

World Components Network Service Ltd

Customer Name:**Date:**

2017-2-4

Part No:

WCN1SX-1040B7-A1

**Product Group
Description:**

LED Display

Customer Part No:**Approval Date:****Customer
Confirmation****Approved by****Checked by**Athena
2017-2-4**Prepared By**Fei
2017-2-4

Country of Origin: China

World Components Network Service Ltd

5th Floor,Block A-2,Xuxingda Ind Zone
Shiyan Town,Bao An District , Shenzhen
Tel : (86)755-29000022
Fax : (86)755-29000023

[www . wcnopto.net](http://www.wcnopto.net)

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REVISION RECORD

MARKER	Matter for revision	SHEET	DTAE	MAKER	APPOVED SIGN	
	Reason for revision					
A0	P# WCN1SX-1040B7-A1	Whole Spec	2017-2-4	Fei	Athena	
	New Version issued					

1. Type No./Manufacture's Name

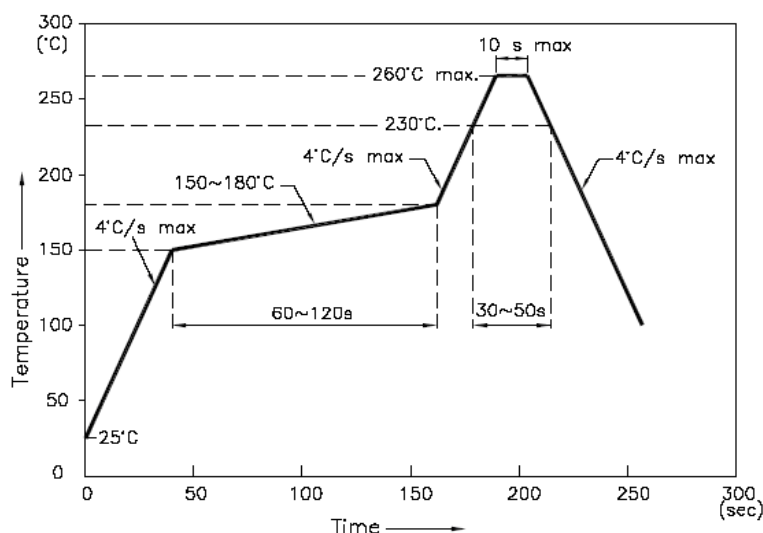
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2. Features:

- High Reliability
- Low Power Requirement
- Easy Assembly

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

Soldering Power <30 W.

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

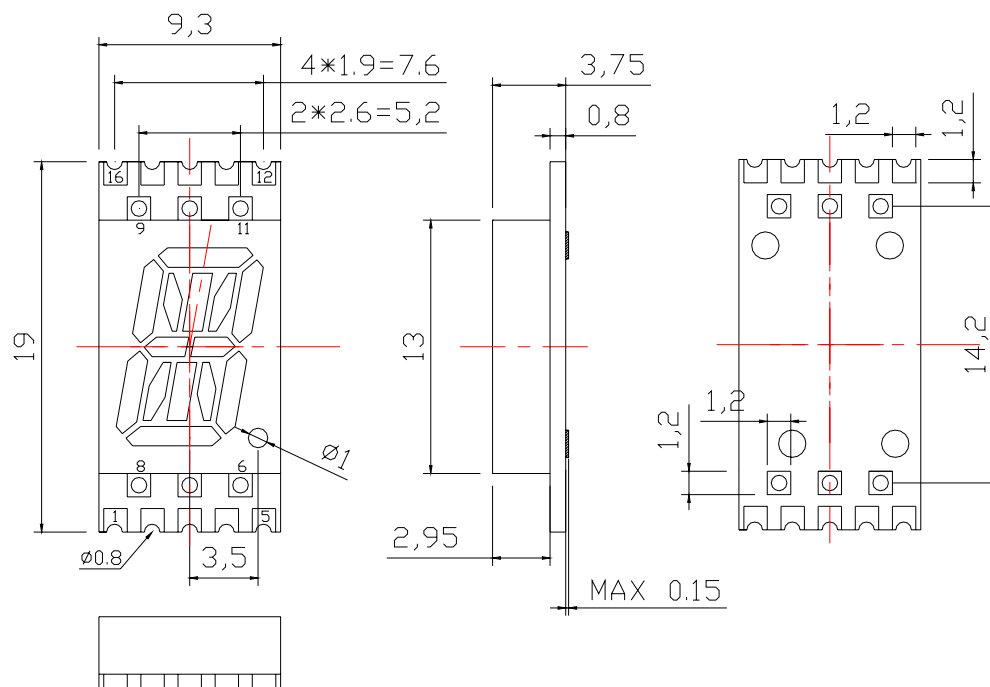
5.1. We recommend the re-flow temperature $245^{\circ}\text{C} (\pm 5^{\circ}\text{C})$. the maximum soldering temperature should be limited to 260°C .

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:

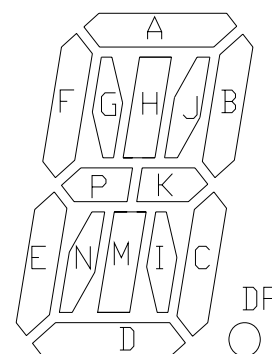
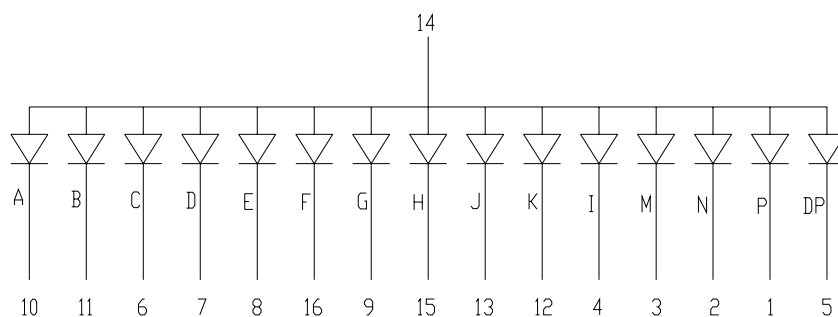
- Single Digit LED Display
- Digit Height: 10.16mm(0.40")
- Gray Face and Milky Segment
- Color: Blue

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 P	9	Cathode G
2	Cathode N	10	Cathode A
3	Cathode M	11	Cathode B
4	Cathode I	12	Cathode K
5	Cathode DP	13	Cathode J
6	Cathode C	14	Common Anode
7	Cathode D	15	Cathode H
8	Cathode E	16	Cathode F

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ABSOLUTE MAXIMUM RATINGS AT TA=25°C

Parameter	Symbol	Condition	Color	Rating	Units
Power Dissipation Per Segment	P _d	—	Blue	95	mW
Forward Current Per Segment	I _F	—	Blue	25	mA
Peak Forward Current Per Segment	I _{FP}	1/10 Duty 1KHz	Blue	100	mA
Reverse Voltage Per Segment	V _R	—	Blue	5	V
Operating Temperature Range	T _{opr}	—	—	-35~+85	°C
Storage Temperature Range	T _{stg}	—	—	-35~+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	2.60	3.20	3.8	V
Reverse Current	I _R	V _R =5V	Per Chip	—	—	100	μA
Luminous Intensity	I _V	I _F =10mA	Per Chip	8501	13500	—	ucd
Wave Length	λ _P	I _F =20mA	Per Chip	—	465	—	nm
	λ _D			465	470	475	
Spectral Line Half Width	△λ	I _F =20mA	Per Segment	—	—	27	nm
Luminous Intensity Matching Ratio (Segment To Segment)	I _{v-m}	I _F =10mA				1.2:1	

■ **Typical Optical-Electronic Characteristic Curves**

Fig1. Forward Current vs. Forward Voltage
Intensity

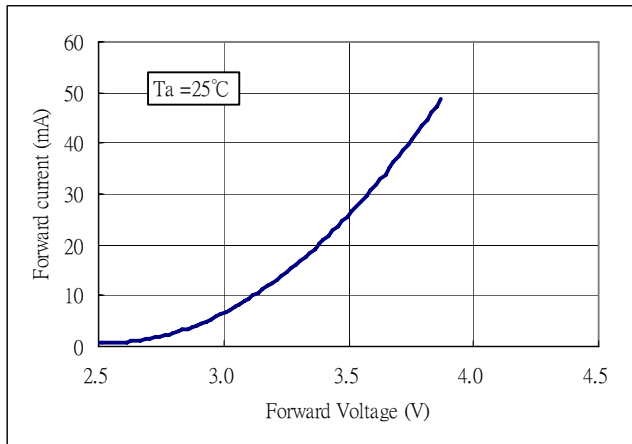


Fig2. Forward Current vs. Relative

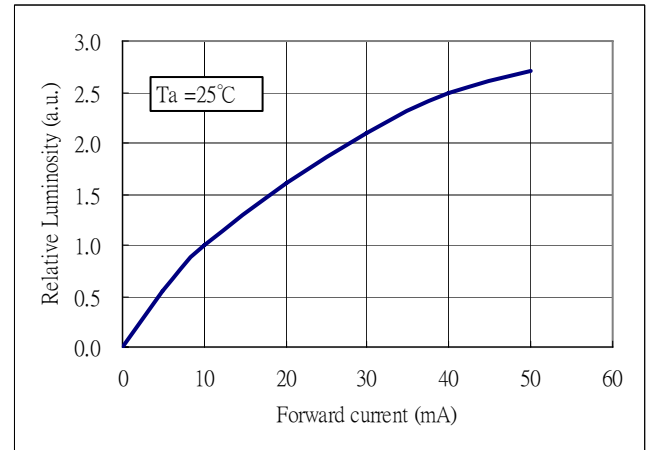


Fig3. Forward Current vs. Relative Wavelength

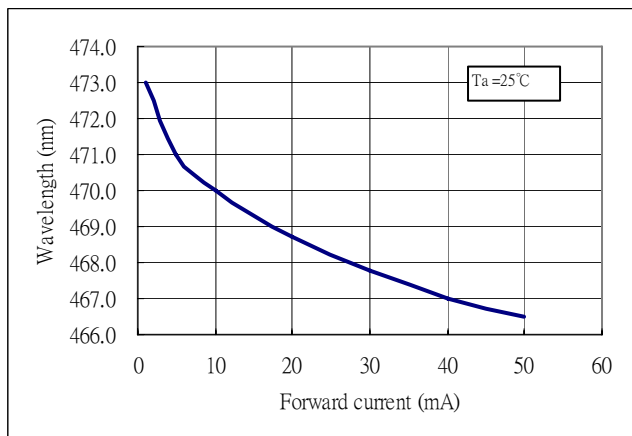
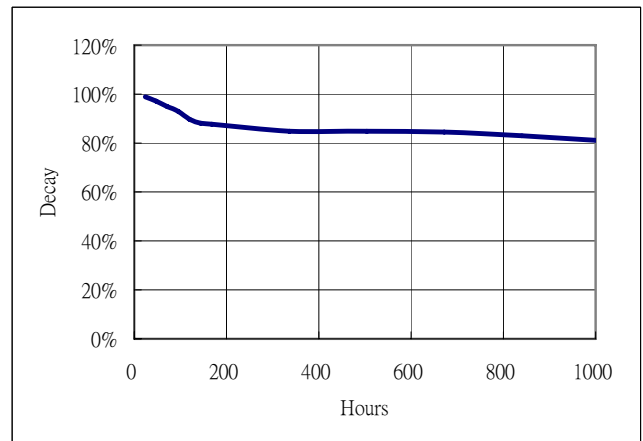
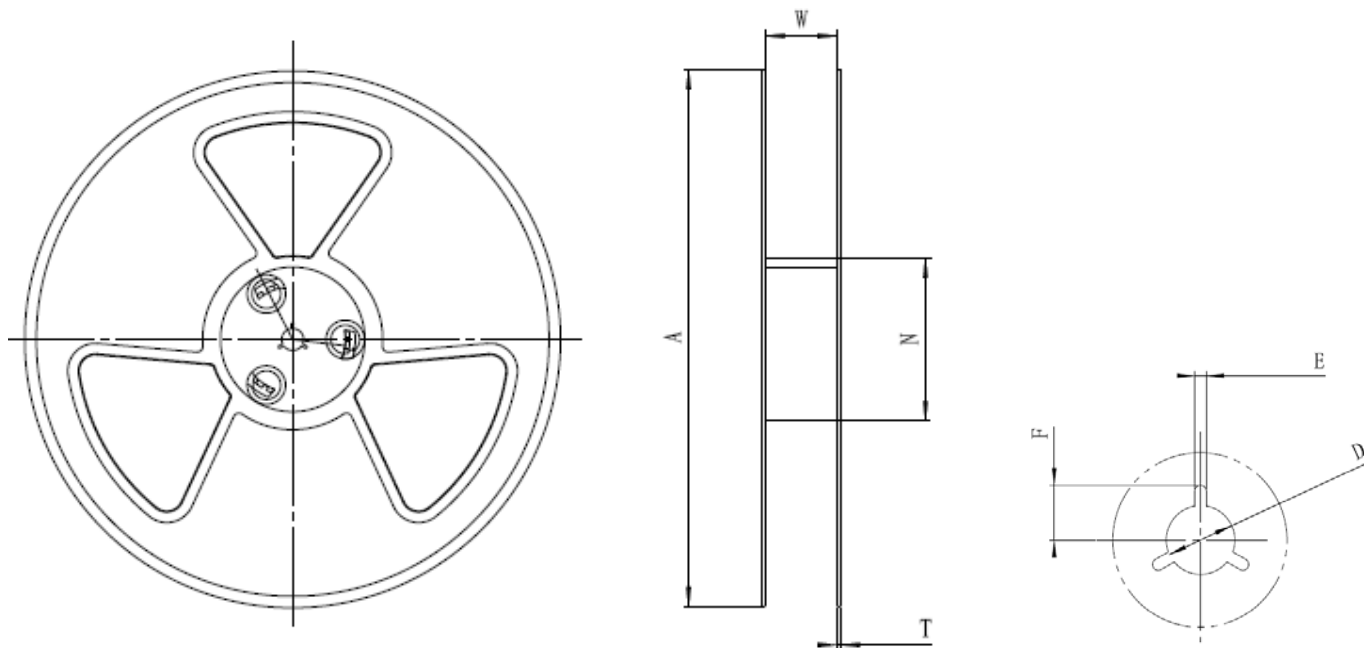


Fig4. Life Test at 20mA R.T. 1000hrs

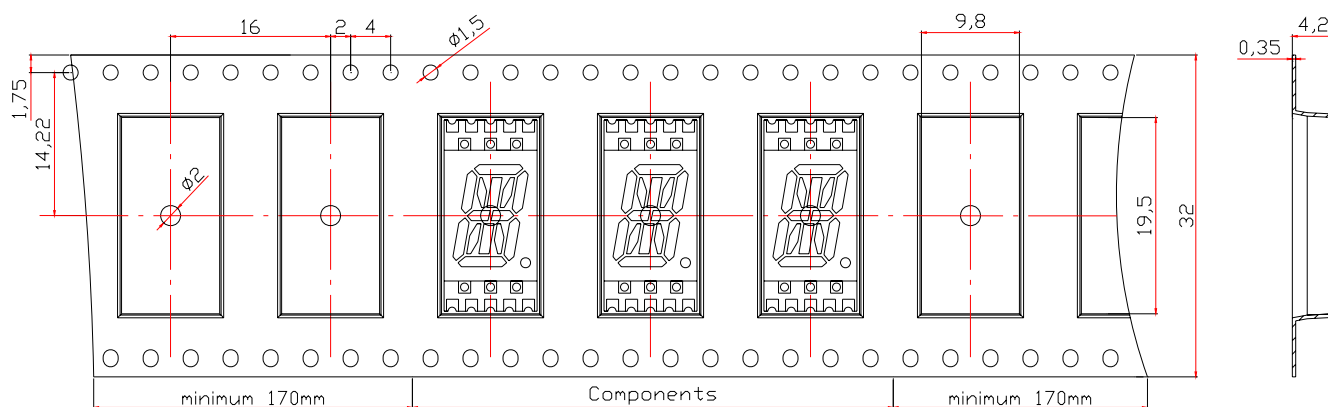


■ Packing Reel Dimensions(mm):

W	A	N	T	E	F	D
32.5	330	100	1.8	2.1	10.75	13.5
± 0.4	± 0.5	± 0.3	± 0.2	± 0.3	± 0.3	+0.5 -0.2

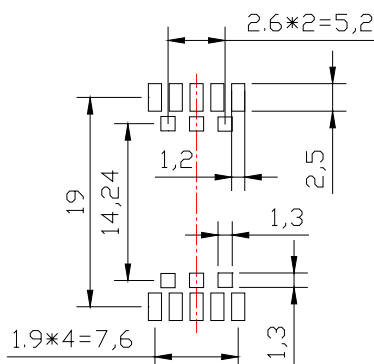


■ Dimensions of Tape (Unit: mm)



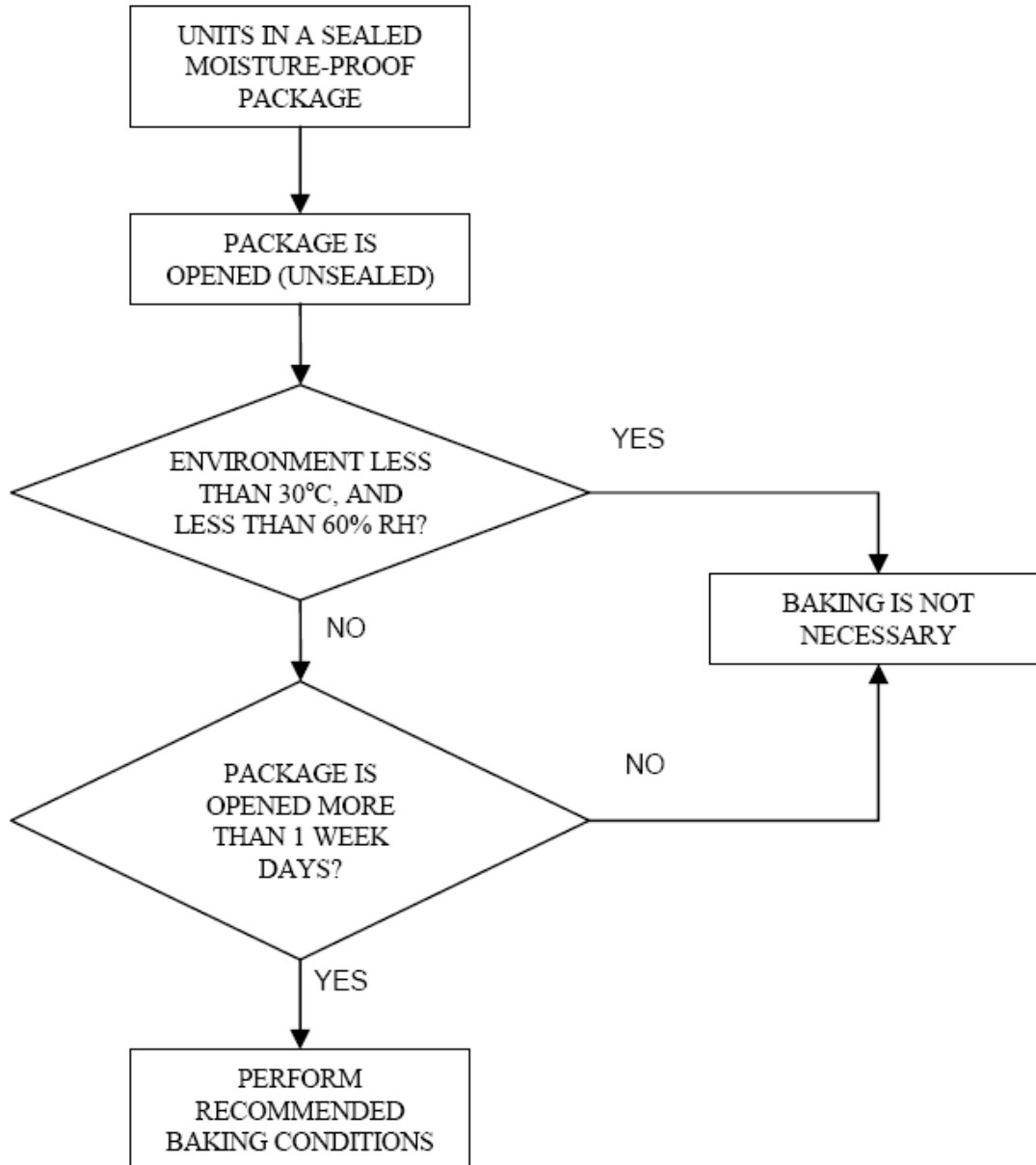
■ One Reel contained 1000 PCS products:

■ 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.