

**World Components Network Service Ltd****Customer Name:****Date:**

2016-2-22

**Part No:**

WCN3S-1040HY-A1

**Product Group  
Description:**

LED Display

**Customer Part No:****Approval Date:****Customer  
Confirmation****Approved by****Checked by**Athena  
2016-2-22**Prepared By**Fei  
2016-2-22

Country of Origin: China

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# World Components Network Service Ltd

## REVISION RECORD

MARKER	Matter for revision	SHEET	DTAE	MAKER	APPOVED SIGN	
	Reason for revision					
A0	P# WCN3S-1040HY-A1	Whole Spec	2016-2- 22	Fei	Athena	
	New Version issued					

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

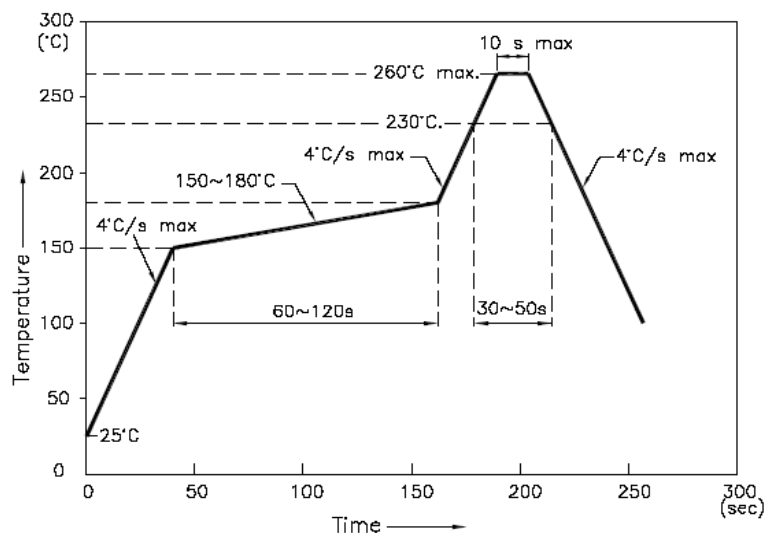
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**2. Features:**

- **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:**

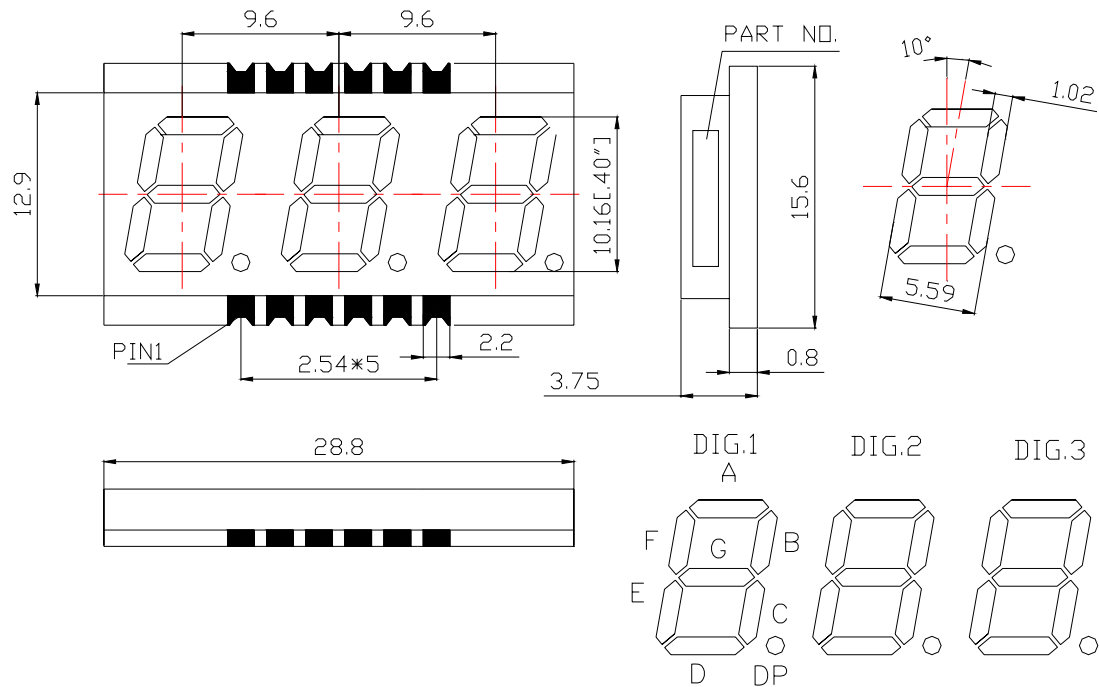
**5.1. We recommend the re-flow temperature  $245^{\circ}\text{C} (\pm 5^{\circ}\text{C})$ . the maximum soldering temperature should be limited to  $260^{\circ}\text{C}$ .**

**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:**

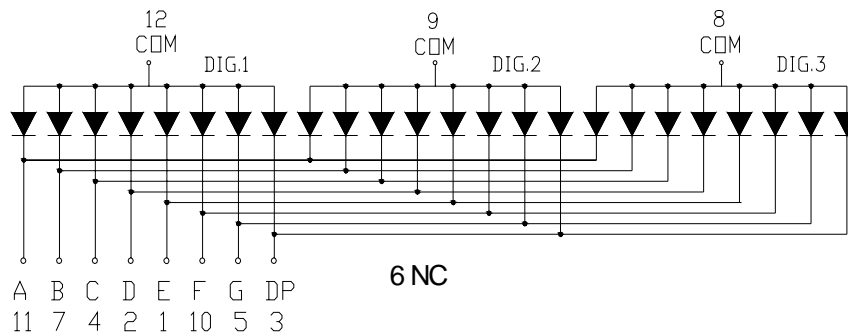
- **Three Digit LED Display**
- **Digit Height: 10.16mm (0.40" )**
- **Gray Face and Milky Segment**
- **Color: Yellow**

### 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	7	Cathode B
2	Cathode D	8	Common Anode Dig.3
3	Cathode DP	9	Common Anode Dig.2
4	Cathode C	10	Cathode F
5	Cathode DP	11	Cathode A
6	NC	12	Common Anode Dig.1

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

Parameter	Symbol	Condition	Color	Rating	Units
Power Dissipation Per Segment	$P_d$	—	Yellow	65	mW
Forward Current Per Segment	$I_F$	—	Yellow	25	mA
Peak Forward Current Per Segment	$I_{FP}$	1/10 Duty 1KHz	Yellow	100	mA
Reverse Voltage Per Segment	$V_R$	—	Yellow	5	V
Operating Temperature Range	$T_{opr}$	—	—	-40~+105	°C
Storage Temperature Range	$T_{stg}$	—	—	-40~+105	°C

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

Item	Symbol	Test conditions	Location	Rating			Units
				Min.	Typ.	Max.	
Forward Voltage	$V_F$	$I_F=20mA$	Per Chip	1.80	2.00	2.60	V
Reverse Current	$I_R$	$V_R=5V$	Per Chip	—	—	100	$\mu A$
Luminous Intensity	$I_V$	$I_F=10mA$	Per Chip	7201	11500	18000	ucd
Wave Length	$\lambda_P$	$I_F=20mA$	Per Chip	—	595	—	nm
	$\lambda_D$			586	589	592	
Spectral Line Half Width	$\Delta \lambda$	$I_F=20mA$	Per Chip	—	—	20	nm
Luminous Intensity Matching Ratio (Segment To Segment)	$I_{v-m}$	$I_F=10mA$				1.2:1	

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

Rank	Symbol	Condition	Min	Max	Unit
O	O	$I_F=10mA$	7201	8500	ucd
P	P	$I_F=10mA$	8501	10500	ucd
Q	Q	$I_F=10mA$	10501	12800	ucd
R	R	$I_F=10mA$	12801	15250	ucd
S	S	$I_F=10mA$	15250	18000	ucd

**Typical Optical-Electronic Characteristic Curves**

光电特性曲线

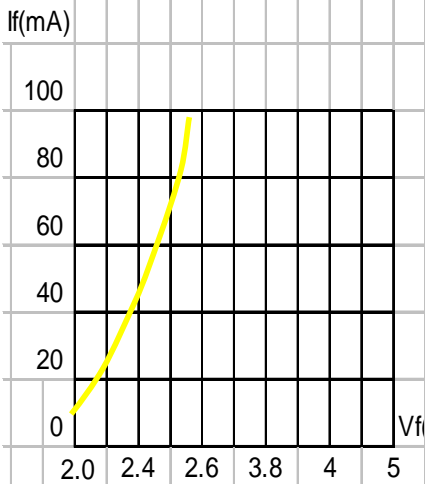


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

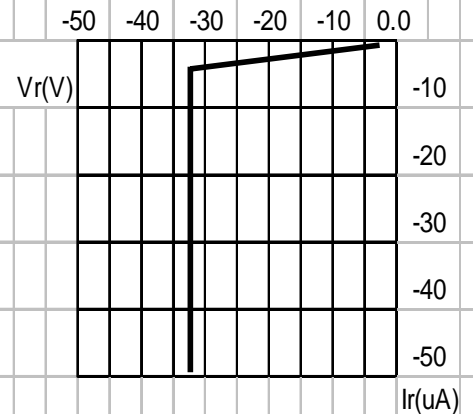
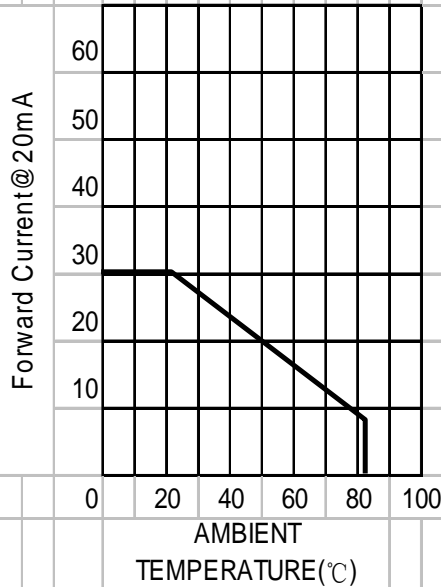
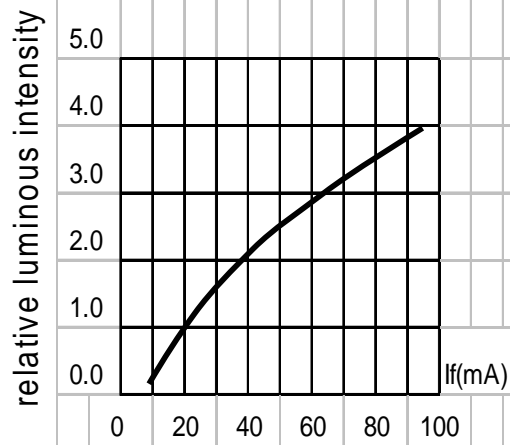
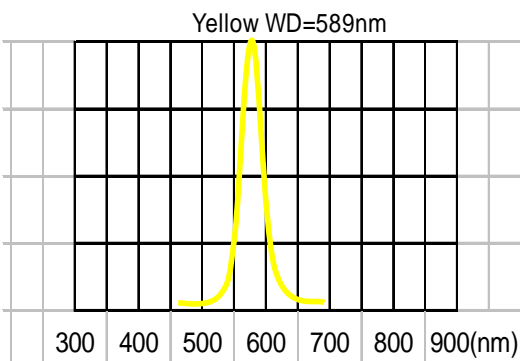
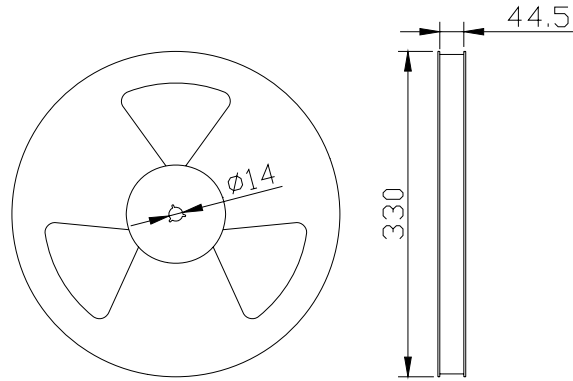


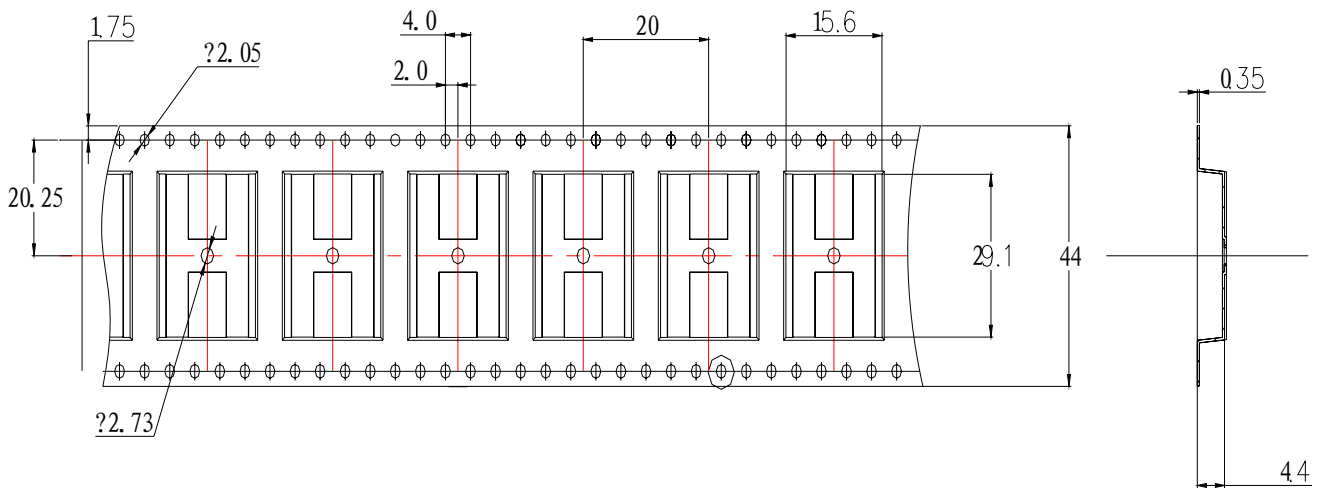
Fig.2 REVERSE CURRENT VS. REVERSE VOLTAGE.



### ■ Packing Reel Dimensions(mm):

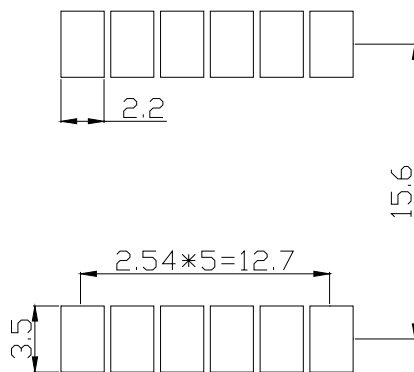


### ■ Dimensions of Tape (Unit: mm)



### ■ One Reel contained 780 PCS products:

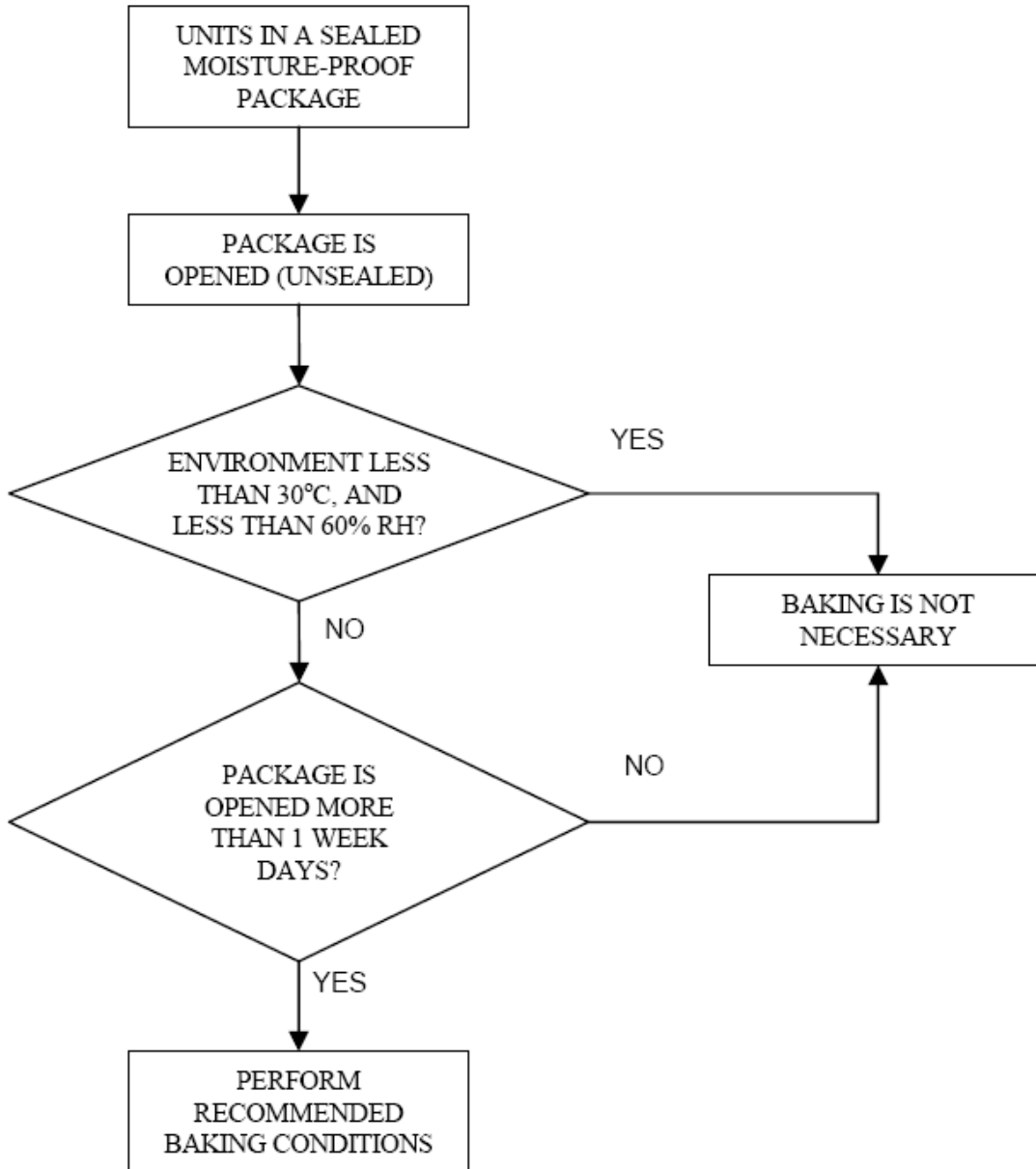
### ■ Recommended Soldering Pattern:





■ **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.**