

**Customer Name:**

**Date:**

2018-01-19

**Part No:**

WCN2S-1028WW-A1

**Product Group  
Description:**

LED Display

**Customer Part No:**

**Approval Date:**

**Customer  
Confirmation**

**Approved by**

**Checked by**

Athena  
2018-01-19

**Prepared By**

Fei  
2018-01-19

**Country of Origin:** China

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**REVISION RECORD**

MARKER	Matter for revision	SHEET	DTAE	MAKER	APPOVED SIGN	
	Reason for revision					
A0	P# WCN2S-1028WW-A1 ----- New Version issued	Whole Spec	2018-01-19	Fei	Athena	

**1. Type No./Manufacture's Name**

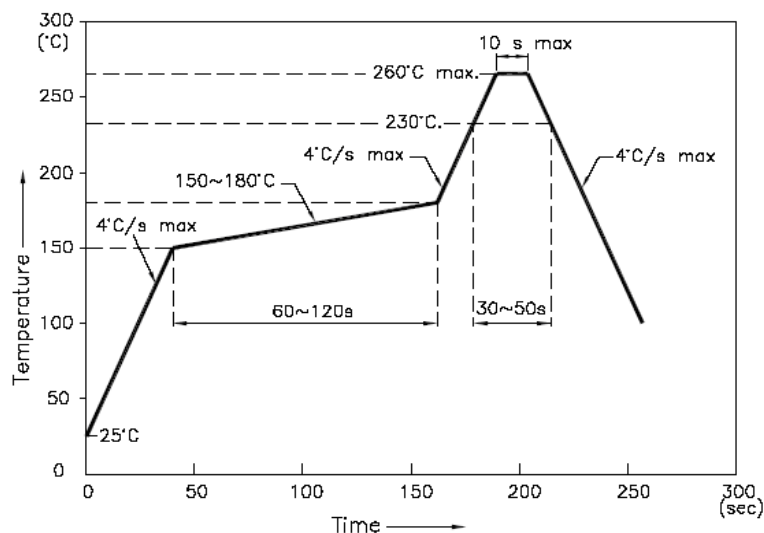
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**2. Features:**

- High Reliability
- Low Power Requirement
- Easy Assembly

**3. Faction: Display Digit Characteristic****4. Soldering Conditions: Soldering Temp.  $260 \pm 5$  °C, Soldering Time. 3~5 sec.**

Soldering Power <30 W.

**5. Re-flow Temp/Time****NOTES:**

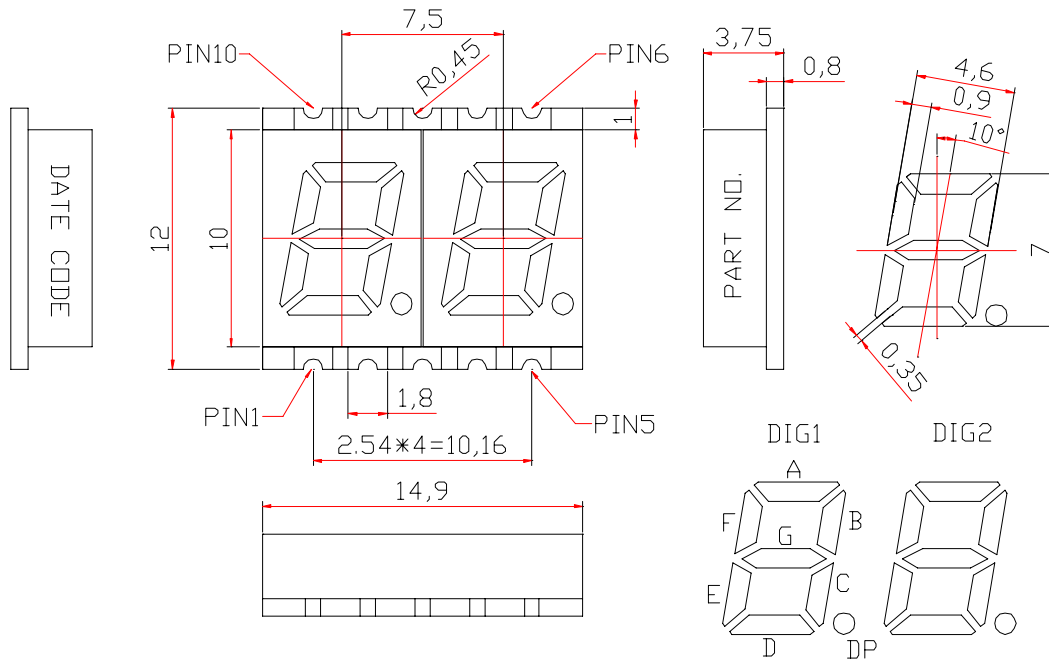
5.1. We recommend the re-flow temperature  $245^{\circ}\text{C}(\pm 5^{\circ}\text{C})$ . the maximum soldering temperature should be limited to  $260^{\circ}\text{C}$ .

5.2. Don't cause stress to the epoxy resin while it is exposed to high temperature. Number of re-flow process shall be 2 times or less.

**6. Description:**

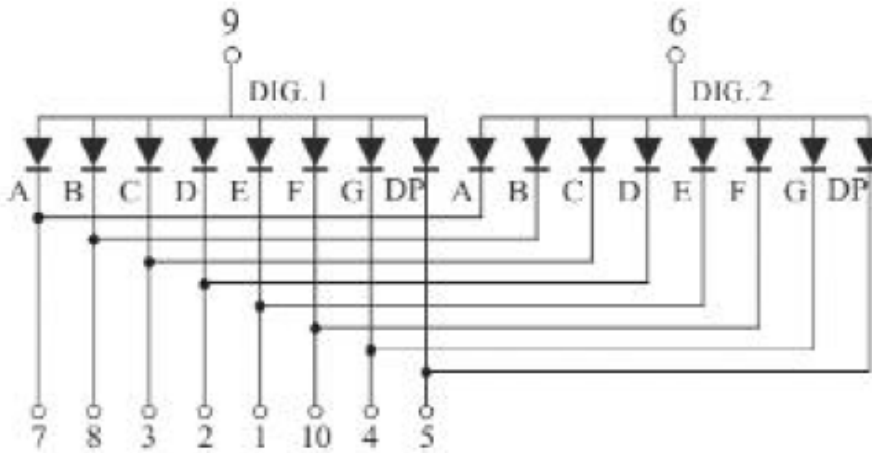
- Two Digit LED Display
- Digit Height: 7.0mm(0.28" )
- Gray Face and Milky Segment
- Color: White

### Outer Dimension:



Notes: Unless otherwise stated, the tolerance is  $\pm 0.25\text{mm}$ .

### Circuit Diagram:



### Pin Connection:

PIN NO.	CONNECTION	PIN NO.	CONNECTION
1	Cathode E	6	Common Anode
2	Cathode D	7	Cathode A
3	Cathode C	8	Cathode B
4	Cathode G	9	Common Anode
5	Cathode DP	10	Cathode F

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## ■ ABSOLUTE MAXIMUM RATINGS AT TA=25°C

Parameter	Symbol	Condition	Color	Rating	Units
Power Dissipation Per Segment	P <sub>a</sub>	—	White	90	mW
Forward Current Per Segment	I <sub>F</sub>	—	White	25	mA
Peak Forward Current Per Segment	I <sub>FP</sub>	1/10 Duty 1KHz	White	100	mA
Reverse Voltage Per Segment	V <sub>R</sub>	—	White	5	V
Operating Temperature Range	Topr	—	—	-40~+105	°C
Storage Temperature Range	Tstg	—	—	-40~+105	°C

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

Item	Symbol	Test conditions	Location	Rating			Units
				Min.	Typ.	Max.	
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =20mA	Per Chip	2.6	3.2	3.6	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V	Per Chip	—	—	100	μA
Luminous Intensity	I <sub>V</sub>	I <sub>F</sub> =10mA	Per Chip	42	80	—	ucd
CIE Coordinate	X	I <sub>F</sub> =20mA	Per Chip	—	0.30	—	nm
	Y			—	0.280	—	
Luminous Intensity Matching Ratio (Segment To Segment)	I <sub>v-m</sub>	I <sub>F</sub> =10mA				1.2:1	

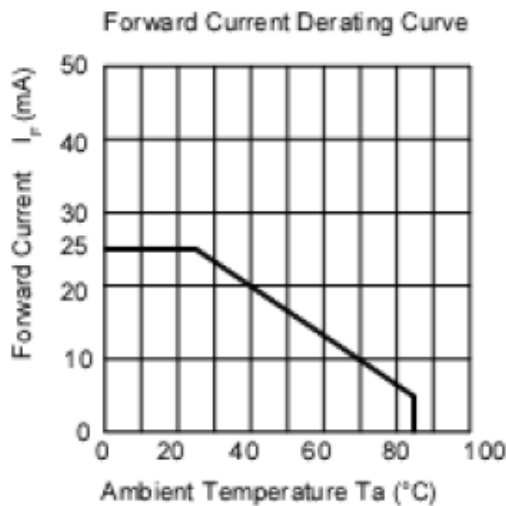
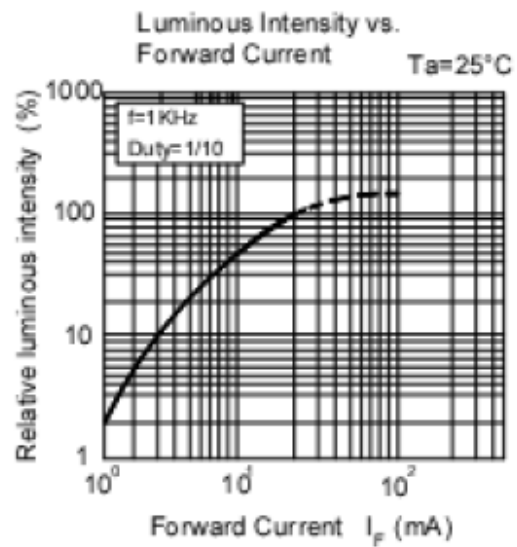
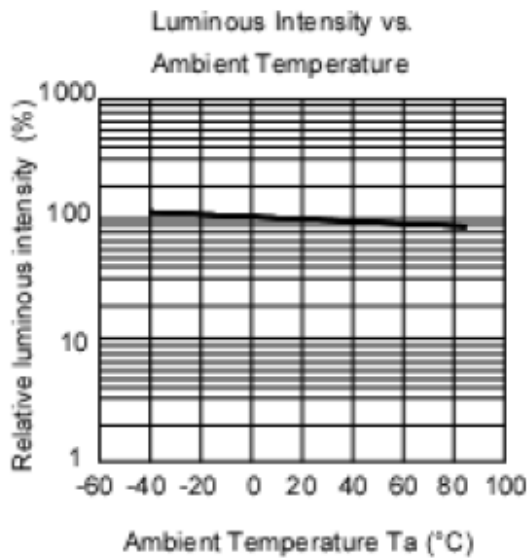
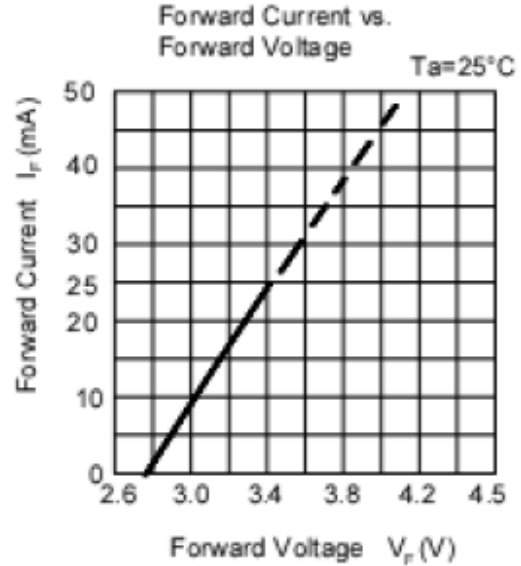
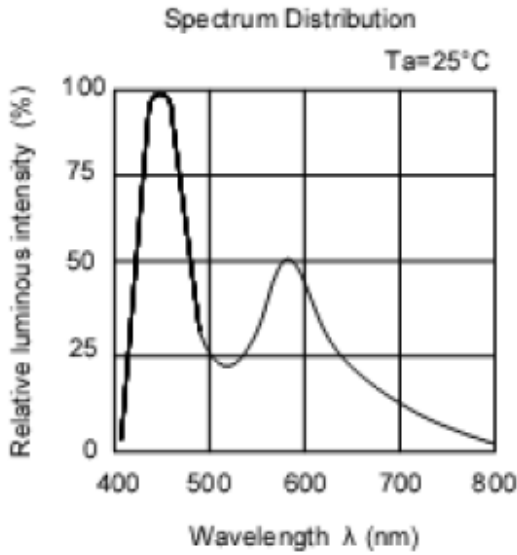
## ■ Luminous Intensity Sorting: (Luminous intensity tolerance :+/-10%)

Rank Color	N	P	Q	R
White ( mcd )	42-63	63-94	94-140	140-210

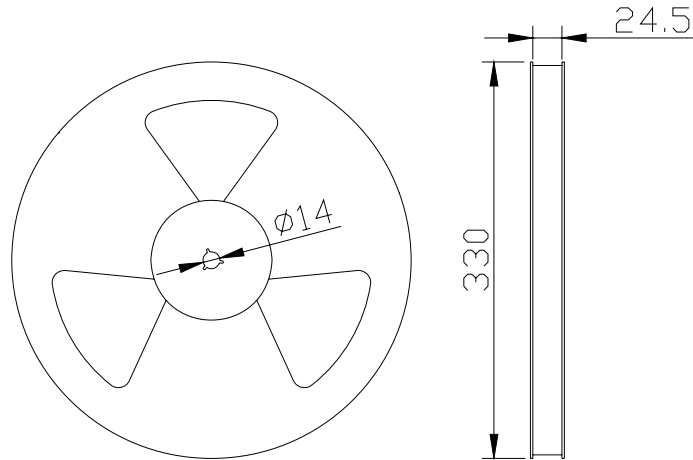
## ■ Soldering Conditions: Soldering Temp. ≤+260°C, Soldering Time. ≤3sec.

(at 2mm Distance from The Case of Reflector Edge)

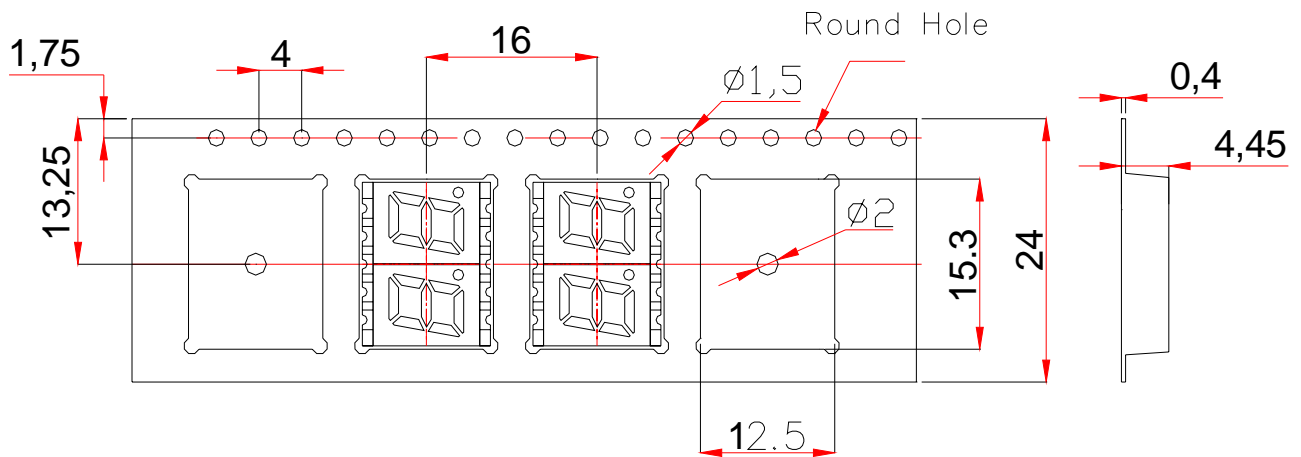
■ **Typical Optical-Electronic Characteristic Curves**



■ Packing Reel Dimensions(mm):

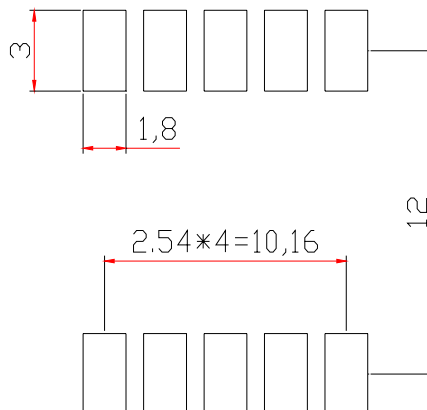


■ Dimensions of Tape (Unit: mm)



■ One Reel contained 900 PCS products:

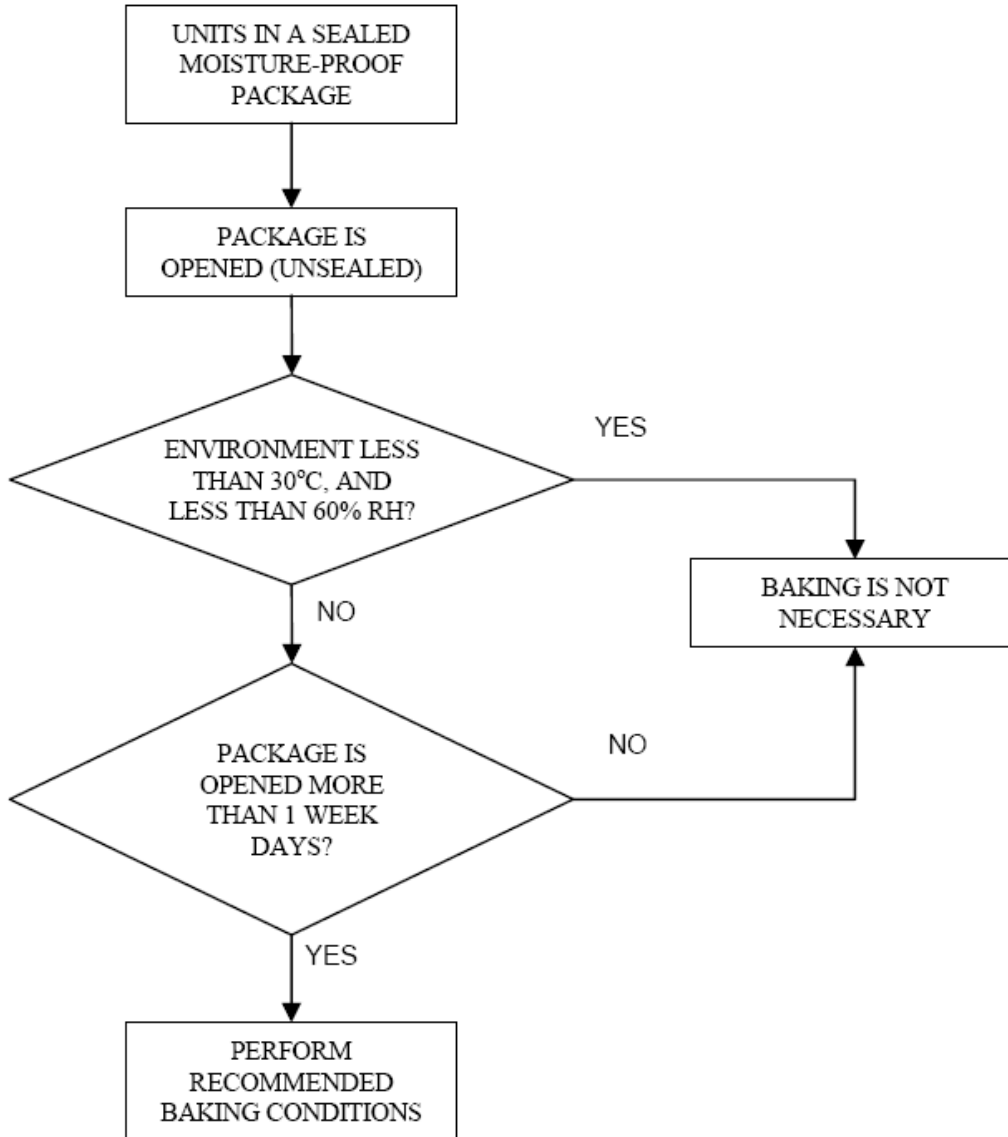
■ Recommended Soldering Pattern:





### Moisture Proof Packaging :

All N/D SMD displays are shipped in moisture proof package. The displays should be stored at 30°C or less and 60% RH or less. Once the package opened, moisture absorption begins.



### Baking Conditions:

If the parts not stored in dry conditions, they must be baked before re-flow to prevent damage to the parts.

Package	Temperature	Time
In Reel	60 °C	≥ 48hours
In Bulk	100 °C	≥ 4hours
	125 °C	≥ 2hours

■ Baking should only be done once.