AVA TECHNOLOGY CO.

Technical Specification

Model: ND39R1
Name: .39″Seven-Segment Display
REV: A
Date: 2006-1-6

AVA TECHNOLOGY CO.
2640 S. Myrtle Ave. Suite 6, Monrovia, CA 91016
Tel: 626-574-7726 Fax: 626-574-7732

DESCRIPTION

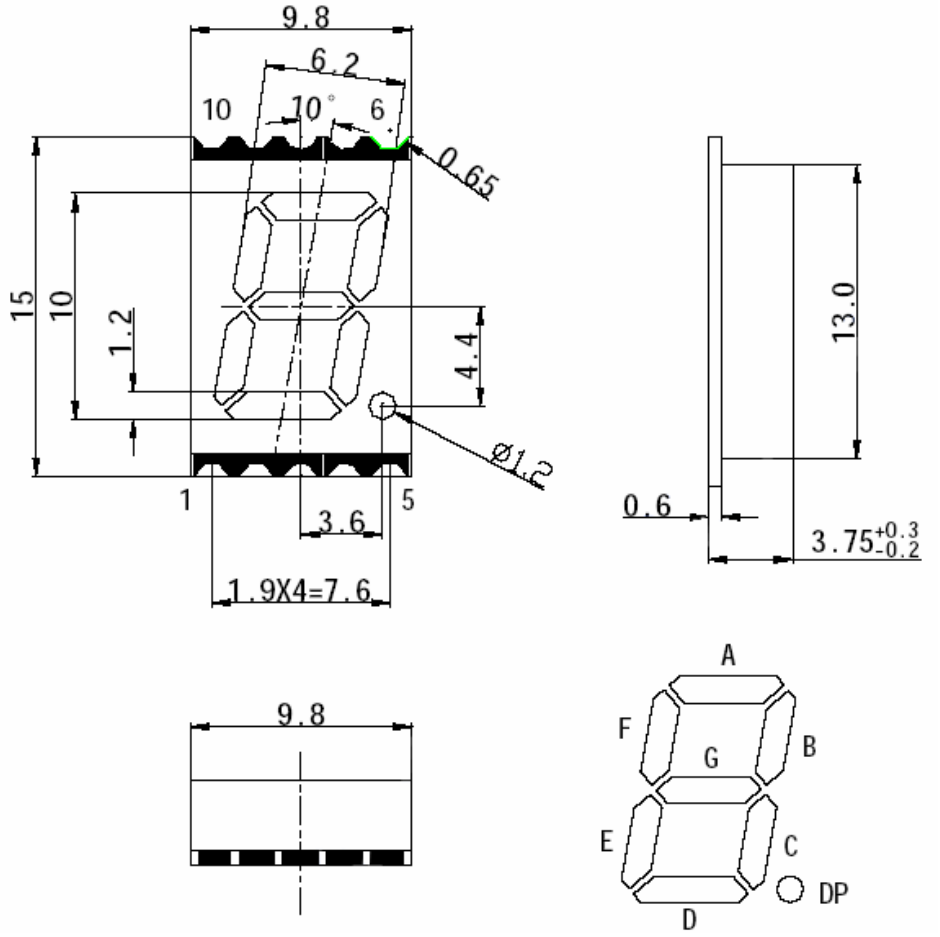
THE SUPER BRIGHT RED SOURCE COLOR DEVICES ARE MADE WITH GALLIUM ALUMINUM ARSENIDE RED LIGHT EMITTING DIODE



FEATURES

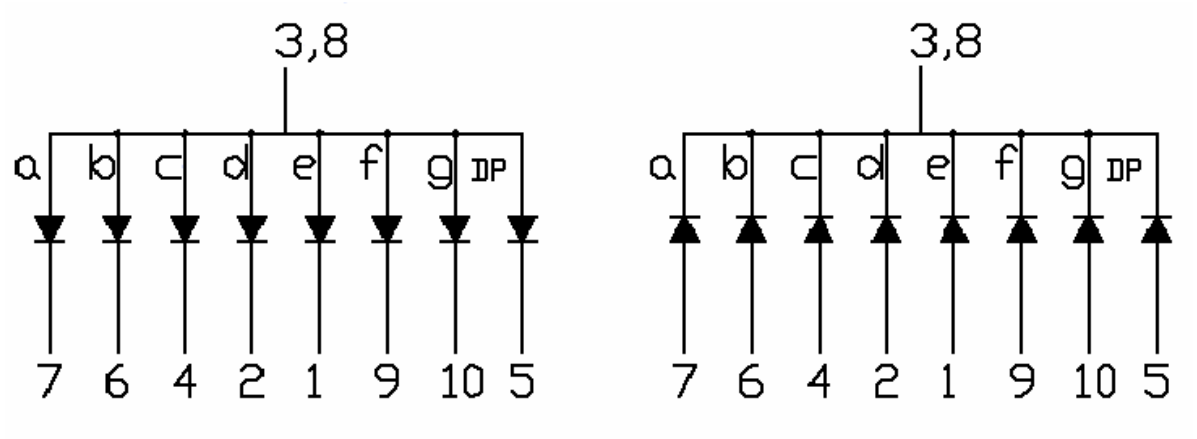
* 0.39 inch (10.0 mm) DIGIT HEIGHT
* CONTINUOUS UNIFORM SEGMENTS
* LOW POWER REQUIREMENT
* EXCELLENT CHARACTERS APPEARANCE
* HIGH BRIGHTNESS & HIGH CONTRAST
* WIDE VIEWING ANGLE
* SOLID STATE RELIABILITY
* CATEGORIZED FOR LUMINOUS INTENSITY
* THE CHARACTERISTIC OF ENCAPXULATION METHOD IS USE THE CHIP ON BORAD OR SMT

PACKAGE DIMENSIONS



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

INTERNAL CIRCUIT DIAGRAM



Selection Gulde

Part No.	Dice	Lens Type	Iv (mcd) @10mA		Description
			Min.	Typ.	
ND39R1ASR-S	RED (GaAlAs)	WHITE DIFFUSED	16.35	17.46	Common Anode
ND39R1CSR-S	RED (GaAlAs)	WHITE DIFFUSED	16.35	17.46	Common Cathode

ABSOLUTE MAXIMUM RATING AT Ta = 25oC

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation Per Segment	100	mW
DC Froward Current	30	mA
Peak Froward Current	155	mA
Reverse Voltage Per Segment	5	V
Operating Temperature Range	-40^0C to $+85^0$C	

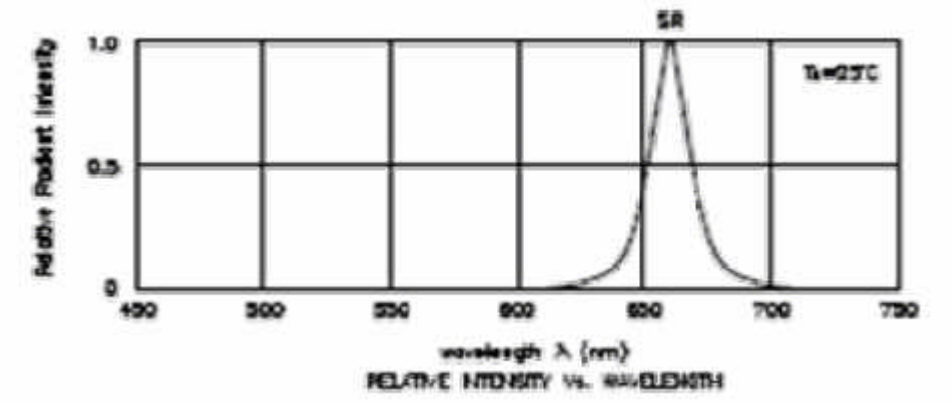
ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta = 25°C

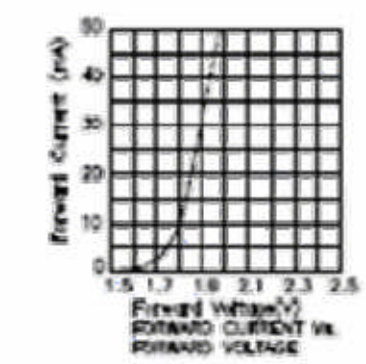
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Peak Emission Wavelength	λp		645		nm	I_F=20mA
Spectral Line Half-Width	Δλ		20		nm	I_F=20mA
Dominant Wavelength	λd		643		nm	I_F=20mA
Forward Voltage Per Segment	V_F		1.85	2.5	V	I_F=20mA
Reverse Current Per Segment	I_R			10	μA	V_R=5V

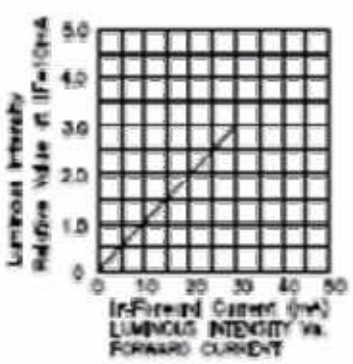
Note: Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commision Internationale De L'Eclairage) eye-response curve.

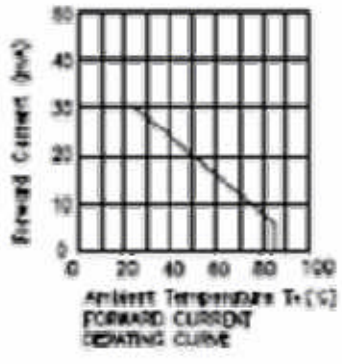
TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

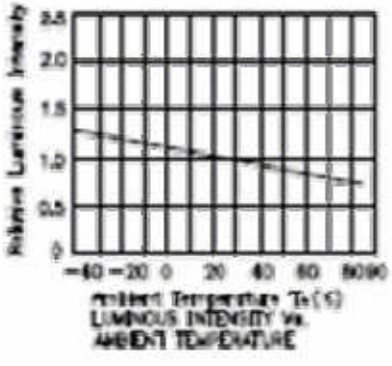
(25oC Ambient Temperature Unless Otherwise Noted)











THE CHIP ON BORAD OR SMT Reflow Soldering Instructions

Number of reflow process shall be 2 times or less and cooling

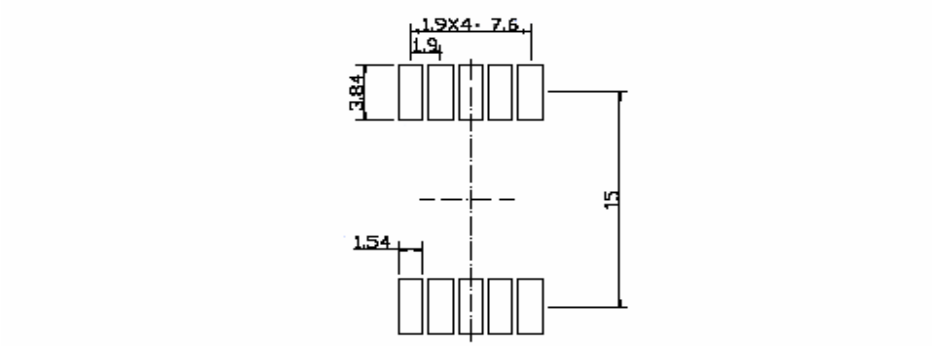
Process to normal temperature is required berween first and

Second soldering process.



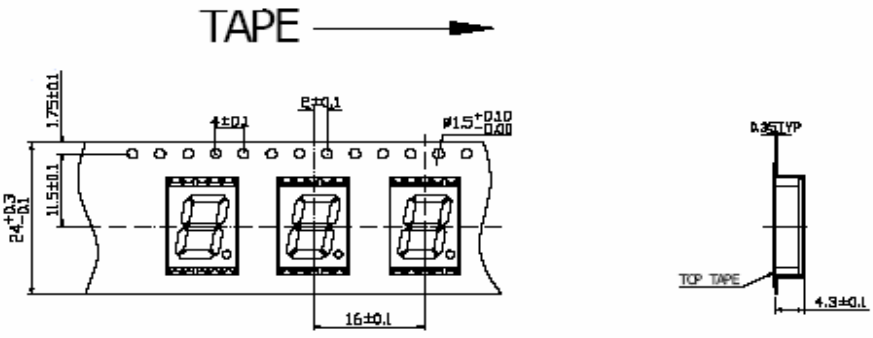
Recommended Soldering Pattern

(Units:mm)



Tape Specifications

(Units:mm)



Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or wavelength), the typical accuracy of the sorting process is as follow:

1. Wavelength:+/-1nm

2. Luminous Intensity:+/-15%

3. Forward Voltage:+/-0.1V

Note: Accuracy may depend on the sorting parameters.