World Components Network Service Ltd

Customer Name:	
Date:	2021-9-2
Part No:	WCN3S-1020SR-A1
Product Group Description:	LED Display
Customer Part No:	
Approval Date:	

Customer Confirmation	Approved by	Checked by	Prepared By
	William 2021-9-2	Athena 2021-9-2	Wei 2021-9-2

恒盛源光电科技(深圳)有限公司 开发部 WCN

Country of Origin: China

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RoHS

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REVISION RECORD

MARKER	Matter for revision / Reason for revision	SHEET	DTAE	MAKER	APPOVED SIGN	
A0	P# WCN3S-1020SR-A1 / New Version issued	Whole Spec	2021-9-2	Wei	Athena	William

1. Type No./Manufacture's Name

WCN3S-1020SR-A1 / World Components Network Service Ltd.

2. Features:

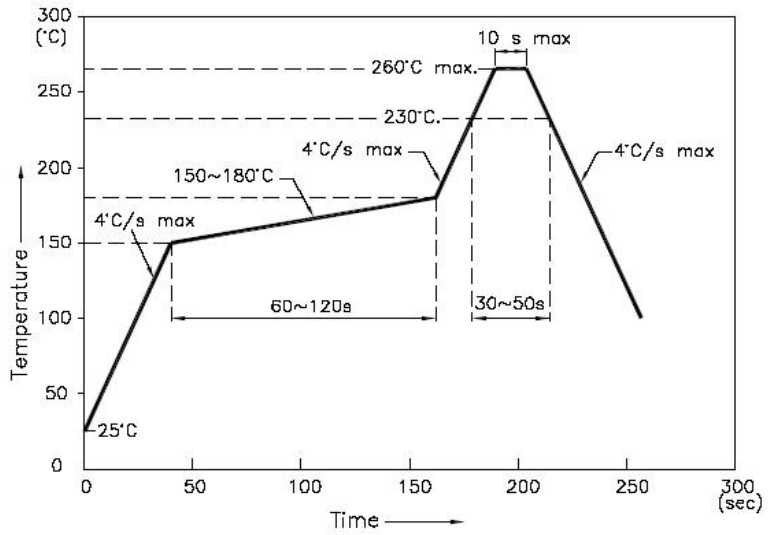
- **High Reliability**
- **Low Power Requirement**
- **Easy Assembly**

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:

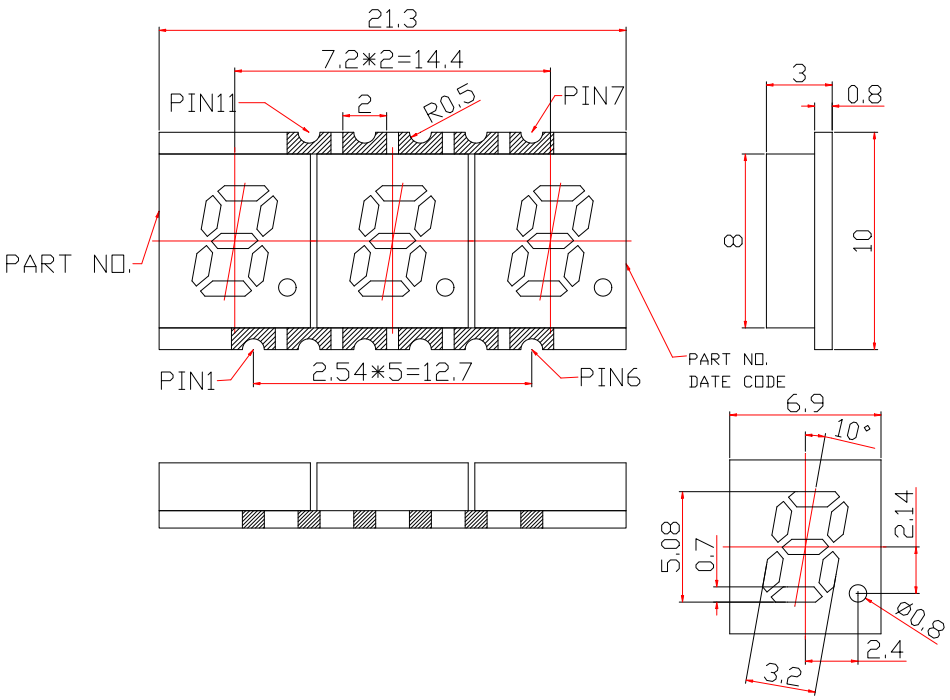
5.1. We recommend the re-flow temperature 245℃(±5℃).the maximum soldering temperature should be limited to 260℃.

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:

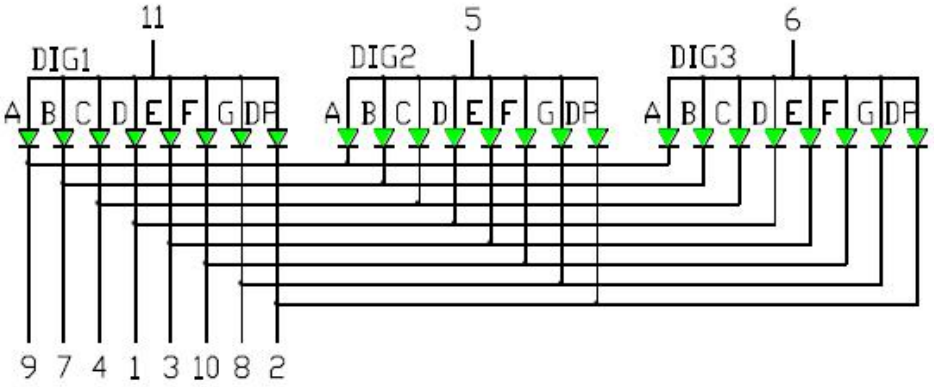
- **Three Digit LED Display**
- **Digit Height:5.08mm(0.20″)**
- **Gray Face and Milky Segment**
- **Color: Red**

■ Outer Dimension:



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

■Circuit Diagram:



■Pin Connection:

PIN NO.	CONNECTION	PIN NO.	CONNECTION
1	Cathode D	7	Cathode B
2	Cathode DP	8	Cathode G
3	Cathode E	9	Cathode A
4	Cathode C	10	Cathode F
5	Common Anode dig2	11	Common Anode dig1
6	Common Anode dig3		

■ ABSOLUTE MAXIMUM RATINGS AT TA=25℃

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

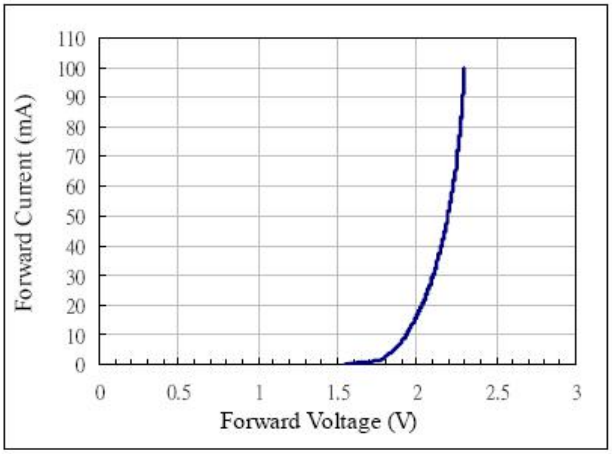
■ Electrical/Optical Characteristics Rating(Ta=25℃)

Item	Symbol	Test conditions	Location	Rating			Units
				Min.	Typ.	Max.	
Forward Voltage	V_F	I_F=20mA	Per Chip	1.80	2.00	2.60	V
Reverse Current	I_R	V_R=5V	Per Chip	—	—	100	μA
Luminous Intensity	I_V	I_F=10mA	Per Chip	3051	5500	8500	ucd
Wave Length	λ_P	I_F=20mA	Per Chip	—	635	—	nm
	λ_D			627	630	633	
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	

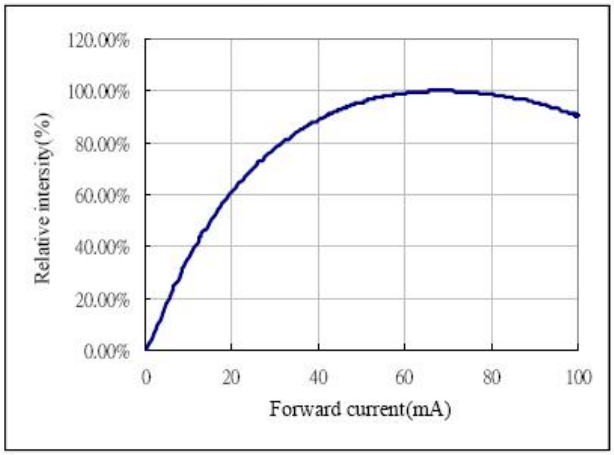
■Luminous Intensity Sorting: (Luminous intensity tolerance :+/-10%)

Rank	Symbol	Condition	Min	Max	Unit
K	K	I_F=10mA	3051	4000	ucd
L	L	I_F=10mA	4001	5000	ucd
M	M	I_F=10mA	5001	6100	ucd
N	N	I_F=10mA	6101	7200	ucd
O	O	I_F=10mA	7201	8500	ucd

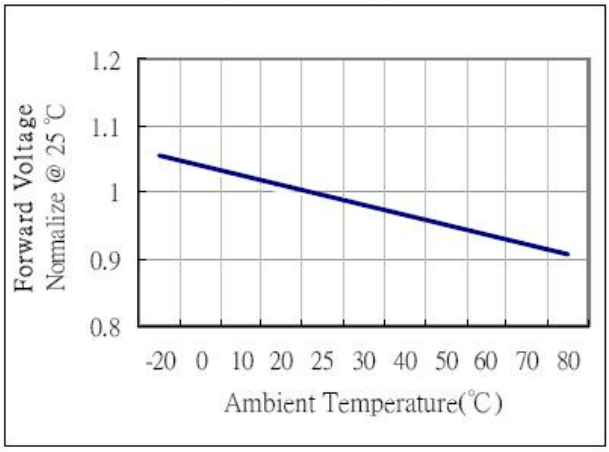
Forward current vs. Forward voltage



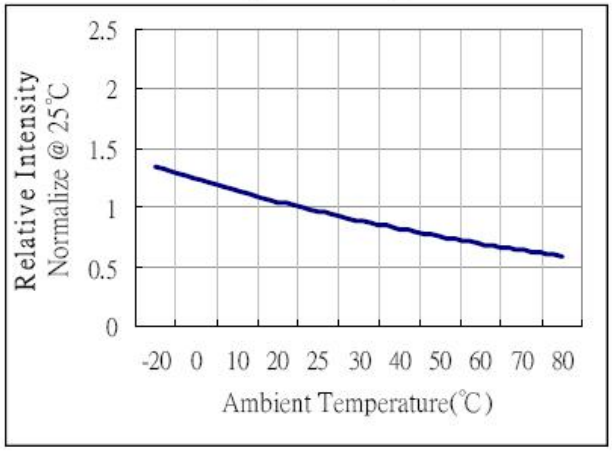
Relative intensity vs. Forward current



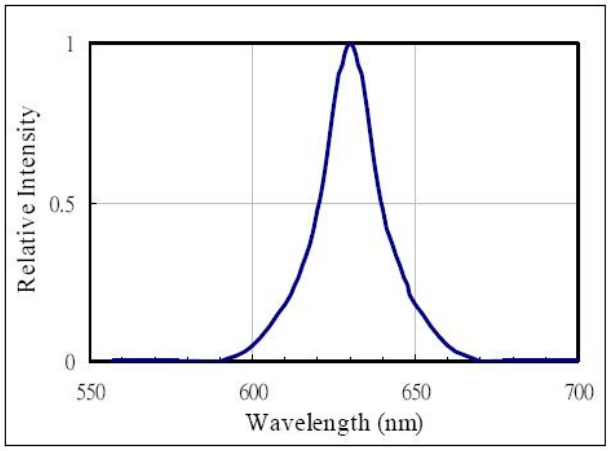
Forward voltage vs. Temperature



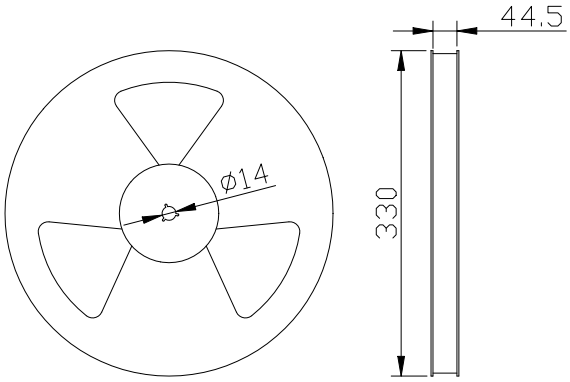
Relative intensity vs. Temperature



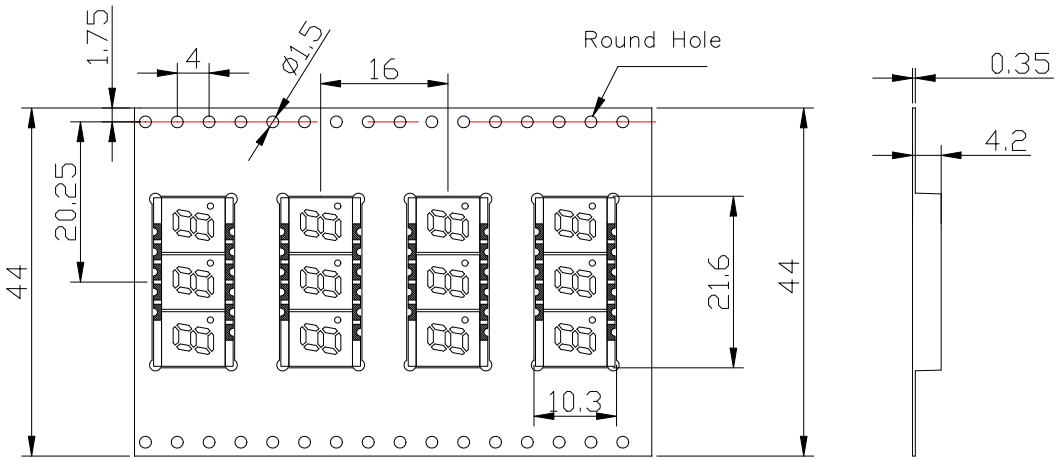
Relative intensity vs. Wavelength



■ **Packing Reel Dimensions(mm)：**

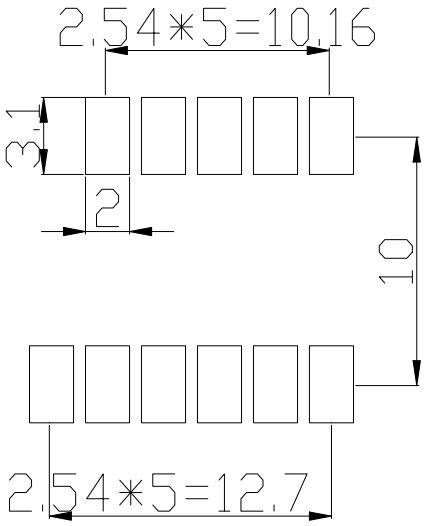


■ **Dimensions of Tape (Unit: mm)**



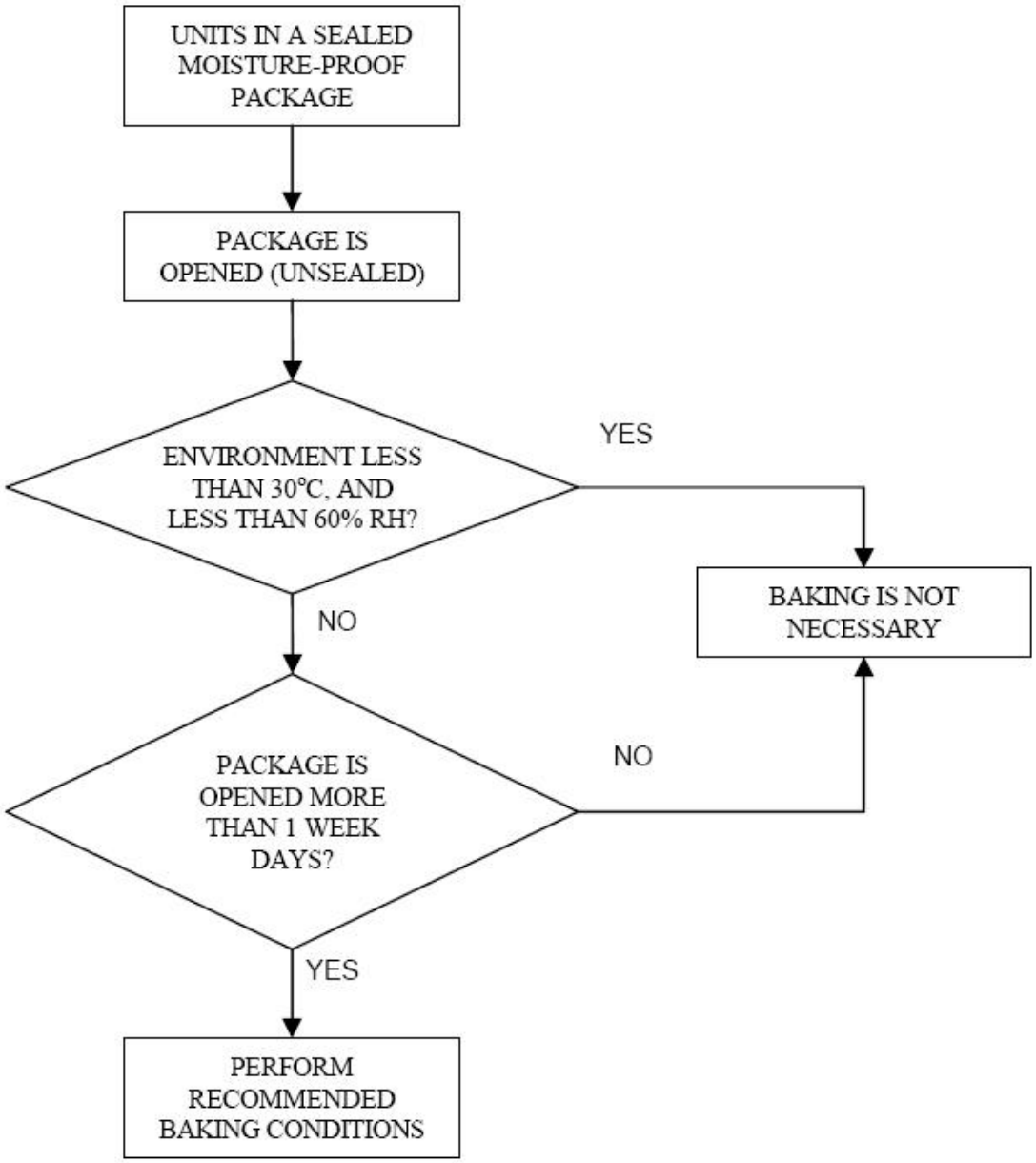
■ **One Reel contained 1000 PCS products:**

■ **Recommended Soldering Pattern:**



■ **Moisture Proof Packaging：**

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