

WCN Opto Group Co., Limited

Customer Name:

Date:

2020-8-5

Part No:

WCN4S-1028SR-A1

Product Group Description:

LED Display

Customer Part No:

Approval Date:

Customer Confirmation

Approved by

William
2020-8-5

Checked by

Athena
2020-8-5

Prepared By

Zhang
2020-8-5

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)755-2900022
Fax : (86)755-2900023



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REVISION RECORD

MARKER	Matter for revision	SHEET	DTAE	MAKER	APPOVED SIGN	
	Reason for revision					
A0	<p style="text-align: center;">P# WCN4S-1028SR-A1</p> <hr style="border-top: 1px dashed black;"/> <p style="text-align: center;">New Version issued</p>	Whole Spec	2015-8- 17	Fei	Athena	William
A1	<p style="text-align: center;">Change Out Size Shape</p> <hr style="border-top: 1px dashed black;"/> <p style="text-align: center;">Improved</p>	Page.5	2015-8- 27	Fei	Athena	William
A2	<p style="text-align: center;">Increase the packaging description</p> <hr style="border-top: 1px dashed black;"/> <p style="text-align: center;">Improved</p>	Whole Spec	2015-9- 12	Fei	Athena	William
A3	<p style="text-align: center;">New Version issued</p> <hr style="border-top: 1px dashed black;"/> <p style="text-align: center;">Recommended Soldering Pattern:</p>	Whole Spec	2020-8- 5	Zhang	Athena	William

1. Type No./Manufacture's Name

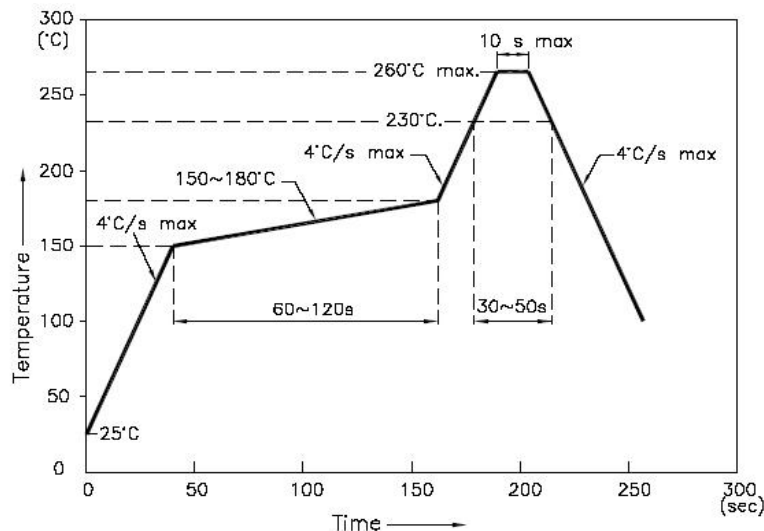
WCN4S-1028SR-A1 / WCN Opto Group Co., Limited.

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:**

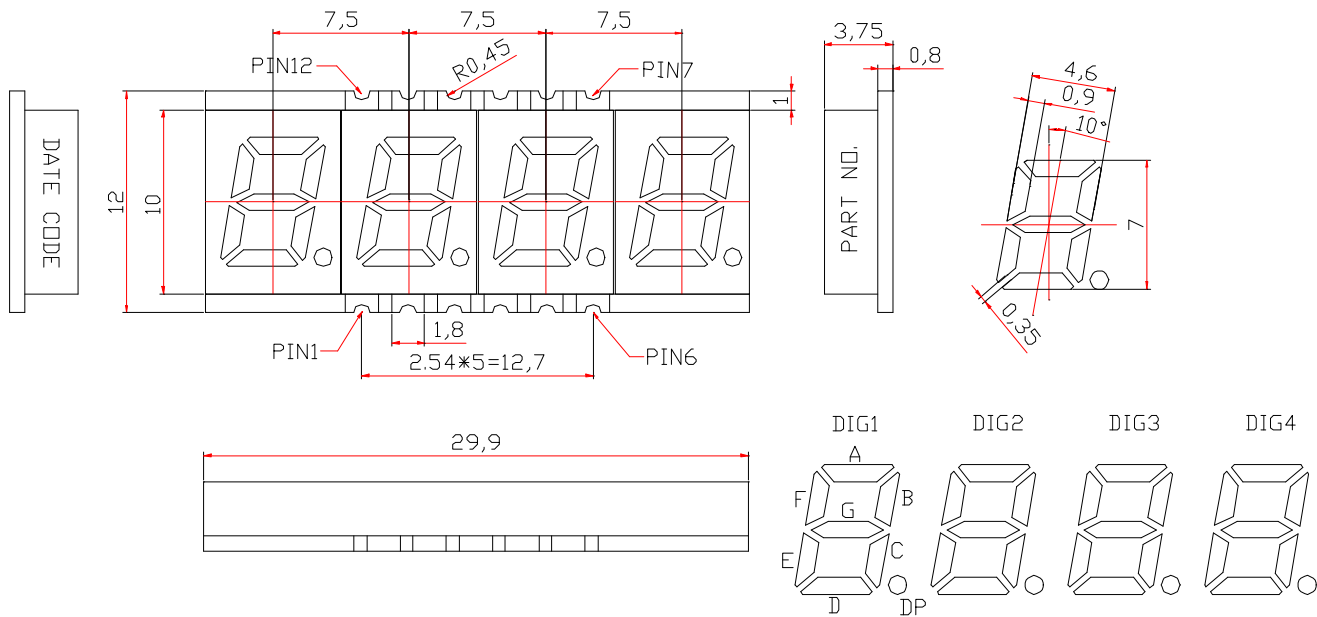
5.1. We recommend the re-flow temperature $245^{\circ}\text{C}(\pm 5^{\circ}\text{C})$. the maximum soldering temperature should be limited to 260°C .

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:

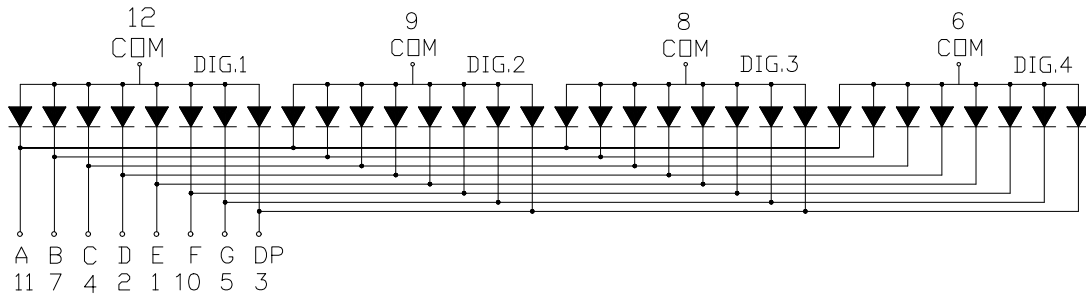
- Four Digit LED Display
- Digit Height: 7.0mm(0.28")
- Gray Face and Milky Segment
- Color: Red

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 dig3
3	Cathode DP	9	Common Anode dig2
4	Cathode C	10	Cathode F
5	Cathode G	11	Cathode A
6	Common Anode dig4	12	Common Anode dig1

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■ ABSOLUTE MAXIMUM RATINGS AT TA=25°C

Parameter	Symbol	Condition	Color	Rating	Units
Power Dissipation Per Chip	P _d	—	Red	65	mW
Forward Current Per Chip	I _F	—	Red	25	mA
Peak Forward Current Per Chip	I _{FP}	1/10 Duty 1KHz	Red	100	mA
Reverse Voltage Per Chip	V _R	—	Red	5	V
Operating Temperature Range	Topr	—	—	-40~+105	°C
Storage Temperature Range	Tstg	—	—	-40~+105	°C

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

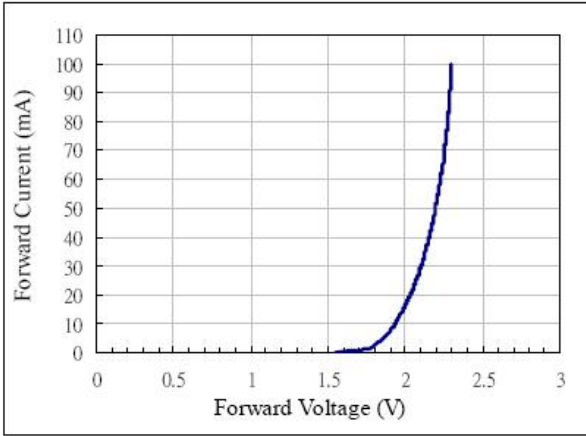
Item	Symbol	Test conditions	Location	Rating			Units
				Min.	Typ.	Max.	
Forward Voltage	V _F	I _F =20mA	Per Chip	1.8	2.0	2.6	V
Reverse Current	I _R	V _R =5V	Per Chip	—	—	100	μA
Luminous Intensity	I _V	I _F =10mA	Per Chip	4001	6500	10500	ucd
Wave Length	λ _P	I _F =20mA	Per Chip	—	635	—	nm
	λ _D			—	630	—	

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

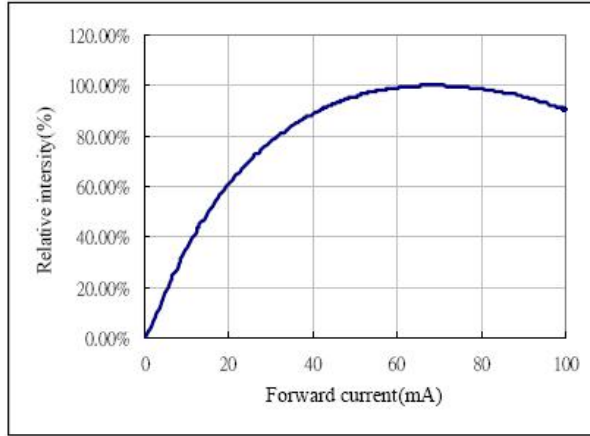
Rank	Symbol	Condition	Min	Max	Unit
L	L	I _F =10mA	4001	5000	ucd
M	M	I _F =10mA	5001	6100	μcd
N	N	I _F =10mA	6101	7200	μcd
O	O	I _F =10mA	7201	8500	μcd
P	P	I _F =10mA	8501	10500	μcd

■ **Typical Optical-Electronic Characteristic Curves**

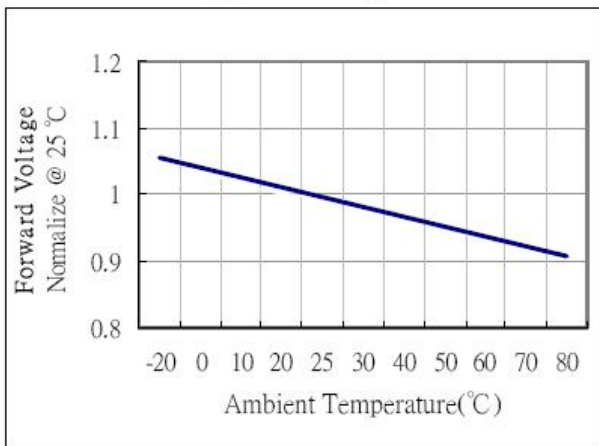
Forward current vs. Forward voltage



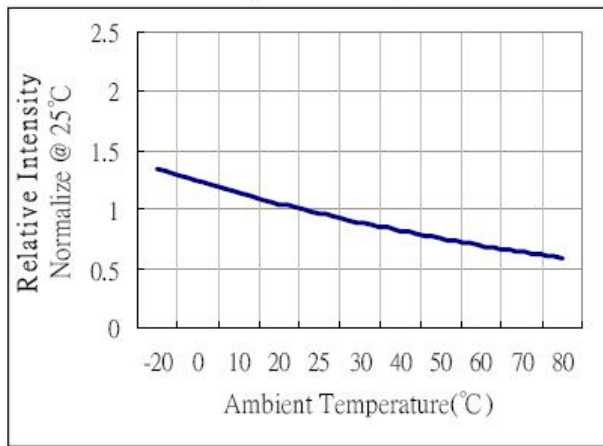
Relative intensity vs. Forward current



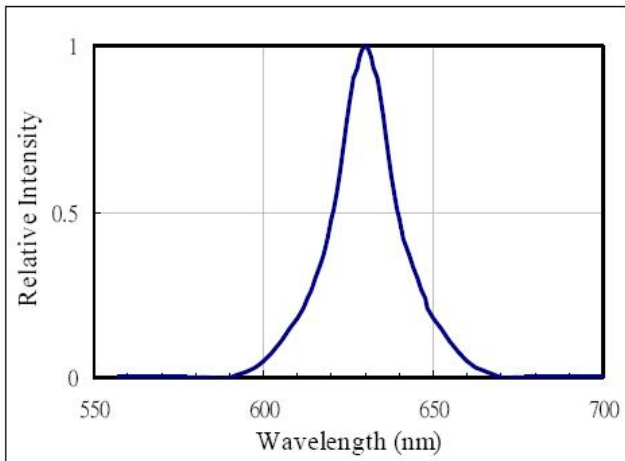
Forward voltage vs. Temperature



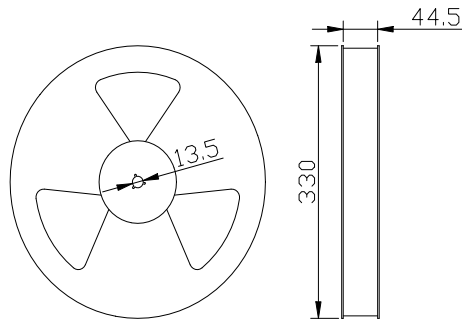
Relative intensity vs. Temperature



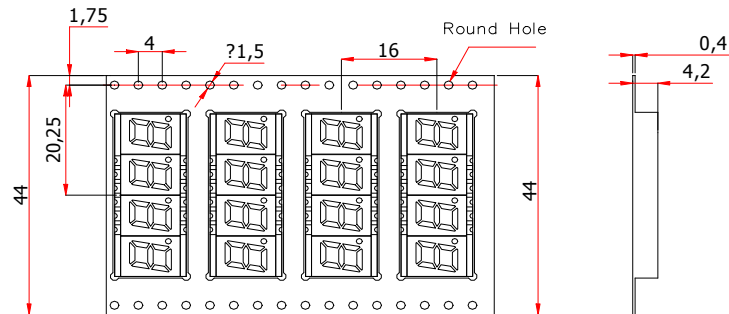
Relative intensity vs. Wavelength



■ Packing Reel Dimensions(mm):



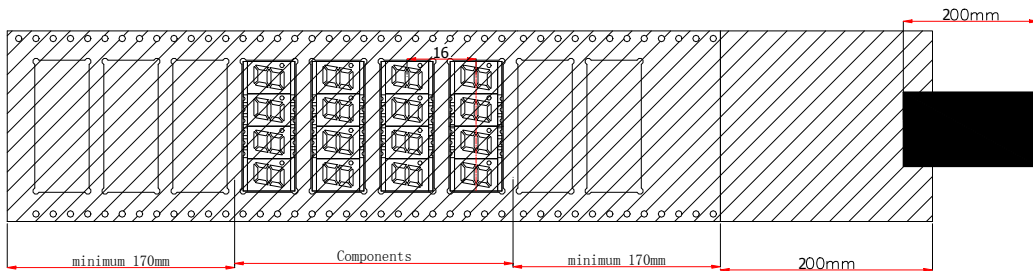
■ Dimensions of Tape (Unit: mm)



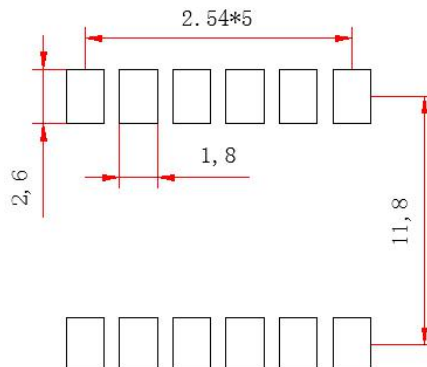
■ One Reel contained 900 PCS products

■ An Outer carton contained 3 Reel and 2700 PCS products.

■ USER FEE DIRECTION

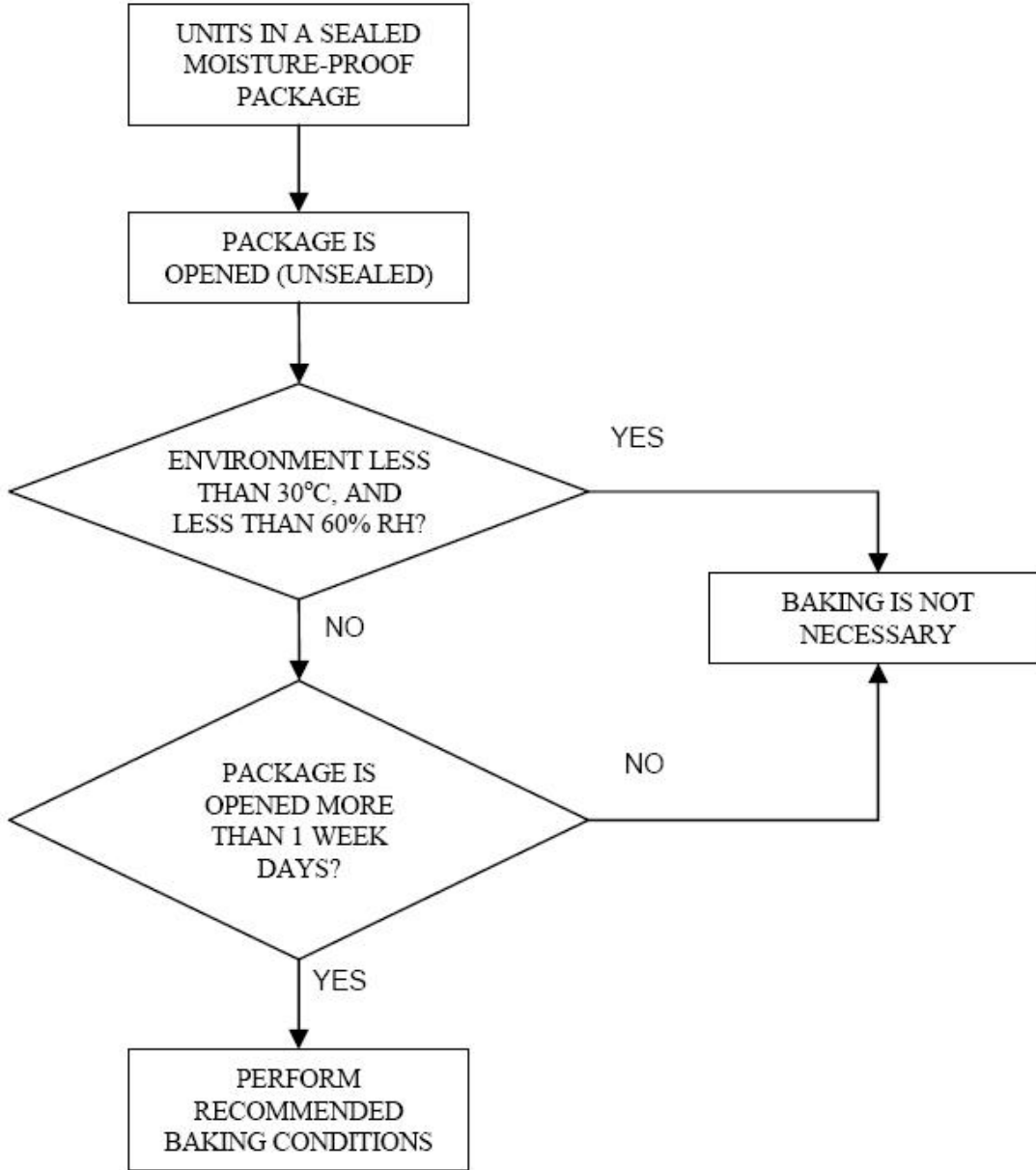


■ Recommended Soldering Pattern:



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.