



WCN Opto Group Co., Limited

Customer Name:

Date:

2024-9-23

Part No:

WCN3S-1030WW-A1

Product Group
Description:

LED Display

Customer Part No:

Approval Date:

Customer
Confirmation

Approved by

William
2024-9-23

Checked by

Athena
2024-9-23

Prepared By

Liu
2024-9-23



Country of Origin: China

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REVISION RECORD

MARKER	Matter for revision	SHEET	DTAE	MAKER	APPOVED SIGN	
	Reason for revision					
A0	P# WCN3S-1030WW-A1	Whole Spec	2013-3-28	Liu	Athena	William
	New Version issued					
A1	New Version issued	Whole Spec	2017-07-19	Fei	Athena	William
	Improved					
A2	Change Packaging Data	Page.8	2024-9-23	Liu	Athena	William
	Improved					

1. Type No./Manufacture's Name

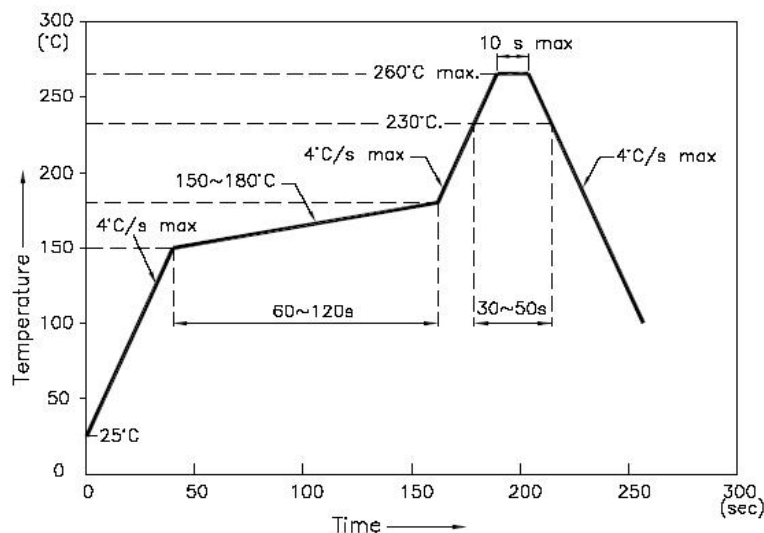
WCN3S-1030WW-A1 / WCN Opto Group Co., Limited.

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:**

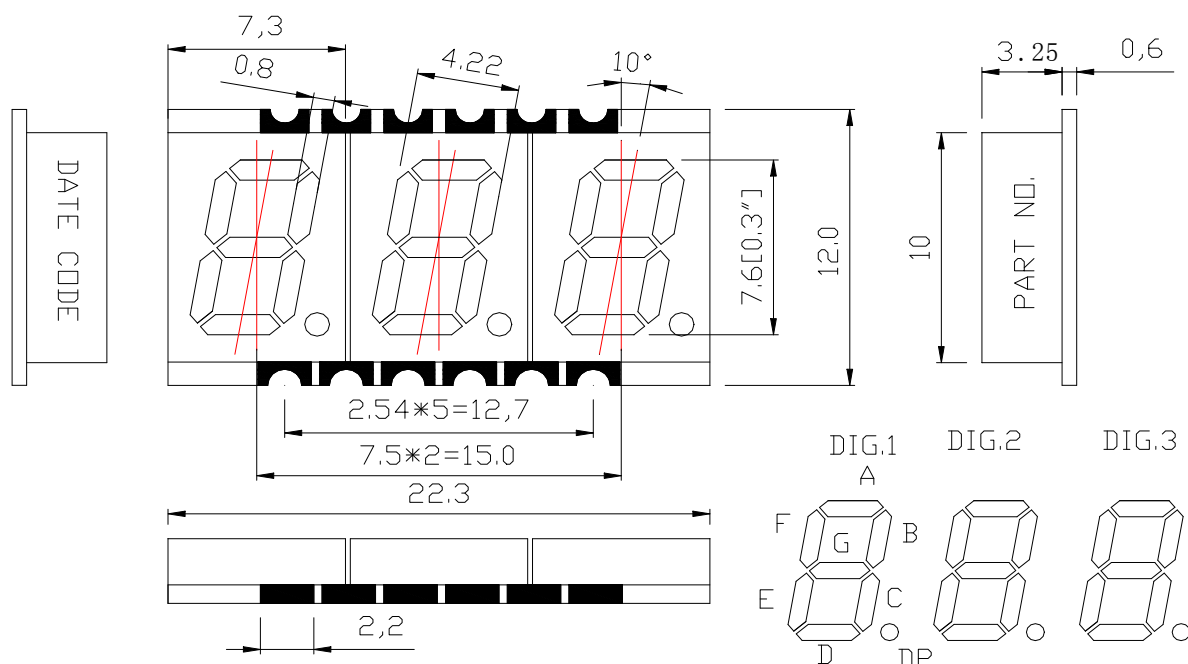
5.1. We recommend the re-flow temperature $245^{\circ}\text{C} (\pm 5^{\circ}\text{C})$. the maximum soldering temperature should be limited to 260°C .

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:

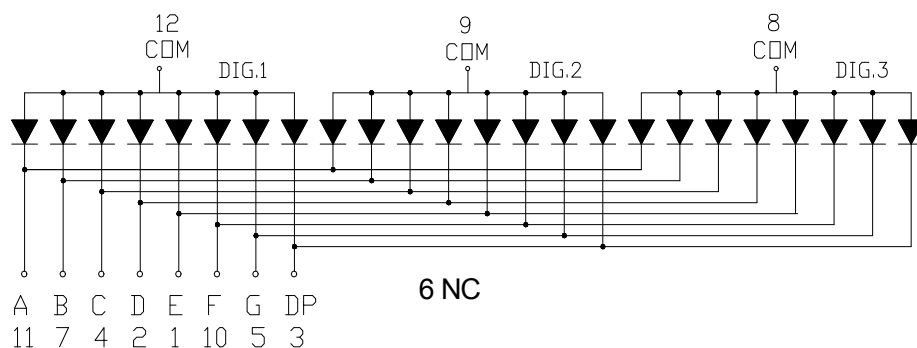
- **Three Digit LED Display**
- **Digit Height: 7.62mm (0.30")**
- **Gray Face and Milky Segment**
- **Color: White**

■ **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	NC	12	Common Anode dig1

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ABSOLUTE MAXIMUM RATINGS AT TA=25°C

Parameter	Symbol	Condition	Color	Rating	Units
Power Dissipation Per Segment	P _d	—	White	92.5	mW
Forward Current Per Segment	I _F	—	White	25	mA
Peak Forward Current Per Segment	I _{FP}	1/10 Duty 1KHz	White	100	mA
Reverse Voltage Per Segment	V _R	—	White	5	V
Operating Temperature Range	T _{opr}	—	—	-40~+105	°C
Storage Temperature Range	T _{stg}	—	—	-40~+105	°C

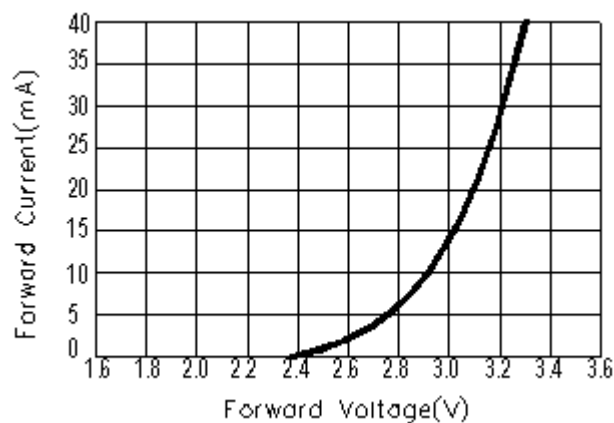
Electrical/Optical Characteristics Rating(Ta=25°C)

Item	Symbol	Test conditions	Location	Rating			Units
				Min.	Typ.	Max.	
Forward Voltage	V _F	I _F =20mA	Per LED	2.6	3.2	3.6	V
Reverse Current	I _R	V _R =5V	Per LED	—	—	100	μA
Luminous Intensity	I _V	I _F =10mA	Per LED	200	—	400	mcd
CIE Coordinate	X	I _F =20mA	Per LED	—	0.275	—	nm
	Y			—	0.285	—	
Luminous Intensity Matching Ratio (Segment To Segment)	I _{v-m}	I _F =10mA				1.2:1	

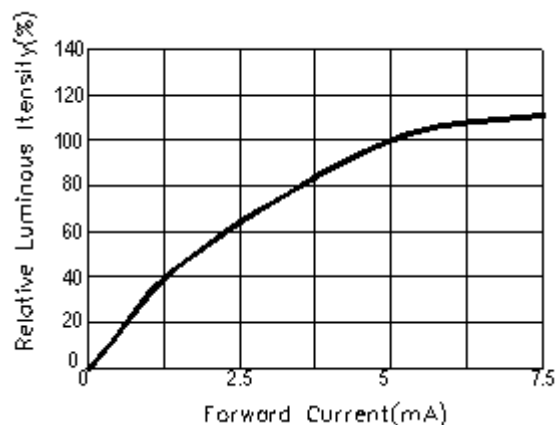
Soldering Conditions: Soldering Temp. ≤+260°C, Soldering Time. ≤3sec
(at 2mm Distance from The Case of Reflector Edge)

■ Typical Optical-Electronic Characteristic Curves

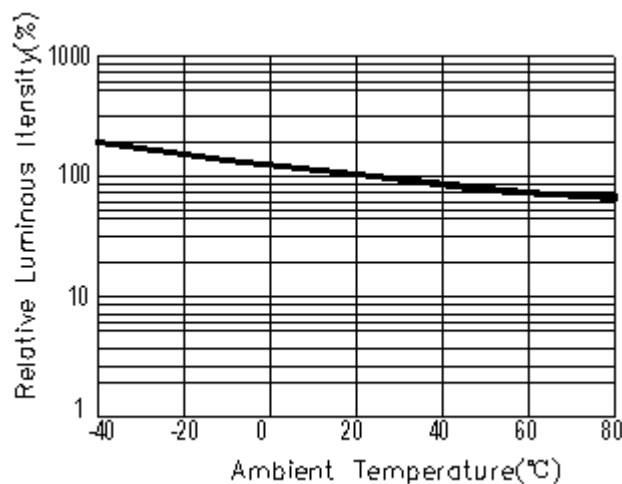
Forward Current VS Forward Voltage



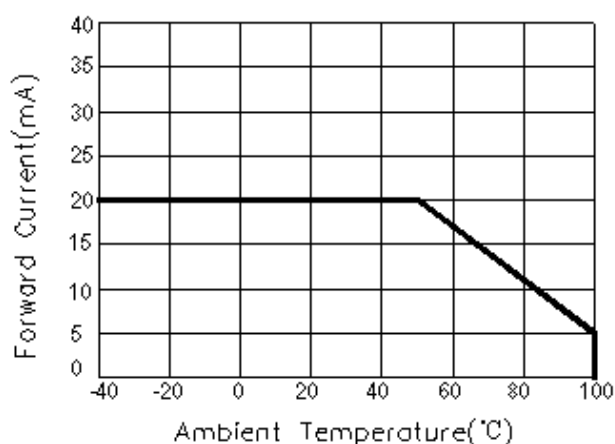
Relative Flux VS Forward Current



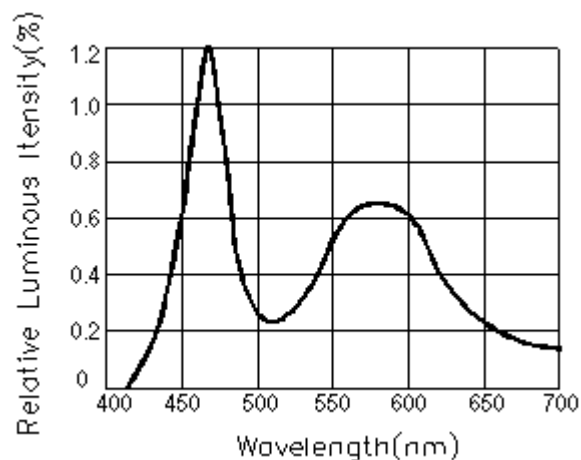
Relative Flux VS Ambient Temperature



Forward Current VS Ambient Temperature

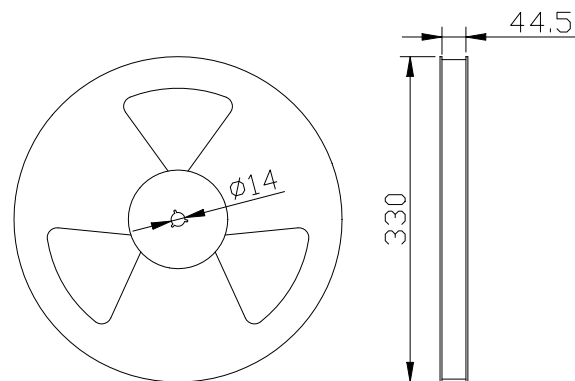


Relative Spectral Distribution

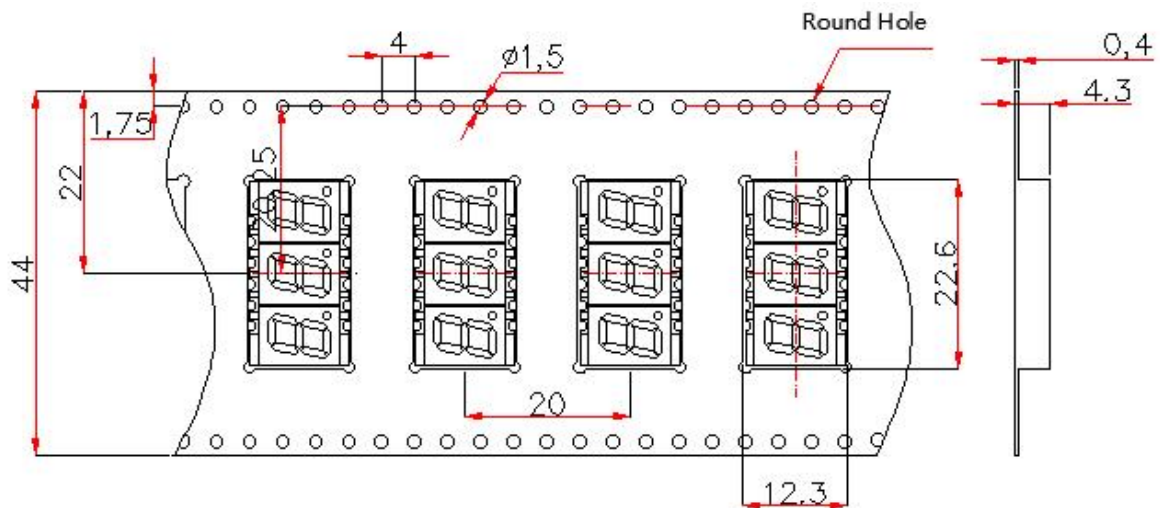


Typical Spectral Distribution

■ Packing Reel Dimensions(mm):

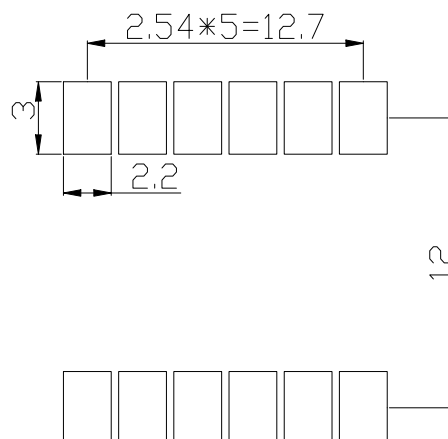


■ Dimensions of Tape (Unit: mm)



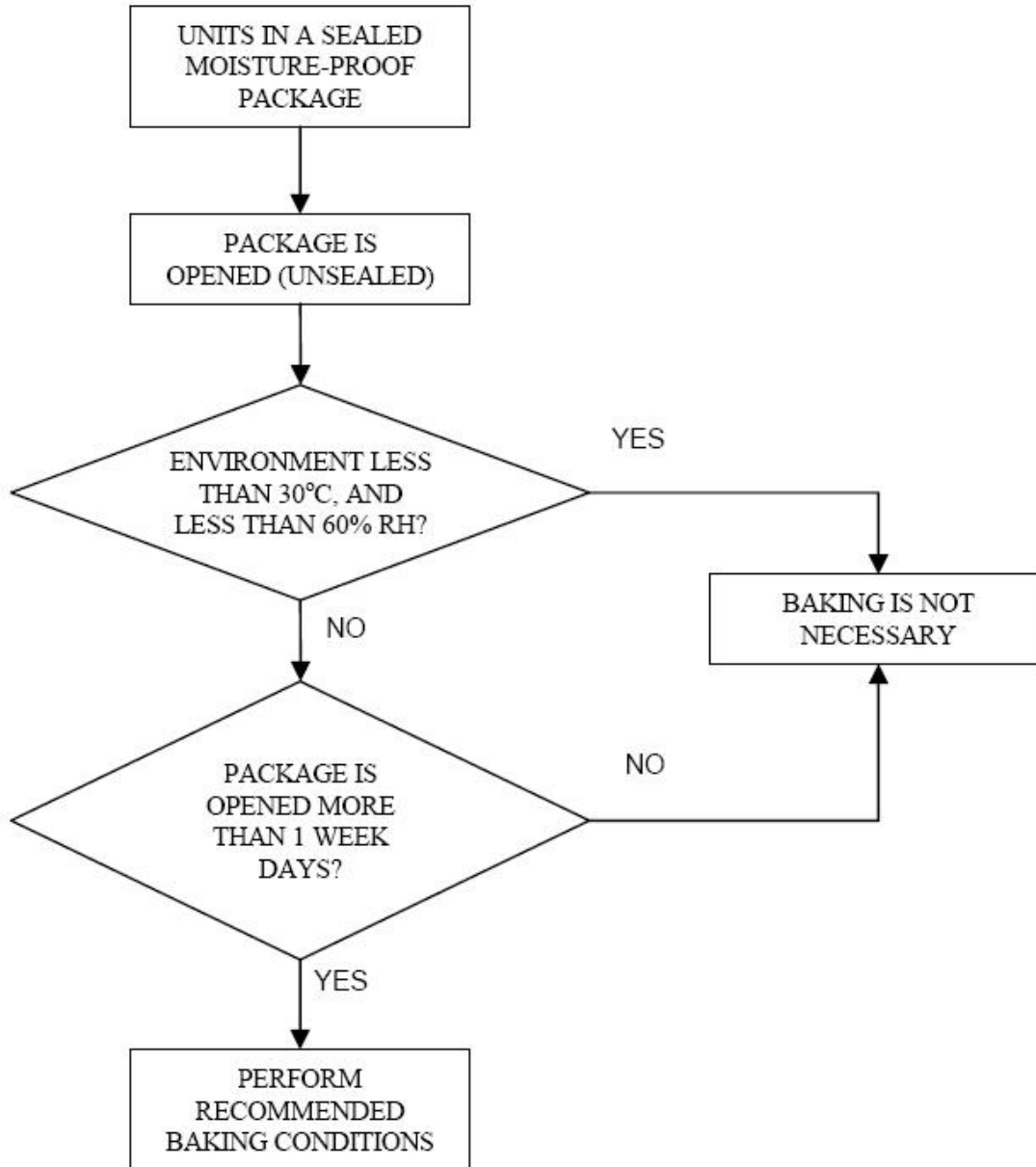
■ One Reel contained 800 PCS products:

■ 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.