

## Seven Segment Display Data Sheet

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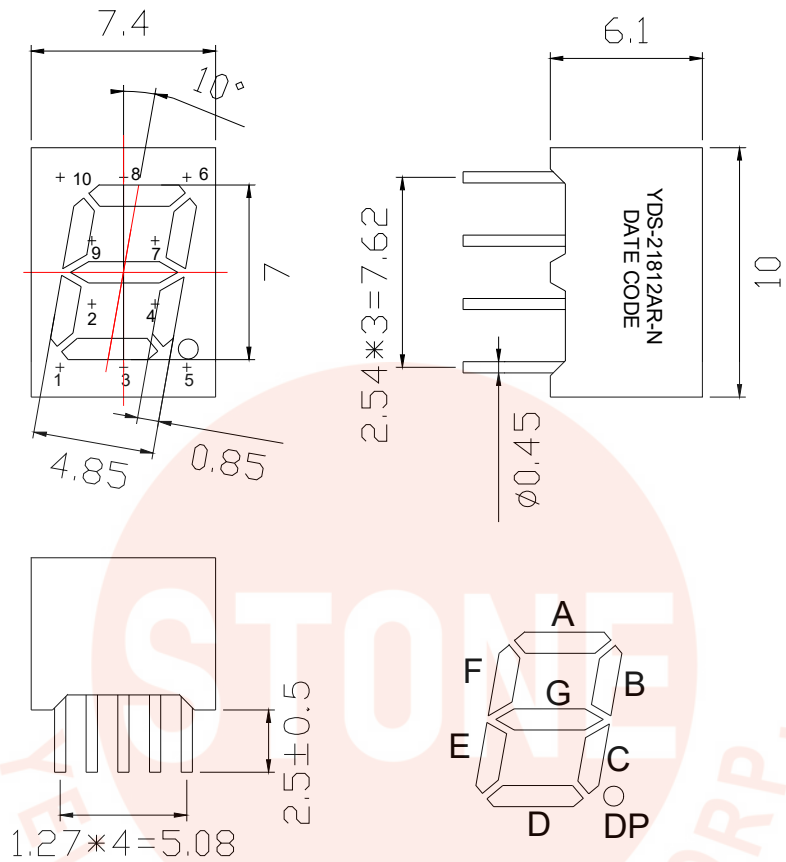
### Description

This YDS-21812AR-N is a 0.28 inch (7 mm) digit height single digit display . This device utilizes AlInGaP Red LED chips (AlInGaP epi on GaAs substrate), and has a black face and white segments.

### Features

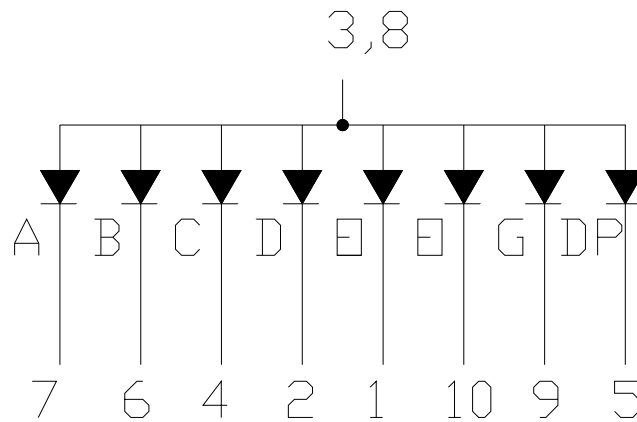
- 0.28 inch (7 mm) digit height
- Continuous uniform segments
- Low power requirement
- Excellent characters appearance
- High brightness & high contrast
- Wide viewing angle
- Solid state reliability
- Categorized for luminous intensity

## Package Dimensions



1. All dimensions are in millimeters. Tolerances are 0.25 mm (0.01") unless otherwise noted.

## Internal Circuit Diagrams



### Absolute Maximum Rating (Ta = 25°C)

Parameter	Max.	Unit
Power Dissipation Per Segment	70	mW
Peak Forward Current Per Segment ( Frequency 1Khz, 10% duty cycle)	90	mA
Continuous Forward Current Per Segment	25	mA
Reverse Voltage Per Segment	5	V
Operating Temperature Range	-35°C to +85°C	
Storage Temperature Range	-35°C to +85°C	

Soldering Conditions: 1/16 inch below seating plane for 3 seconds at 260°C

This product should be operated in forward bias. If a reverse voltage is continuously applied to the product, such operation can cause migration resulting in LED damage.

### Electrical / Optical Characteristics (Ta = 25°C)

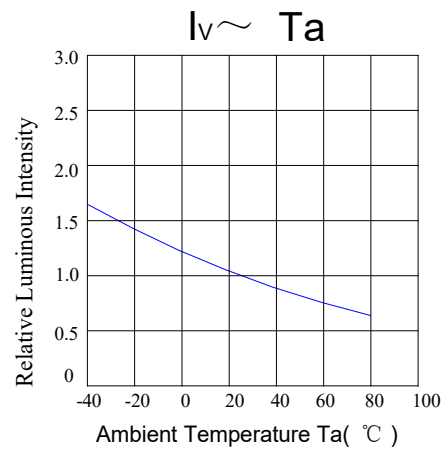
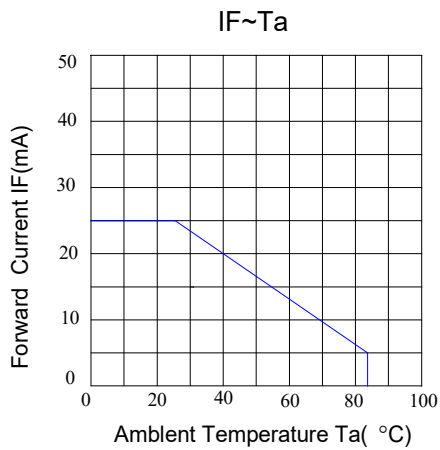
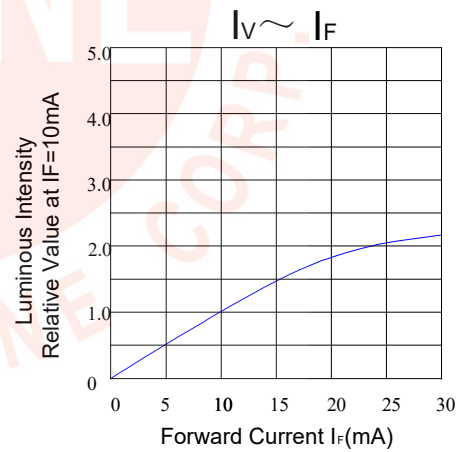
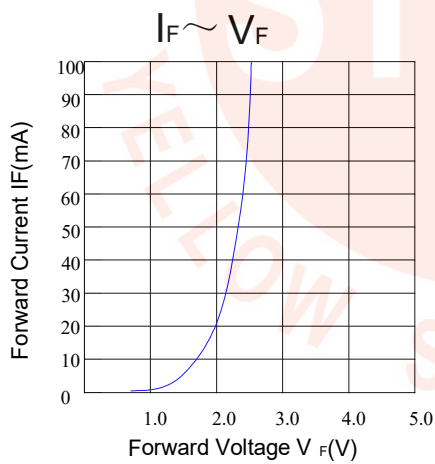
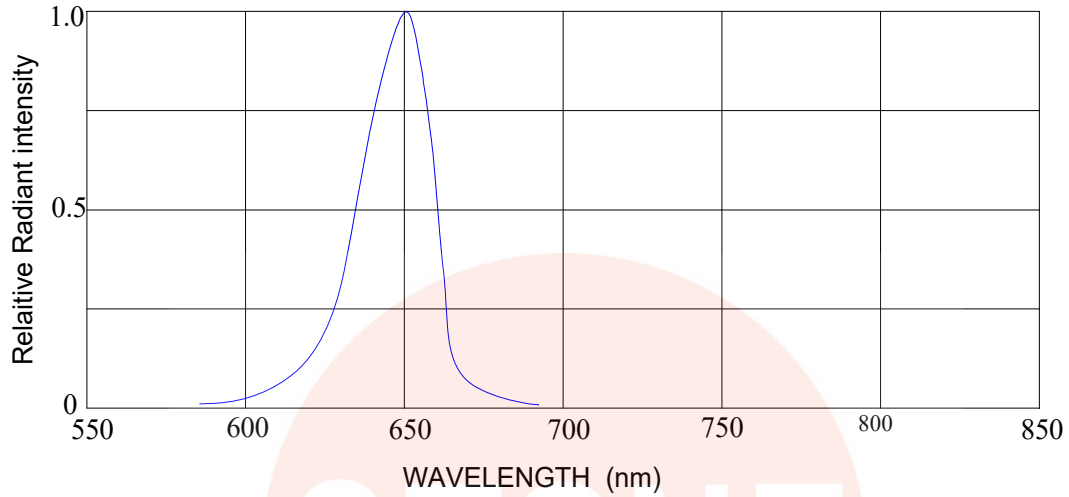
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Average Luminous Intensity	I <sub>v</sub>	5.4	8.6		mcd	IF=10mA
Peak Emission Wavelength	λ <sub>p</sub>		650		nm	IF=20mA
Spectral Line Half-Width	Δλ		20		nm	IF=20mA
Dominant Wavelength	λ <sub>d</sub>		639		nm	IF=20mA
Forward Voltage Per Segment	V <sub>F</sub>		2.1	2.6	V	IF=20mA
Reverse Current Per Segment	I <sub>R</sub>			10	μA	VR=5V
Luminous Intensity Matching Ratio	I <sub>v</sub> -m			2:1		IF=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.

## Typical Electrical / Optical Characteristic Curves

(25°C Ambient Temperature Unless Otherwise Noted)

RELATIVE INTENSITY VS WAVELENGTH





### Package Flow

