



# WCN Opto Group Co., Limited

Customer Name:

Date:

2024-10-6

Part No:

WCN3S-1056WW-A2

Product Group  
Description:

LED Display

Customer Part No:

Approval Date:

Customer  
Confirmation

Approved by

William  
2024-10-6

Checked by

Athena  
2024-10-6

Prepared By

Liu  
2024-10-6

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-1056WW-A2	Whole Spec	2016-9-23	Fei	Athena	William
	New Version issued					
A1	Change Version	Whole Spec	2024-10-6	Liu	Athena	William
	Improved					

**1. Type No./Manufacture's Name**

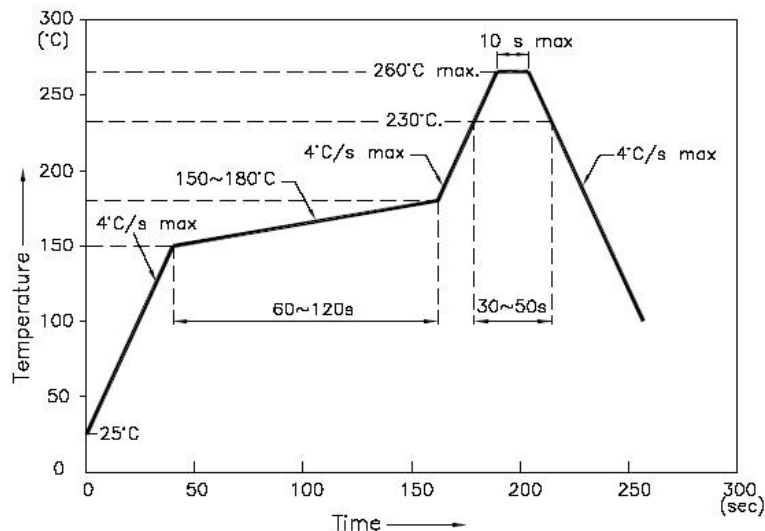
WCN3S-1056WW-A2 / WCN Opto Group Co., Limited.

**2. Features:**

- High Reliability
- Low Power Requirement
- Easy Assembly

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

Soldering Power <30 W.

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

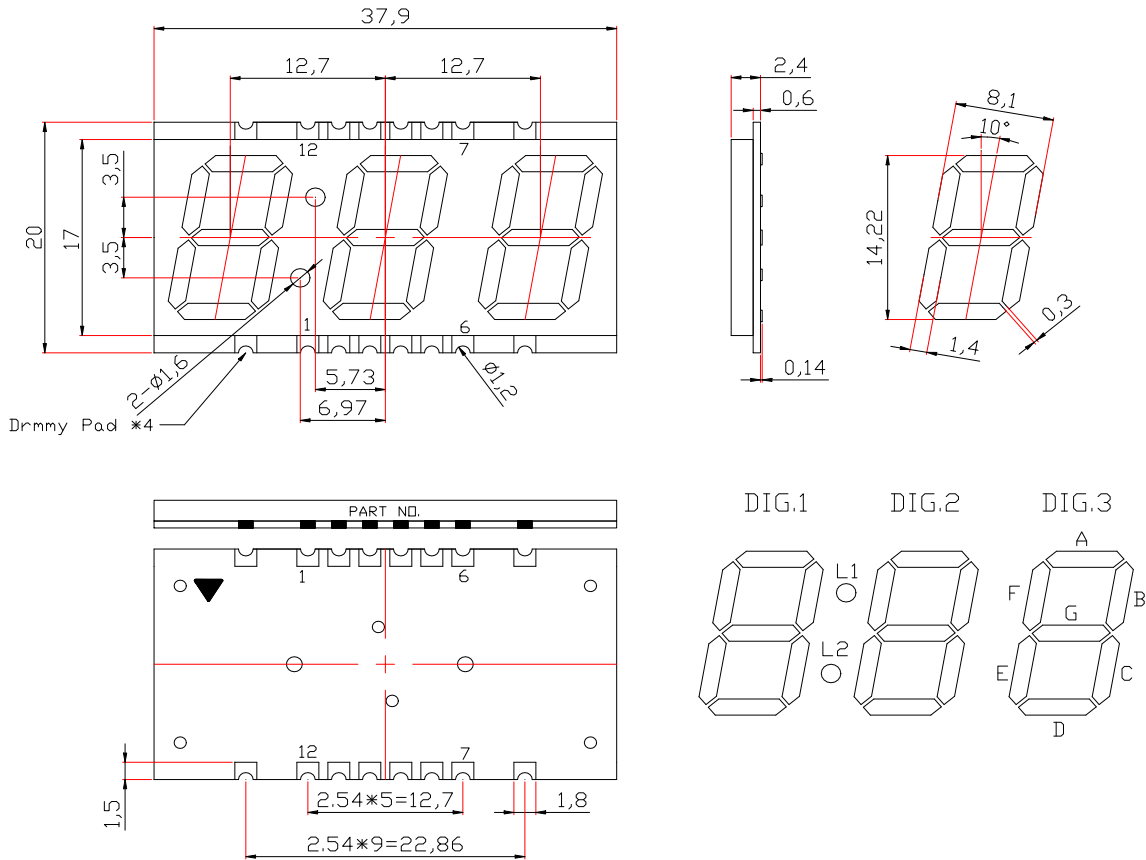
5.1. We recommend the re-flow temperature  $245^{\circ}\text{C} (\pm 5^{\circ}\text{C})$ . the maximum soldering temperature should be limited to  $260^{\circ}\text{C}$ .

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:**

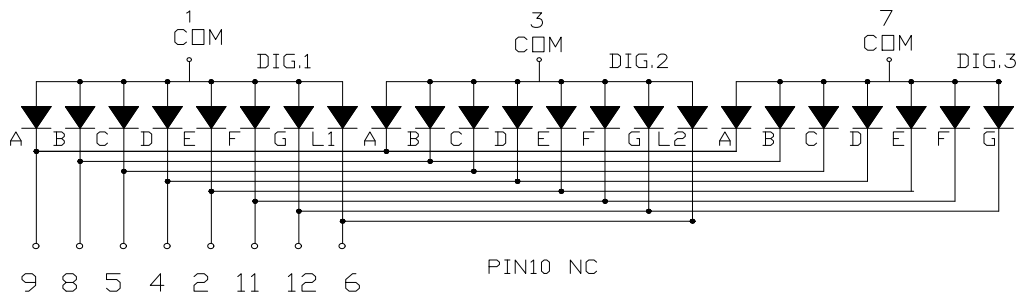
- Three Digit LED Display
- Digit Height: 14.2mm (0.56")
- Gray Face and Milky Segment
- Color: White

## 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	Common Anode dig1	7	Common Anode dig3
2	Cathode E	8	Cathode B
3	Common Anode dig2	9	Cathode A
4	Cathode D	10	NC
5	Cathode C	11	Cathode F
6	Cathode L1,L2	12	Cathode G



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## ABSOLUTE MAXIMUM RATINGS AT TA=25°C

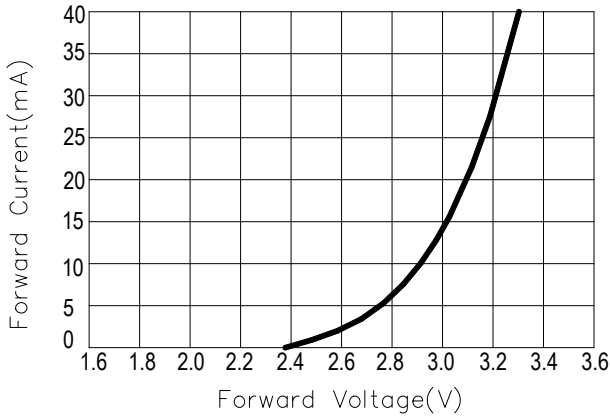
Parameter	Symbol	Condition	Color	Rating	Units
Power Dissipation Per Segment	$P_d$	—	White	85	mW
Forward Current Per Segment	$I_F$	—	White	25	mA
Peak Forward Current Per Segment	$I_{FP}$	1/10 Duty 1KHz	White	100	mA
Reverse Voltage Per Segment	$V_R$	—	White	5	V
Operating Temperature Range	$T_{opr}$	—	—	-40~+105	°C
Storage Temperature Range	$T_{stg}$	—	—	-40~+105	°C

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

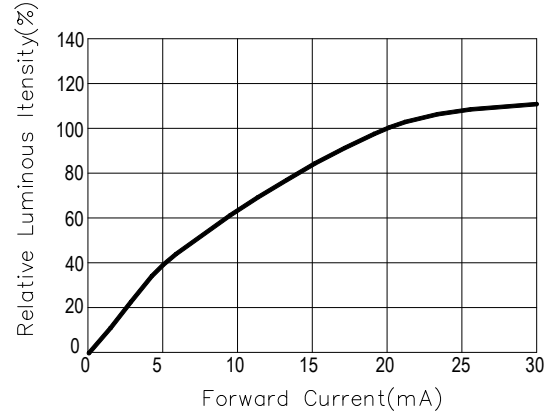
Item	Symbol	Test conditions	Location	Rating			Units
				Min.	Typ.	Max.	
Forward Voltage	$V_F$	$I_F=5mA$	Per Segment	2.2	2.7	3.20	V
Reverse Current	$I_R$	$V_R=5V$	Per Segment	—	—	100	$\mu A$
Luminous Intensity	$I_V$	$I_F=5mA$	Per Segment	240	—	400	mcd
CIE Coordinate	X	$I_F=20mA$	Per Segment	—	0.24	—	
	Y			—	0.23	—	
Luminous Intensity Matching Ratio (Segment To Segment)	$I_{v-m}$	$I_F=5mA$				1.2:1	

## ■ Typical Elector-Optical Characteristics Curve:

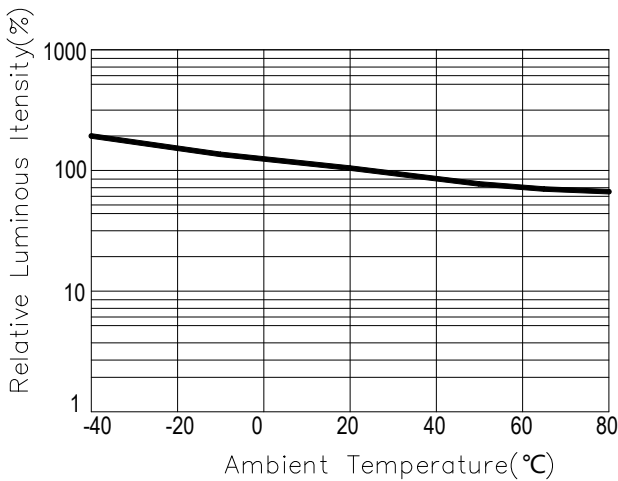
### Forward Current VS Forward Voltage



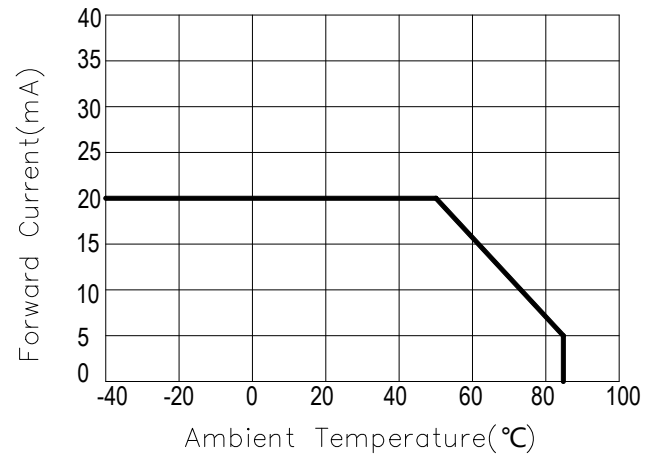
### Relative Flux VS Forward Current



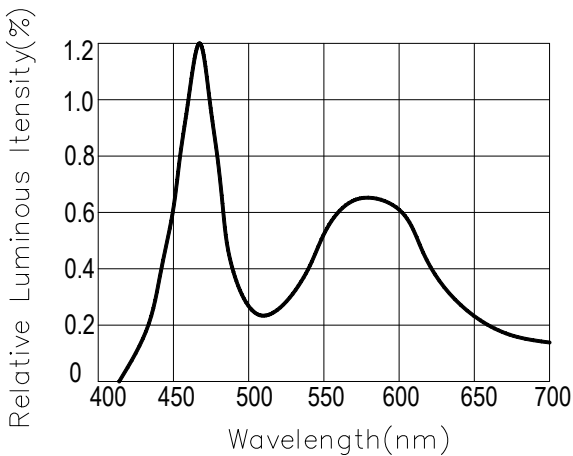
### Relative Flux VS Ambient Temperature



### Forward Current VS Ambient Temperature

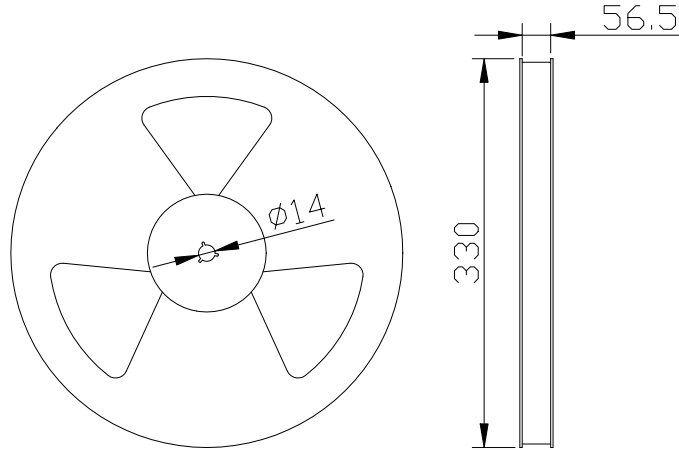


### Relative Spectral Distribution

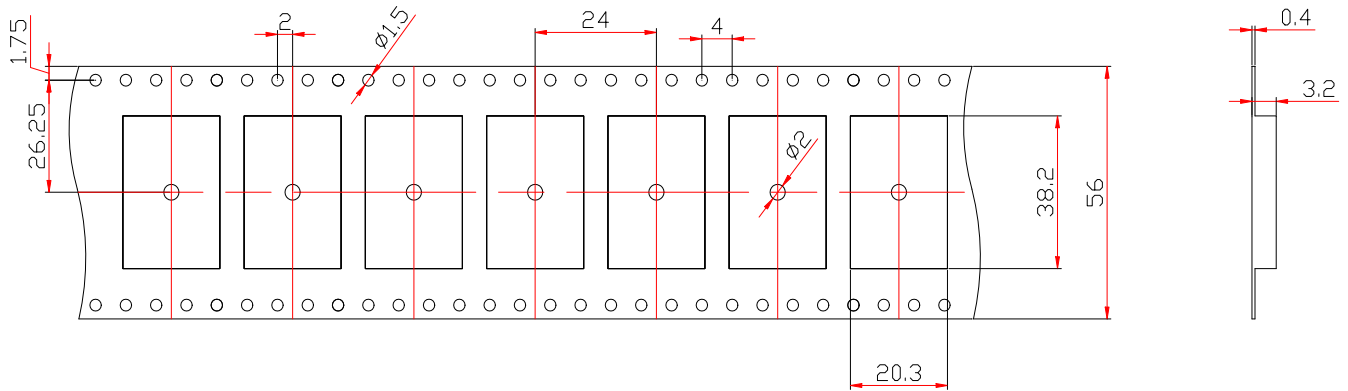


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## ■ Packing Reel Dimensions(mm):

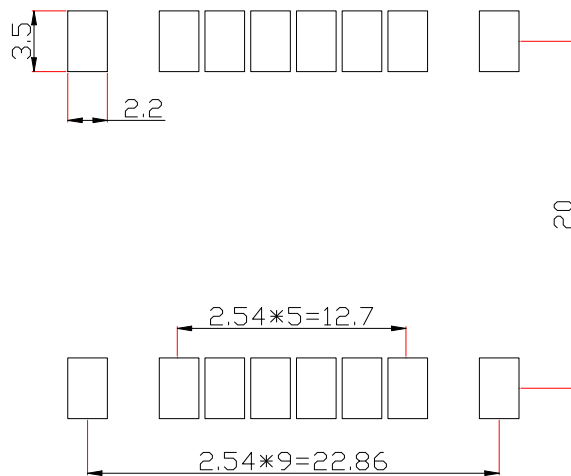


## ■ Dimensions of Tape (Unit: mm)



## ■ One Reel contained 650 PCS products:

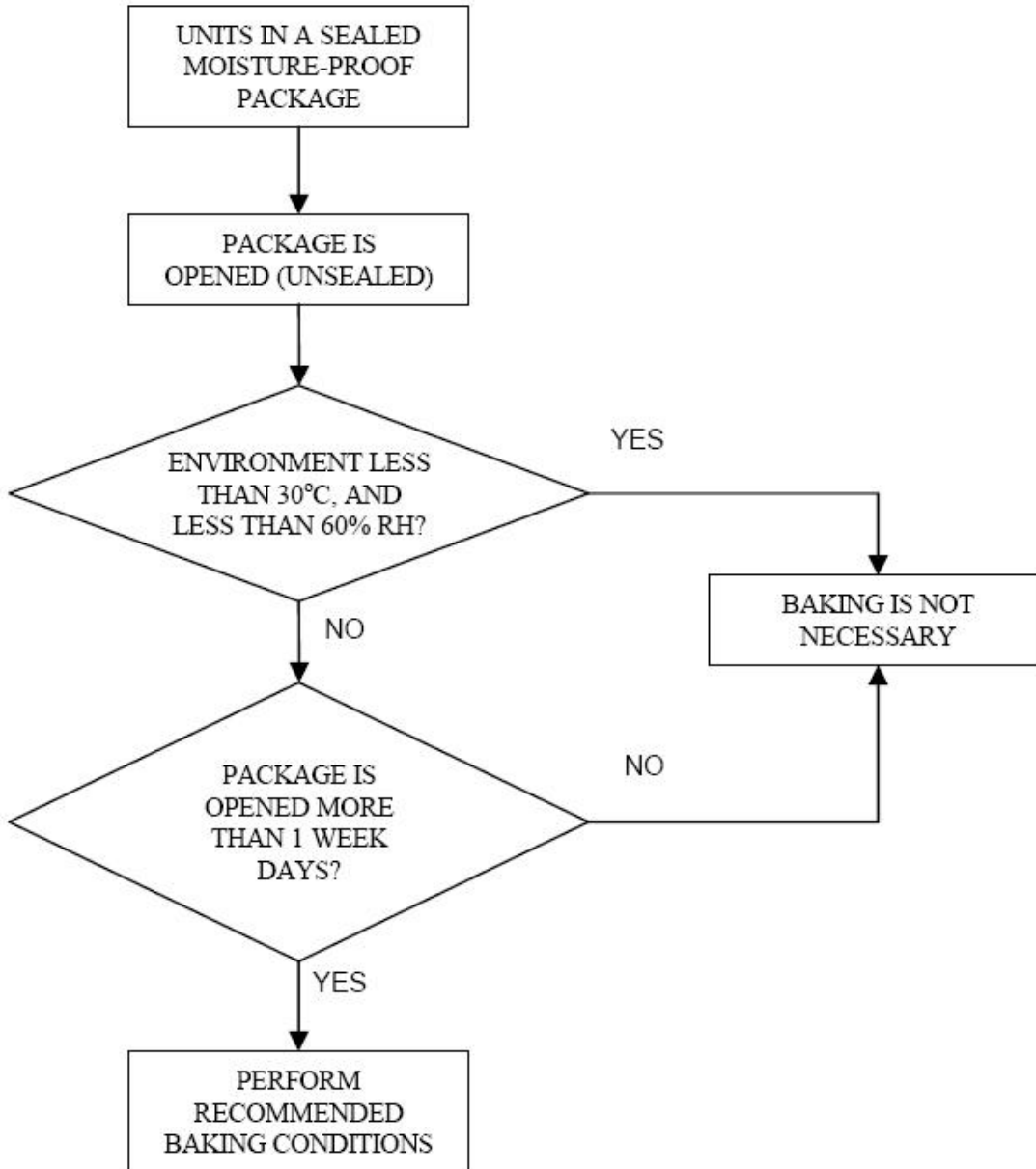
## ■ Recommended Soldering Pattern:





## 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.