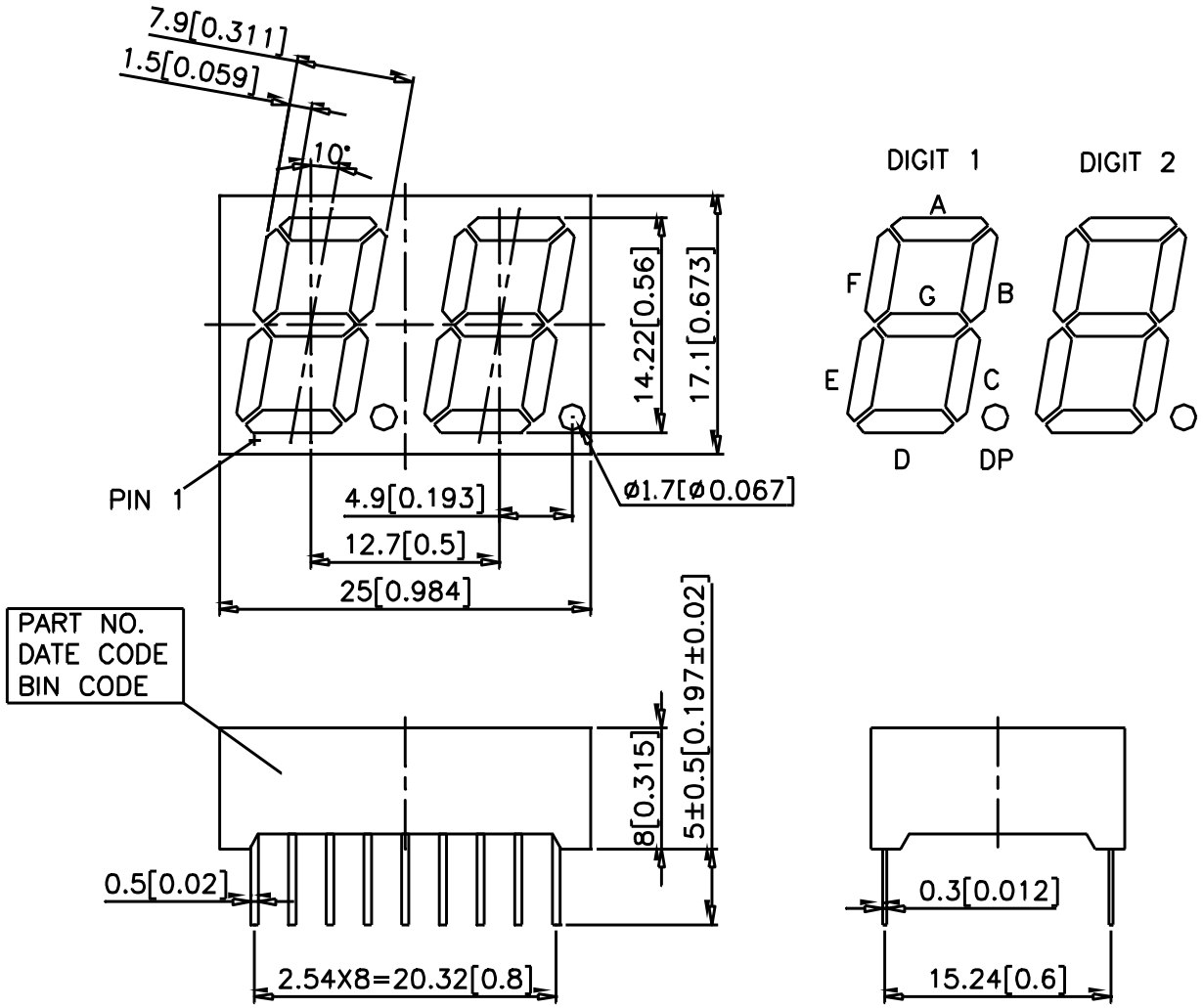
DESCRIPTION

The LTD-5021AJD-J is a 0.56 inch (14.22 mm) digit height dual-digit display. This device uses AlInGaP HYPER RED chips (AlInGaP epi on GaAs substrate). The display has light gray face and white segments.

DEVICE

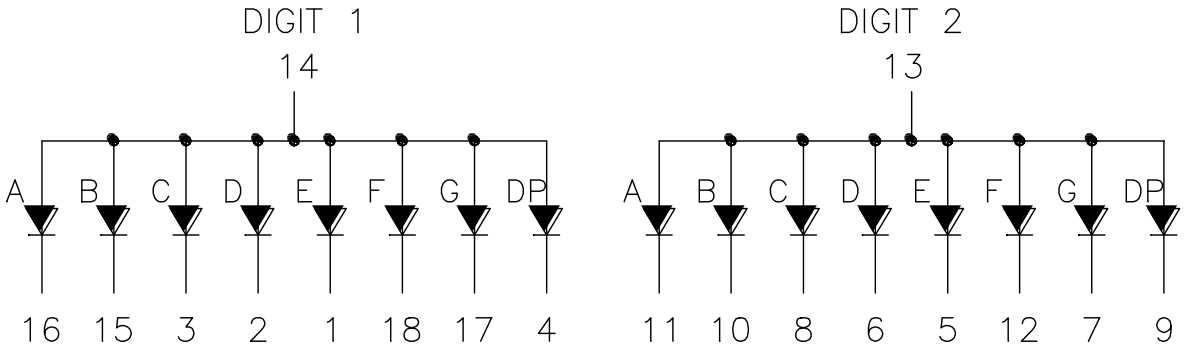
PART NO.	DESCRIPTION
AlInGaP HYPER RED	Common Anode Rt. Hand Decimal
LTD-5021AJD-J	

PACKAGE DIMENSIONS



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

INTERNAL CIRCUIT DIAGRAM



PIN CONNECTION

No	CONNECTION
1	Cathode E (Digit 1)
2	Cathode D (Digit 1)
3	Cathode C (Digit 1)
4	Cathode DP (Digit 1)
5	Cathode E (Digit 2)
6	Cathode D (Digit 2)
7	Cathode G (Digit 2)
8	Cathode C (Digit 2)
9	Cathode DP (Digit 2)
10	Cathode B (Digit 2)
11	Cathode A (Digit 2)
12	Cathode F (Digit 2)
13	Common Anode (Digit 2)
14	Common Anode (Digit 1)
15	Cathode B (Digit 1)
16	Cathode A (Digit 1)
17	Cathode G (Digit 1)
18	Cathode F (Digit 1)

ABSOLUTE MAXIMUM RATING

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation Per Segment	70	mW
Peak Forward Current Per Segment (Frequency 1Khz, 10% 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	-35^0C to +85^0C	
Storage Temperature Range	-35^0C to +85^0C	
Solder Temperature 1/16 inch Below Seating Plane for 3 Seconds at 260^0C		

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I_V	320	700		μcd	I_F=1mA
Peak Emission Wavelength	λp		650		nm	I_F=20mA
Spectral Line Half-Width	$\Delta\lambda$		20		nm	I_F=20mA
Dominant Wavelength	λd		639		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=1mA

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

TYPIGSAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

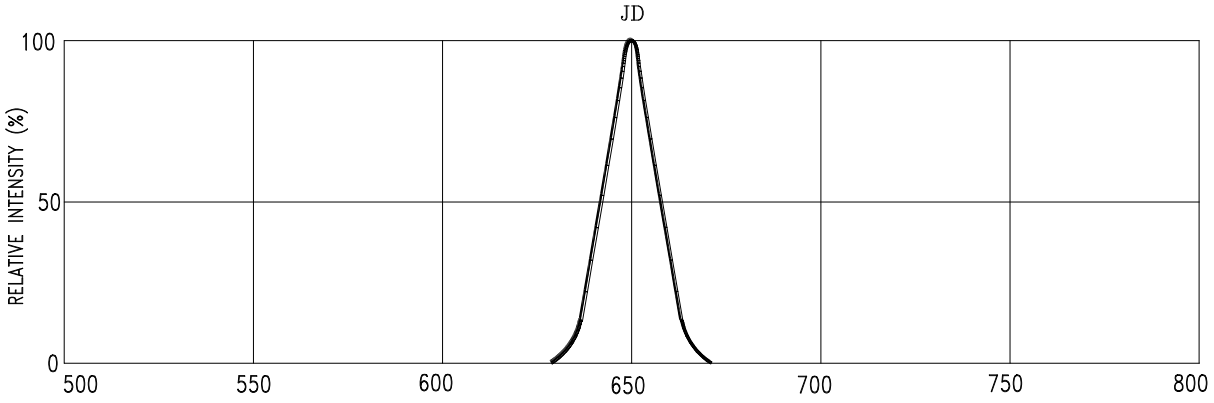


Fig1.Spectral Emission

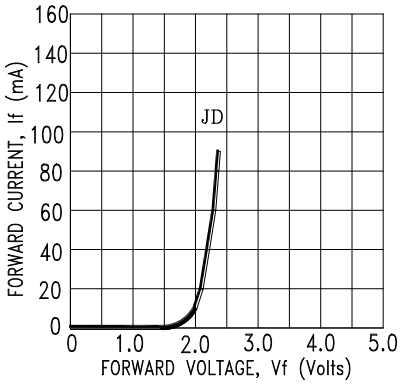


Fig2. Forward Current vs. Forward Voltage

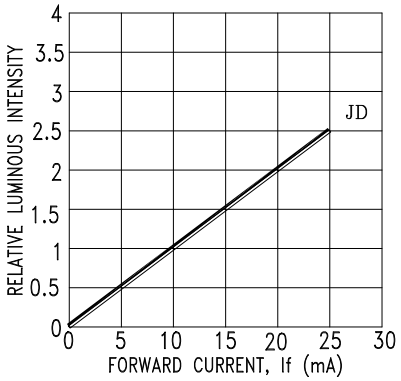


Fig3. Relative Luminous Intensity vs. DC Forward Current

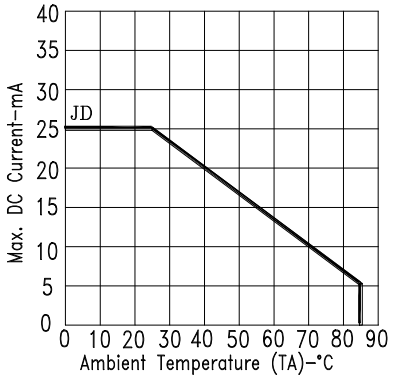


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

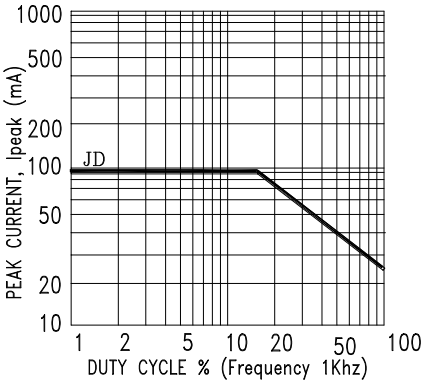


Fig5. Maximum Peak Current vs. Duty Cycle %

NOTE : JD=AlInGaP HYPER RED