

WCN Opto Group Co., Limited**Customer Name:****Date:**

2023-5-29

Part No:

WCN1S-1056B7-A1R

**Product Group
Description:**

LED Display

Customer Part No:**Approval Date:****Customer
Confirmation****Approved by****Checked by****Prepared By**William
2023-5-29Athena
2023-5-29Zhang
2023-5-29

Country of Origin: China

World Components Network Service Ltd5th Floor,Block A-2,Xuxingda Ind Zone
Shiyan Town,Bao An District , Shenzhen
Tel : (86)755-29000022
Fax : (86)755-29000023**RoHS**[www . wcnopto.net](http://www.wcnopto.net)

Table of Contents

NO.	ITEM	PAGE
1	Cover	1
2	Table of Contents	2
3	Revision Record	3
4	Description	4
5	Outer Dimension and Circuit Diagram	5
6	Absolute Maximum Rating and Electrical/Optical Characteristics Rating	6
7	Typical Electrical/ Optical Characteristic Curves and Spectrometer	7
8	Packaging Data	8
9	Moisture Proof Packaging	9

WCN Opto Group Co., Limited

REVISION RECORD

MARKER	Matter for revision	SHEET	DTAE	MAKER	APPOVED SIGN	
	Reason for revision					
A0	P# WCN1S-1056B7-A1R	Whole Spec	2019-8-13	Zhang	Athena	William
	New Version issued					
A1	Chang Outer Dimension and Rating	Page.5 / 6	2023-5-29	Zhang	Athena	William
	Improved					

1. Type No./Manufacture's Name

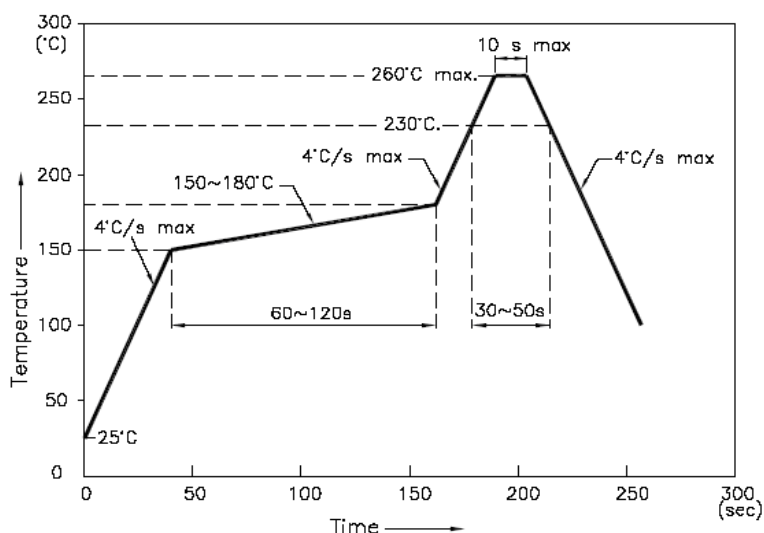
WCN1S-1056B7-A1R / WCN Opto Group Co., Limited.

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:**

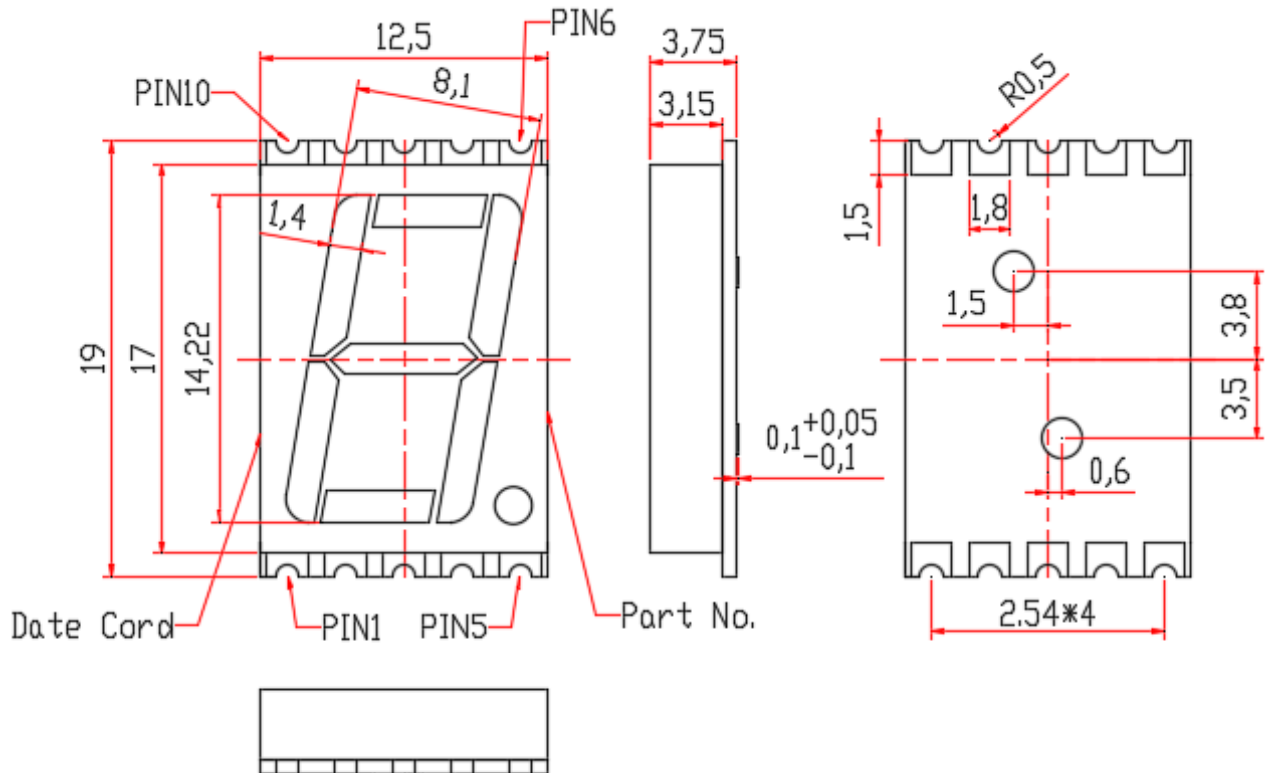
5.1. We recommend the re-flow temperature $245^{\circ}\text{C} (\pm 5^{\circ}\text{C})$. the maximum soldering temperature should be limited to 260°C .

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:

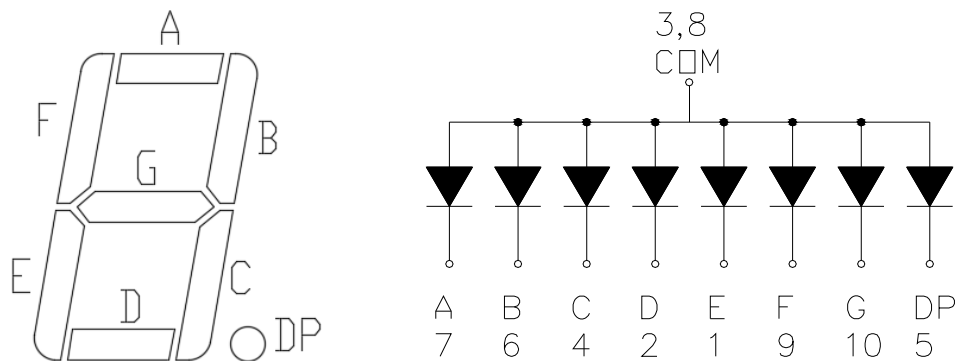
- Single Digit LED Display
- Digit Height: 14.2mm (0.56")
- Gray Face and Milky Segment
- Color: Blue

■ **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	6	Cathode B
2	Cathode D	7	Cathode A
3	Common Anode	8	Common Anode
4	Cathode C	9	Cathode F
5	Cathode DP	10	Cathode G

■ ABSOLUTE MAXIMUM RATINGS AT TA=25°C

Parameter	Symbol	Condition	Color	Rating	Units
Power Dissipation Per Segment	P _d	—	Blue	92.5	mW
Forward Current Per Segment	I _F	—	Blue	25	mA
Peak Forward Current Per Segment	I _{FP}	1/10 Duty 1KHz	Blue	100	mA
Reverse Voltage Per Segment	V _R	—	Blue	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	3.2	3.7	V
Reverse Current	I _R	V _R =5V	Per Chip	—	—	100	μA
Luminous Intensity	I _V	I _F =10mA	Per Chip	90	120	150	mcd
Wave Length	λ _P	I _F =20mA	Per Chip	—	—	—	nm
	λ _D			—	462	—	
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	

Typical Optical-Electronic Characteristic Curves

Fig1. Forward Current vs. Forward Voltage:

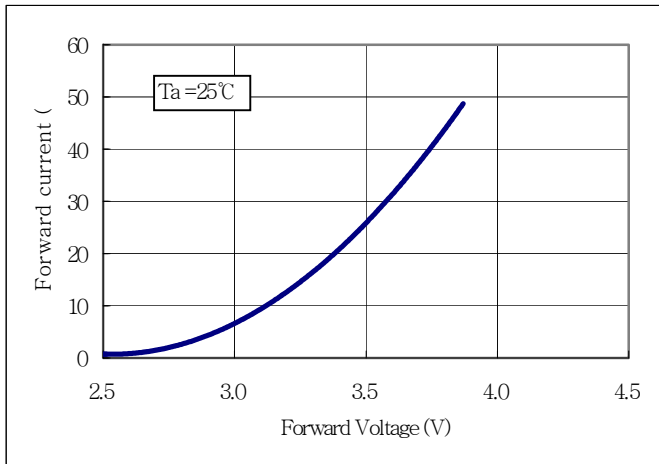


Fig2. Forward Current vs. Relative Intensity:

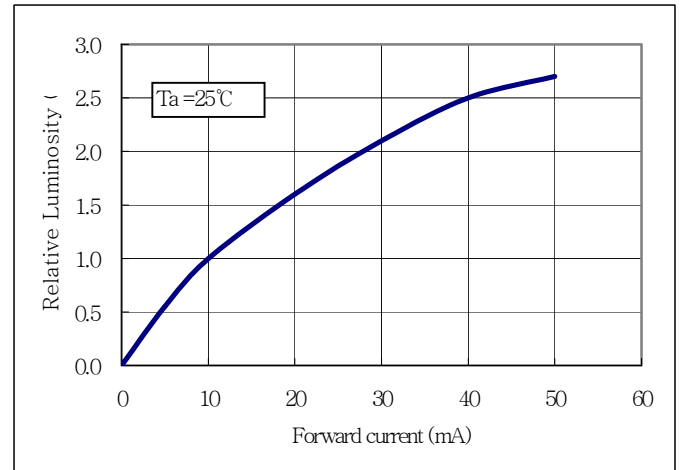


Fig3. Forward Current vs. Relative wavelength:

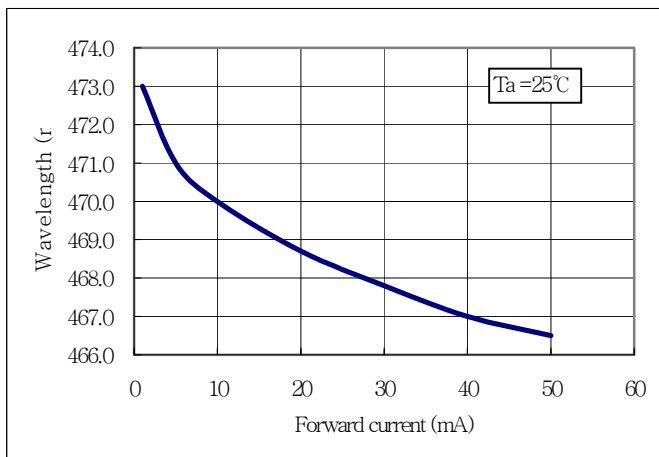
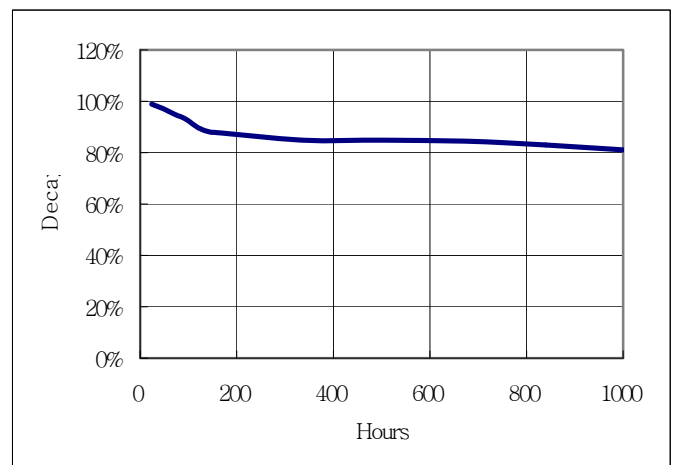
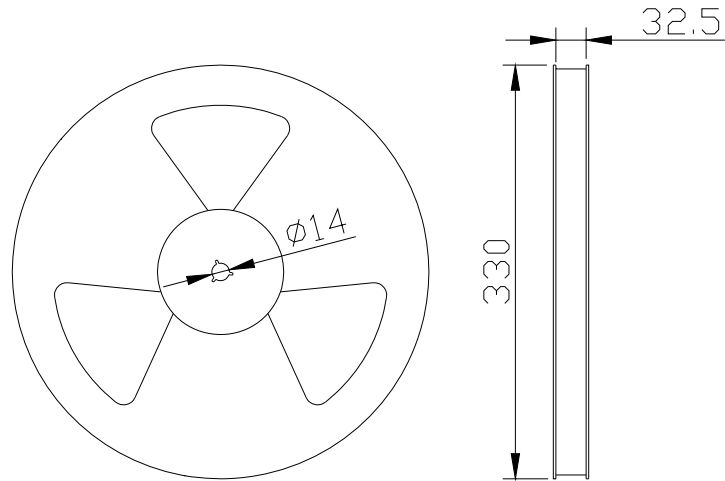


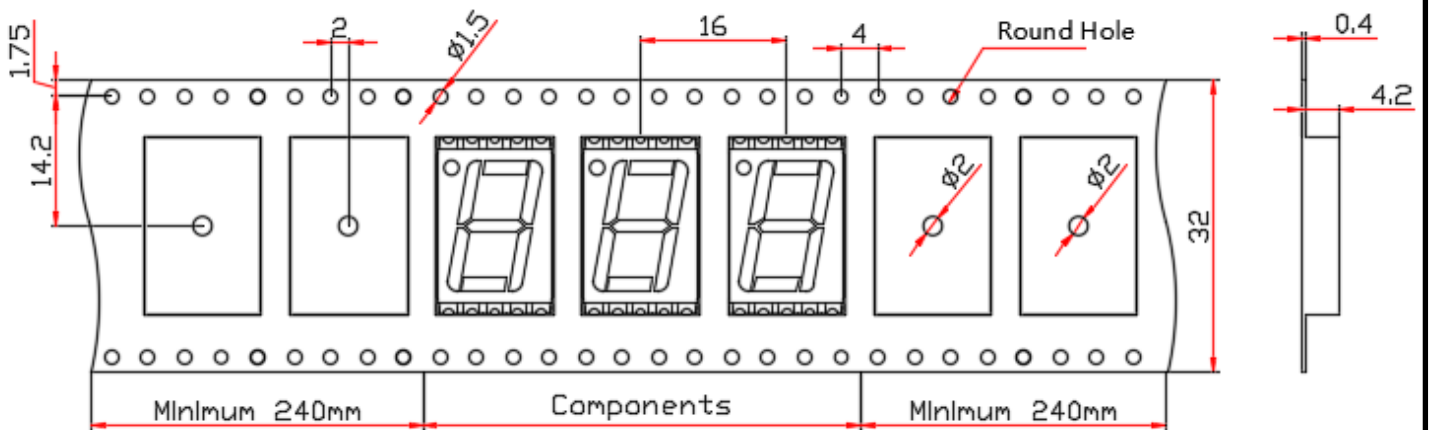
Fig4. Life Test at 20mA R.T. 1000hrs:



■ **Packing Reel Dimensions(mm):**

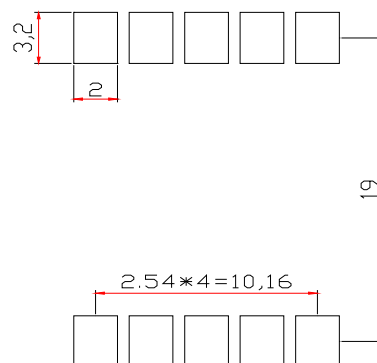


■ **Dimensions of Tape (Unit: mm)**



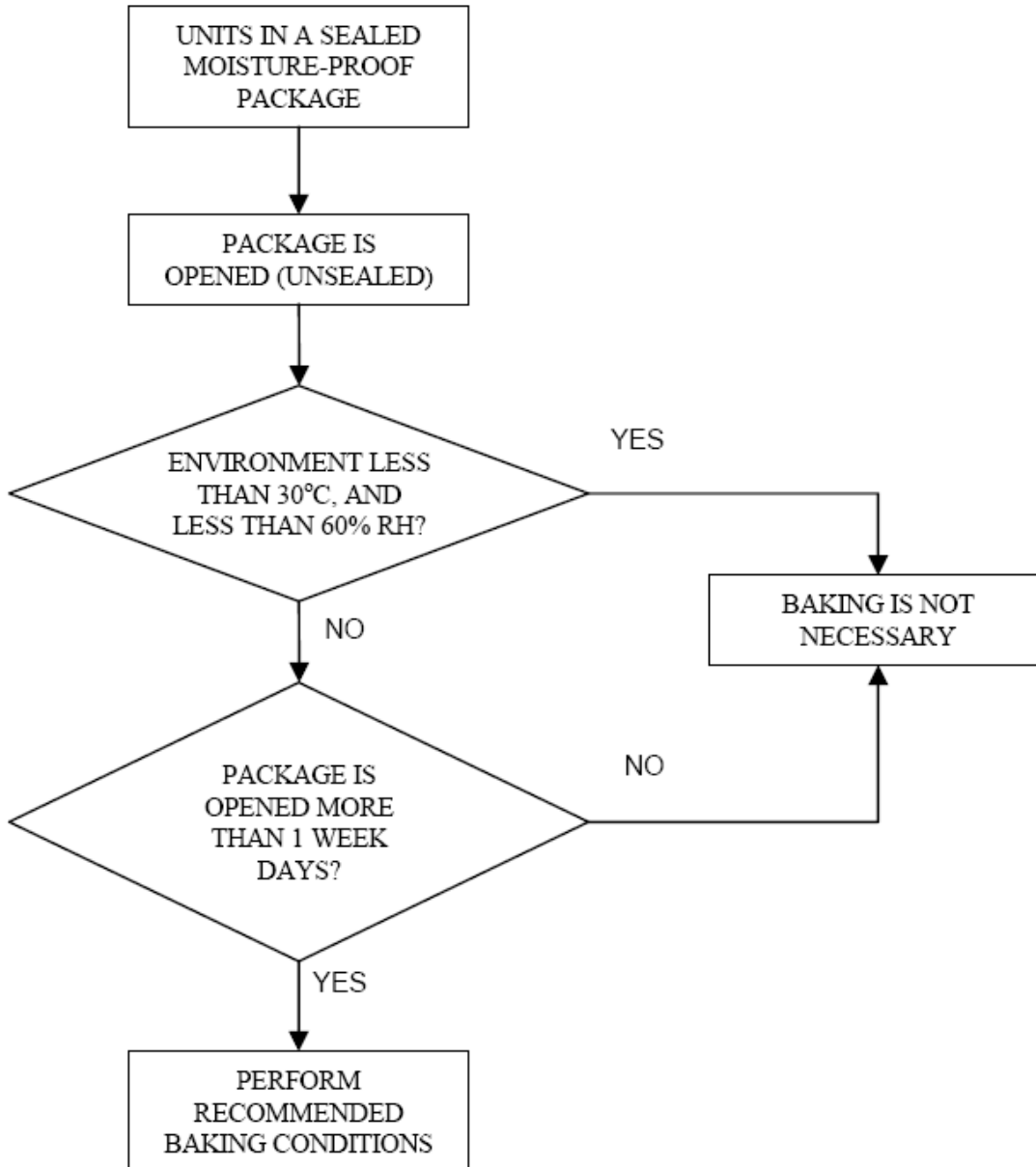
■ **One Reel contained 1000 PCS products:**

■ **Recommended Soldering Pattern:**



Moisture Proof Packaging:

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