

WCN Opto Group Co., Ltd

Customer Name:

Date:

Part No:

Product Group Description:

Customer Part No:

Approval Date:

Customer Confirmation

Approved by

William
2024-5-23

Checked by

Athena
2024-5-23

Prepared By

Liu
2024-5-23

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-1056WW-C1 <hr style="border-top: 1px dashed black;"/> New Version issued	Whole Spec	2024-5-23	Liu	Athena	William

1. Type No./Manufacture's Name

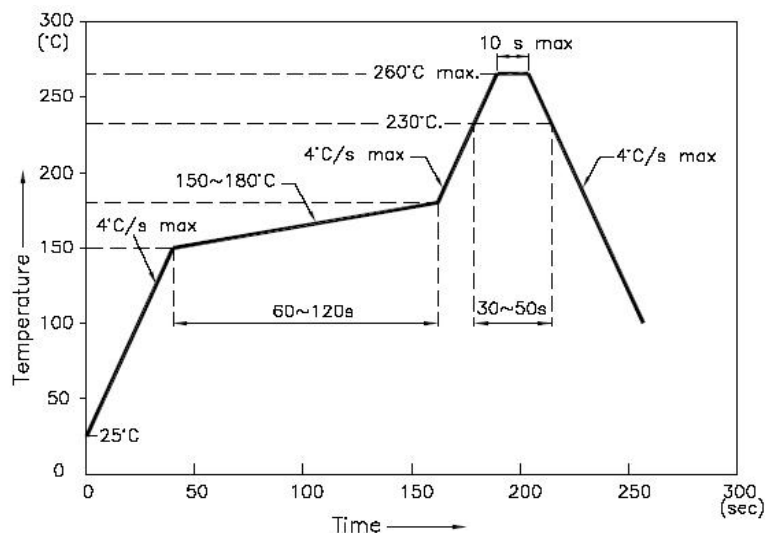
WCN3S-1056WW-C1 / WCN Opto Group Co., Ltd.

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:**

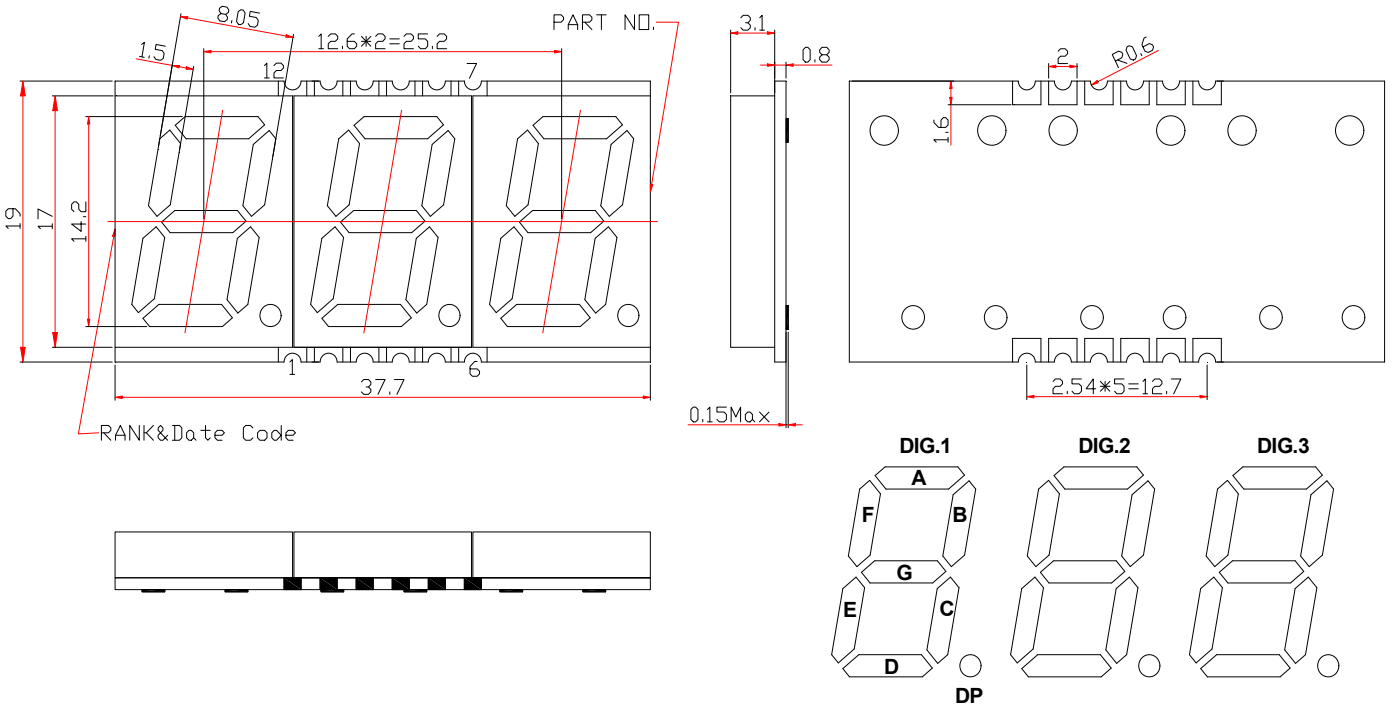
5.1. We recommend the re-flow temperature $245^{\circ}\text{C}(\pm 5^{\circ}\text{C})$. the maximum soldering temperature should be limited to 260°C .

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:

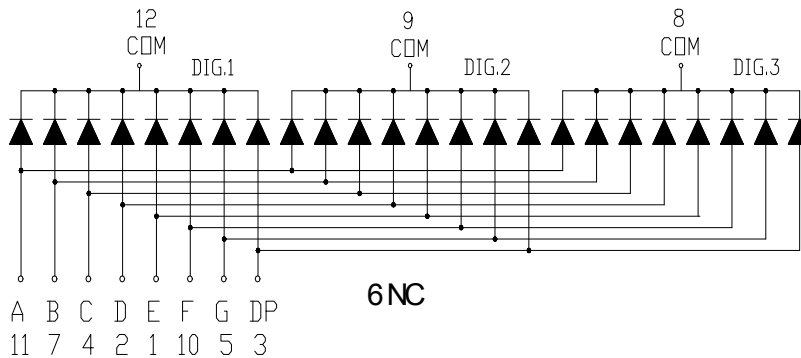
- Three Digit LED Display
- Digit Height: 14.2mm(0.56")
- Gray Face and Milky Segment
- Color: White

■ **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	Anode E	7	Anode B
2	Anode D	8	Common Cathode Dig.3
3	Anode DP	9	Common Cathode Dig.2
4	Anode C	10	Anode F
5	Anode DP	11	Anode A
6	NC	12	Common Cathode Dig.1

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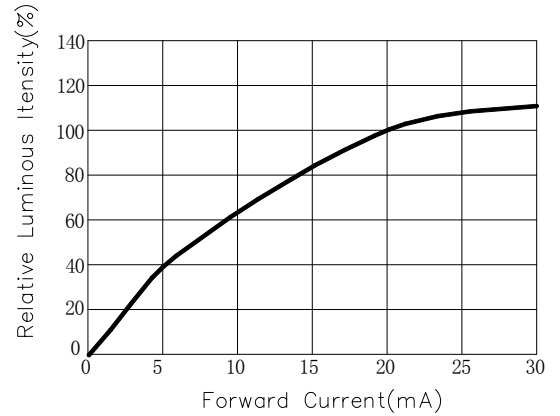
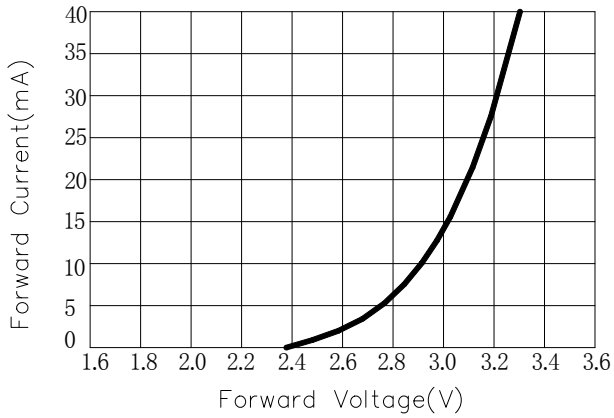
■ ABSOLUTE MAXIMUM RATINGS AT TA=25°C

Parameter	Symbol	Condition	Color	Rating	Units
Power Dissipation Per Segment	P_d	—	White	90	mW
Forward Current Per Segment	I_F	—	White	5	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

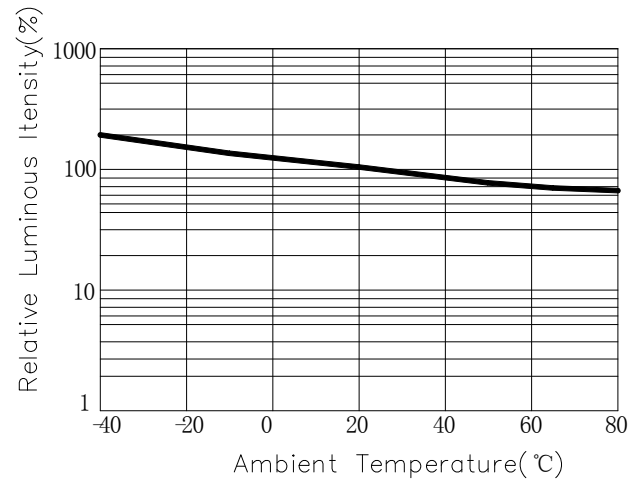
■ Electrical/Optical Characteristics Rating(Ta=25°C)

Item	Symbol	Test conditions	Location	Rating			Units
				Min.	Typ.	Max.	
Forward Voltage	V_F	$I_F=20mA$	Per Chip	2.60	3.00	3.60	V
Reverse Current	I_R	$V_R=5V$	Per Chip	—	—	100	μA
Luminous Intensity	I_V	$I_F=20mA$	Per Chip	600	1100	1400	mcd
CIE Coordinate	X	$I_F=20mA$	Per Chip	—	0.28	—	nm
	Y			—	0.28	—	
Spectral Line Half Width	$\Delta \lambda$	$I_F=20mA$	Per Chip	—	—	20	nm
Luminous Intensity Matching Ratio (Segment To Segment)	I_{v-m}	$I_F=10mA$				1.2:1	

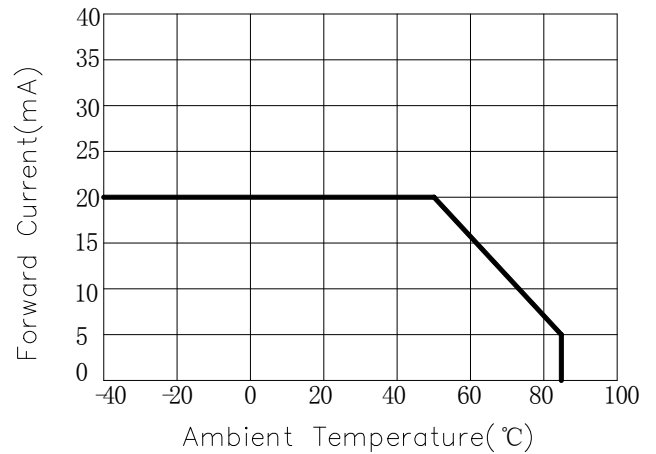
■ **Typical Optical-Electronic Characteristic Curves**



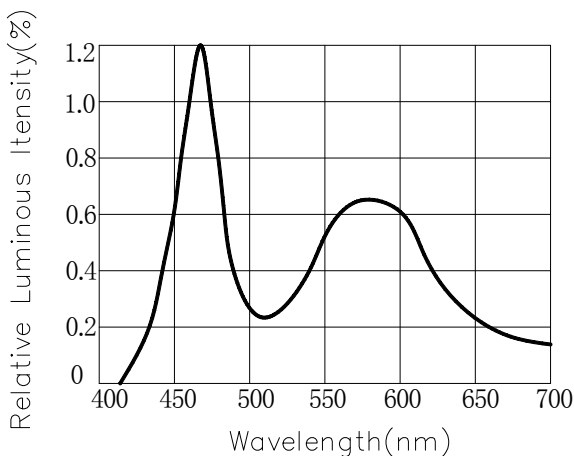
Relative Flux VS Ambient Temperature



Forward Current VS Ambient Temperature



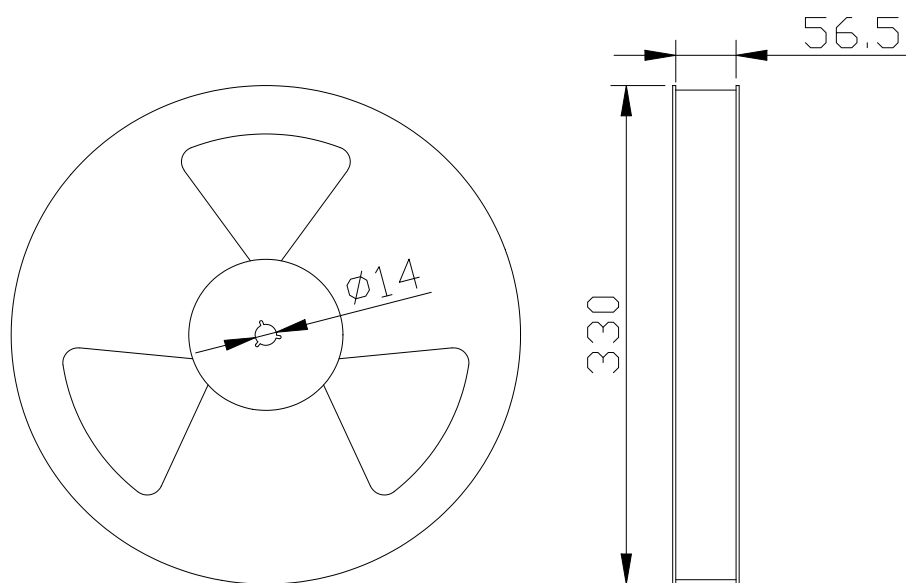
Relative Spectral Distribution



Typical Spectral Distribution

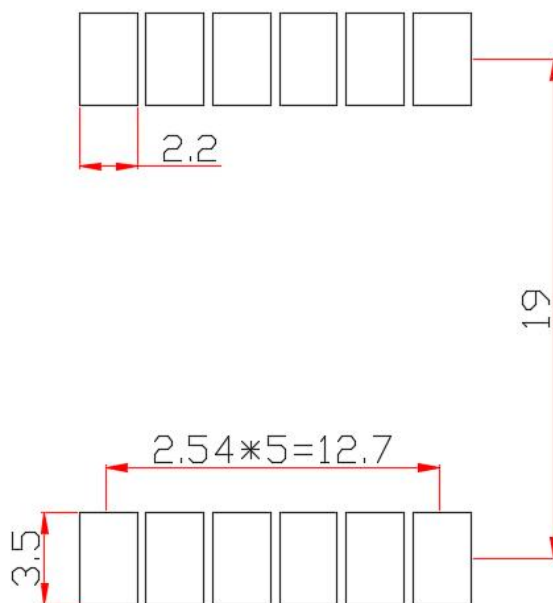
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■ Packing Reel Dimensions(mm):



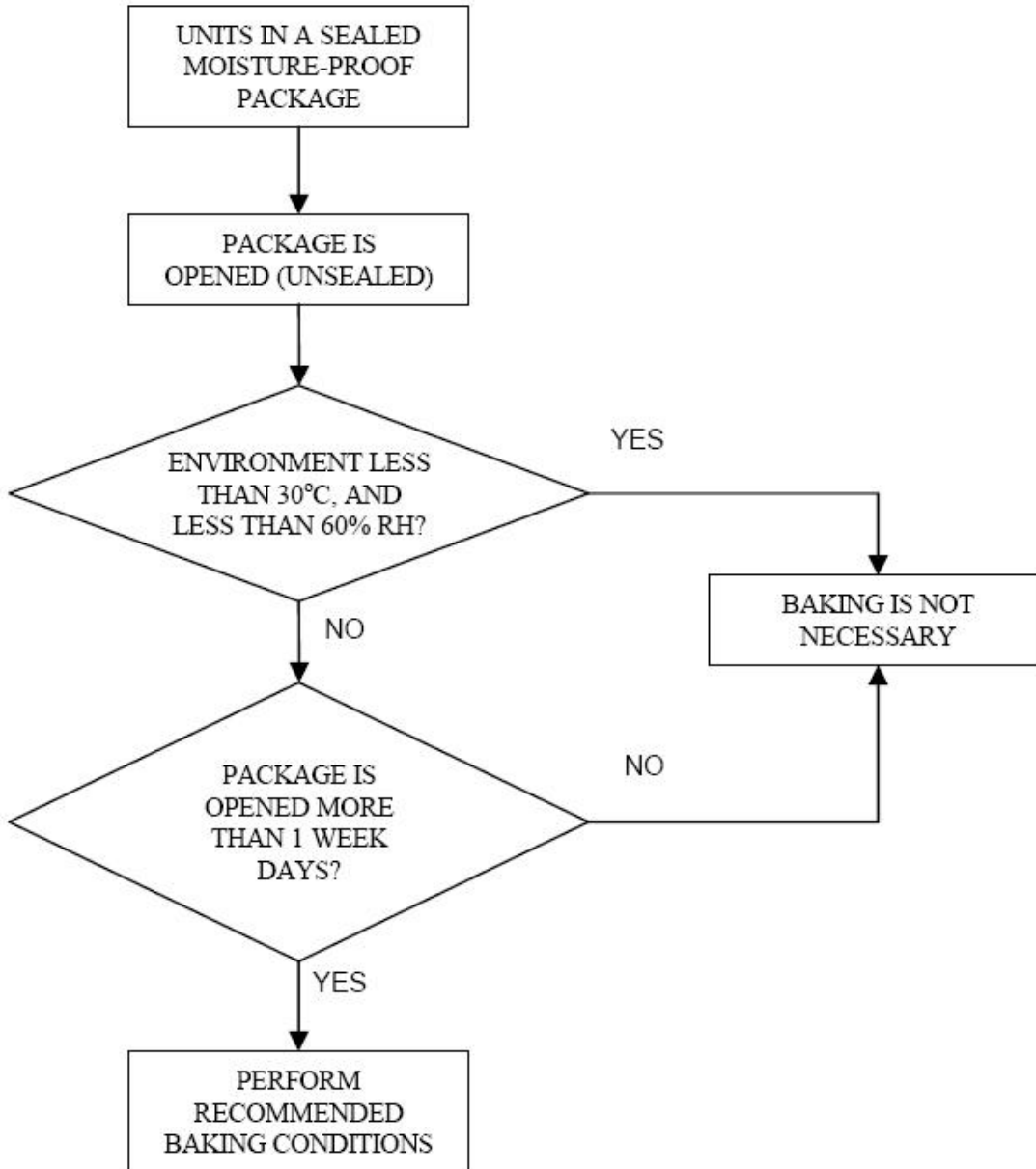
■ One Reel contained 650 PCS products:

■ 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.**