World Components Network Service Ltd

Customer Name:	
Date:	**2018-4-13**
Part No:	**WCN2S-1020B7-A1**
Product Group Description:	**LED Display**
Customer Part No:	
Approval Date:	

Customer Confirmation	Approved by	Checked by	Prepared By
		Athena 2018-4-13	Fei 2018-4-13

Country of Origin: China

World Components Network Service Ltd

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REVISION RECORD

MARKER	Matter for revision / Reason for revision	SHEET	DTAE	MAKER	APPOVED SIGN	
A0	P# WCN2S-1020B7-A1 / New Version issued	Whole Spec	2018-4-13	Zhang	Athena	

1. Type No./Manufacture's Name

WCN2S-1020B7-A1 / World Components Network Service Ltd.

2. Features:

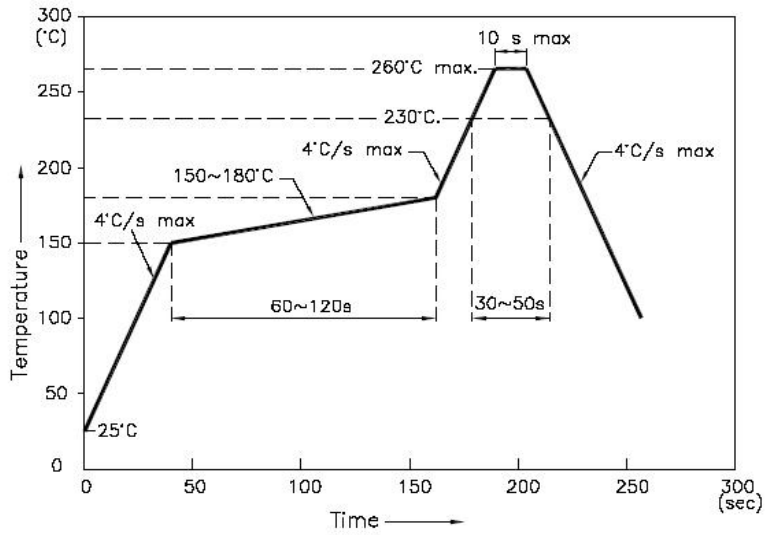
- **High Reliability**
- **Low Power Requirement**
- **Easy Assembly**

3. Faction: Display Digit Characteristic

4. Soldering Conditions: Soldering Temp. 260±5 ℃, Soldering Time. 3~5 sec.

Soldering Power <30 W.

5. Re-flow Temp/Time



NOTES:

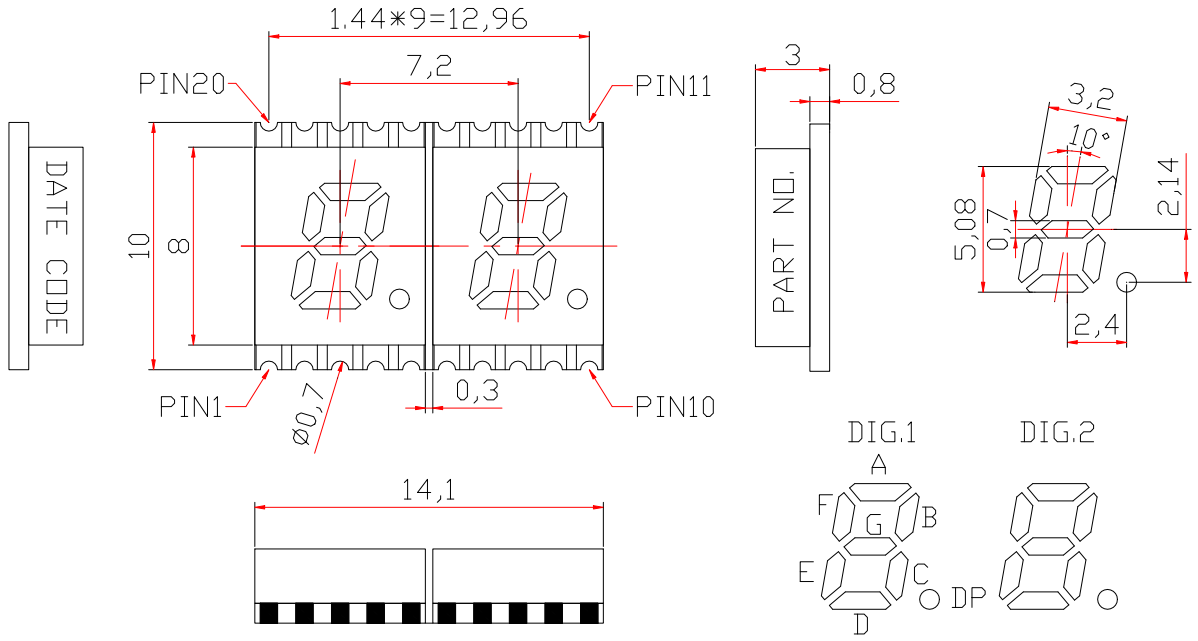
5.1. We recommend the re-flow temperature 245℃(±5℃).the maximum soldering temperature should be limited to 260℃.

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:

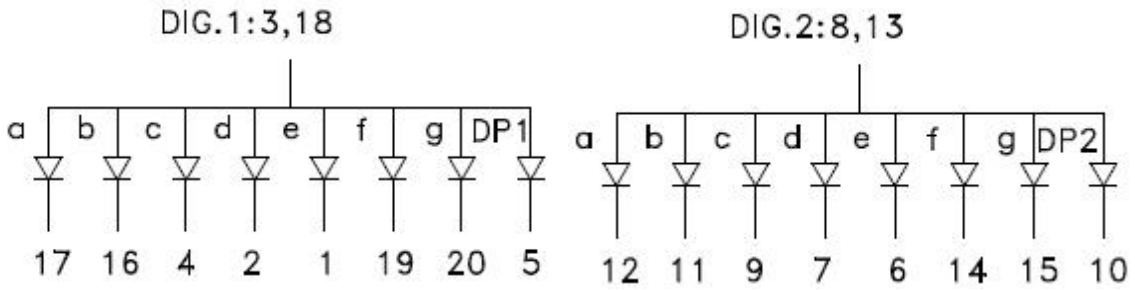
- **Two Digit LED Display**
- **Digit Height:5.08mm(0.20″)**
- **Gray Face and Milky Segment**
- **Color: Blue**

■ Outer Dimension:



Notes: Unless otherwise stated, the tolerance is ±0.25mm.

■Circuit Diagram:



■Pin Connection:

PIN NO.	CONNECTION	PIN NO.	CONNECTION
1	Cathode E1	11	Cathode B2
2	Cathode D1	12	Cathode A2
3	Common Anode dig1	13	Common Anode dig2
4	Cathode C1	14	Cathode F2
5	Cathode DP1	15	Cathode G2
6	Cathode E2	16	Cathode B1
7	Cathode D2	17	Cathode A1
8	Common Anode dig2	18	Common Anode dig1
9	Cathode C2	19	Cathode F1
10	Cathode dp2	20	Cathode G1

■ ABSOLUTE MAXIMUM RATINGS AT TA=25℃

Parameter	Symbol	Condition	Color	Rating	Units
Power Dissipation Per Segment	P_d	—	Blue	90	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	Topr	—	—	-40～+105	℃
Storage Temperature Range	Tstg	—	—	-40～+105	℃

■ Electrical/Optical Characteristics Rating(Ta=25℃)

Item	Symbol	Test conditions	Location	Rating			Units
				Min.	Typ.	Max.	
Forward Voltage	V_F	I_F=20mA	Per Chip	2.6	3.2	3.6	V
Reverse Current	I_R	V_R=5V	Per Chip	—	—	100	μA
Luminous Intensity	I_V	I_F=10mA	Per Chip	3051	5500	8500	μcd
Wave Length	λ_D			—	465	—	
Spectral Line Half Width	△λ	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
K	K	I_F=10mA	3051	4000	μcd
L	L	I_F=10mA	4001	5000	μcd
M	M	I_F=10mA	5001	6100	μcd
N	N	I_F=10mA	6101	7200	μcd
O	O	I_F=10mA	7201	8500	μcd

■ Typical Optical-Electronic Characteristic Curves

Fig1. Forward Current vs. Forward Voltage:

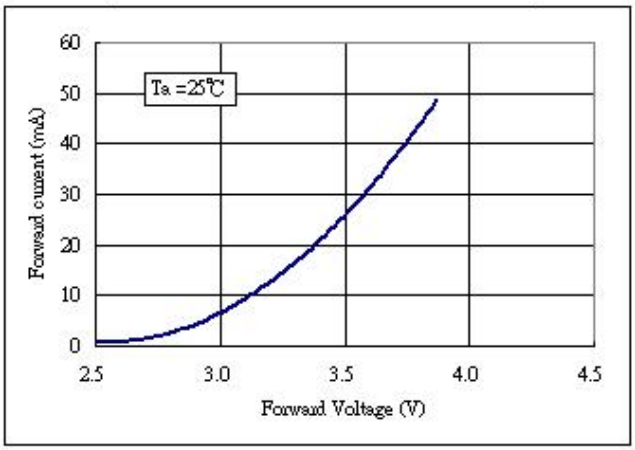


Fig2. Forward Current vs. Relative Intensity:

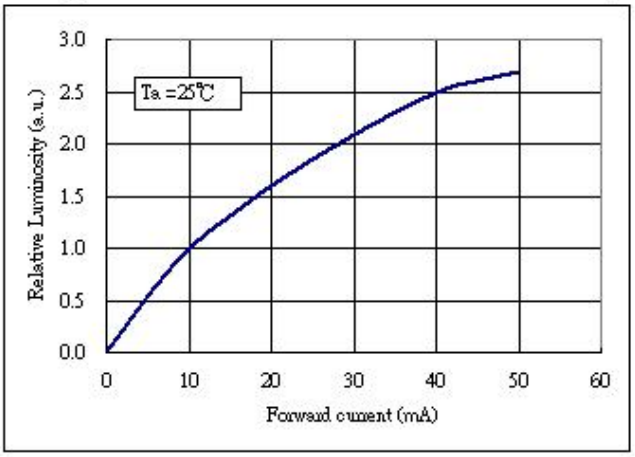


Fig3. Forward Current vs. Relative Wavelength:

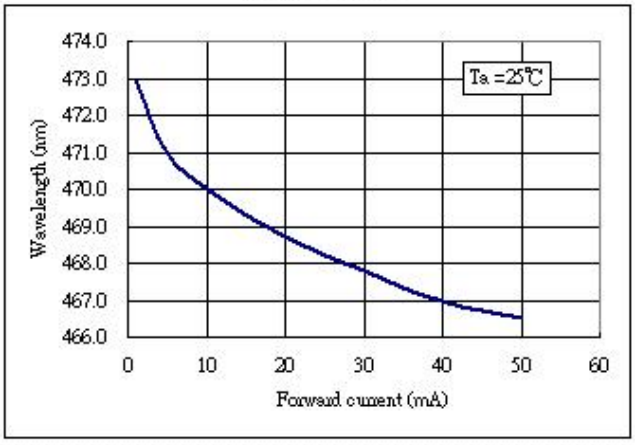
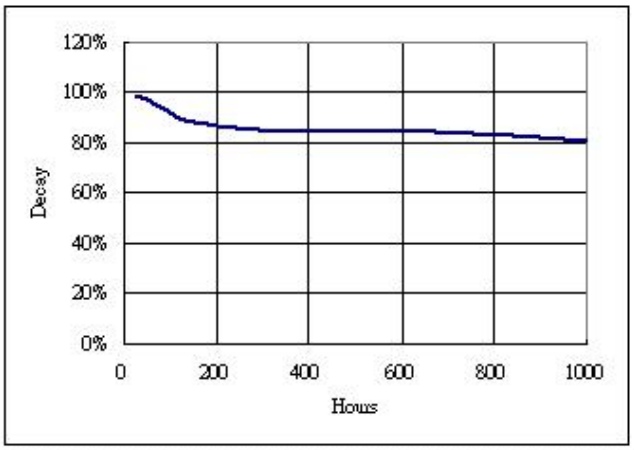
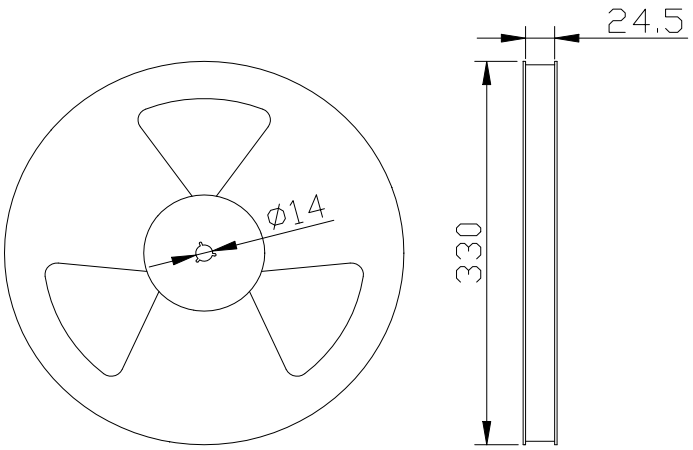


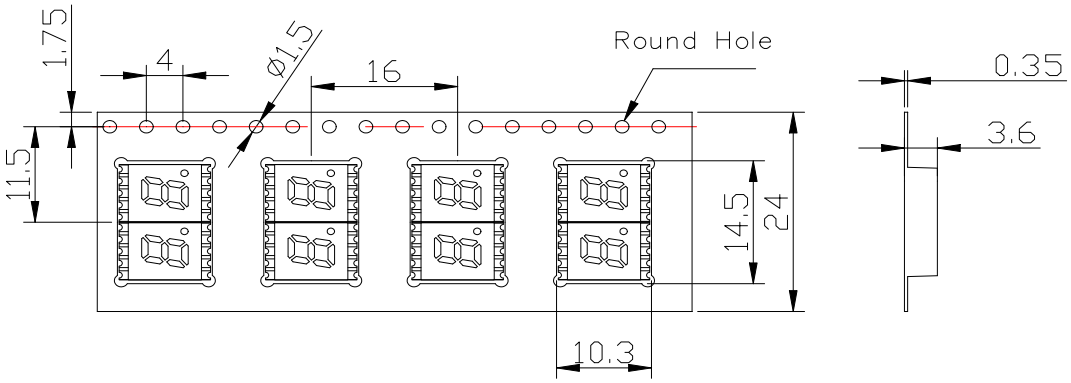
Fig4. Life Test at 20mA R.T. 1000hrs:



■ **Packing Reel Dimensions(mm)：**

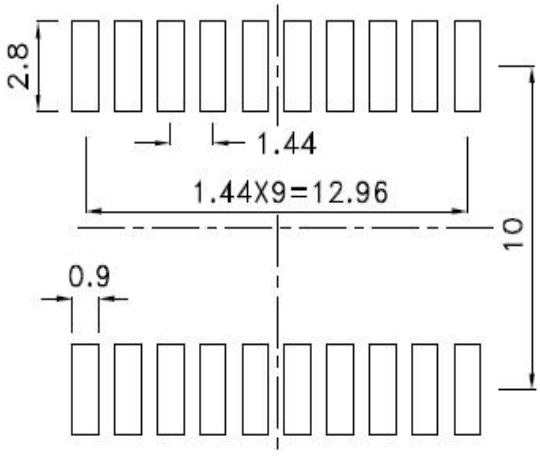


■ **Dimensions of Tape (Unit: mm)**



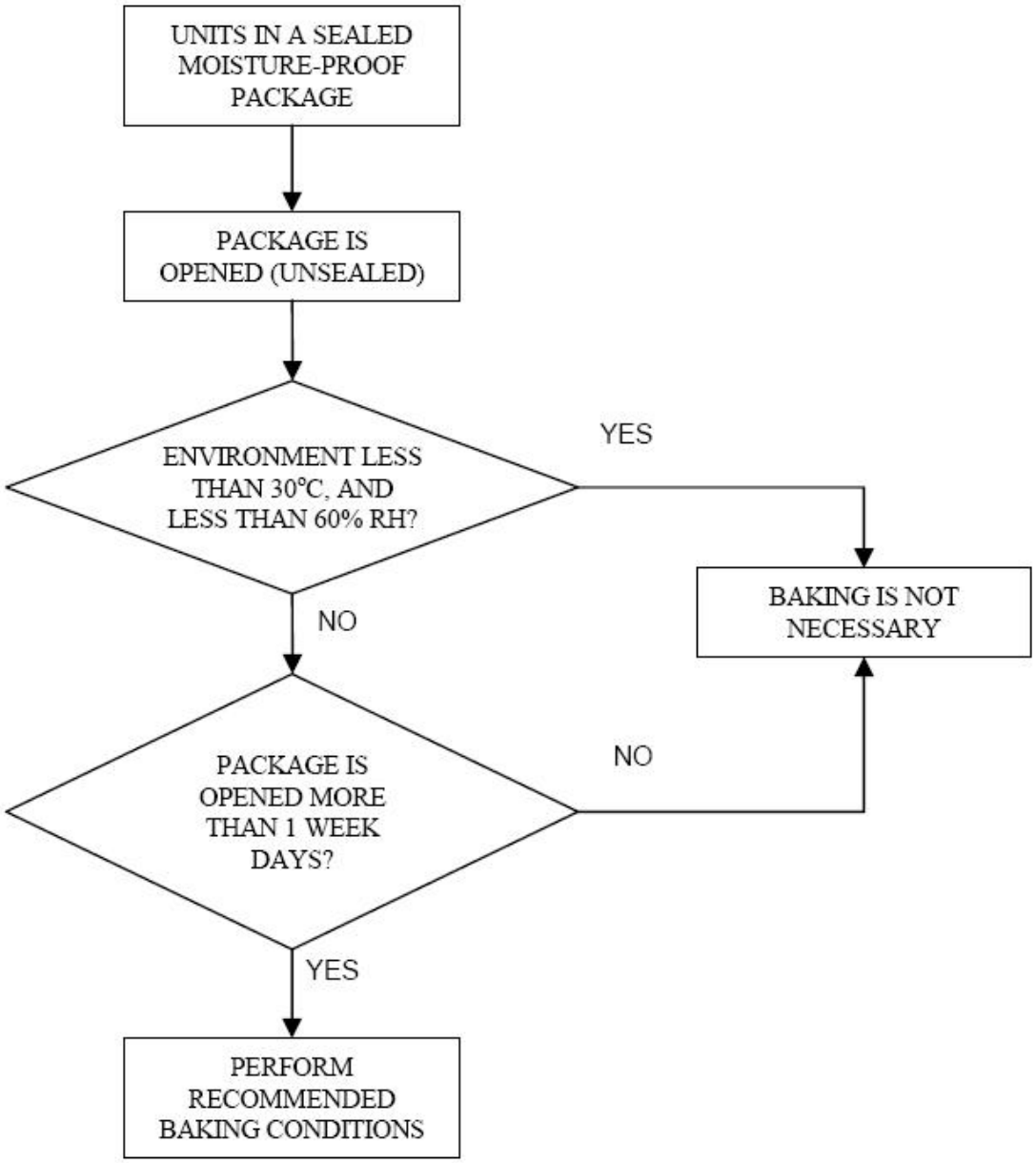
■ **One Reel contained 1100 PCS products:**

■ **Recommended Soldering Pattern:**



■ **Moisture Proof Packaging：**

All N/D SMD displays are shipped in moisture proof package. The displays should be stored at 30℃ 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.**