

World Components Network Service Ltd**Customer Name:****Date:**

2016-2-23

Part No:

WCN3S-1028HY-A1

**Product Group
Description:**

LED Display

Customer Part No:**Approval Date:****Customer
Confirmation****Approved by****Checked by**Athena
2016-2-23**Prepared By**Fei
2016-2-23

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-1028HY-A1 <hr style="border-top: 1px dashed black;"/> New Version issued	Whole Spec	2016-2- 23	Fei	Athena	

1. Type No./Manufacture's Name

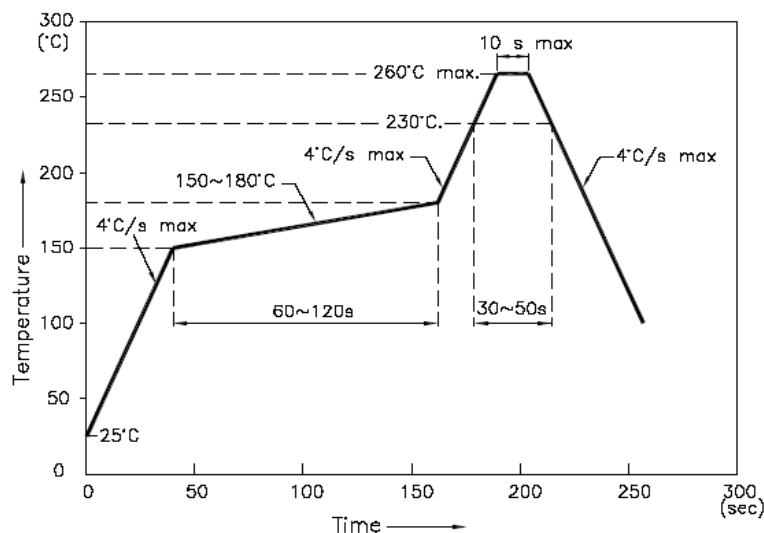
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2. Features:

- 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:**

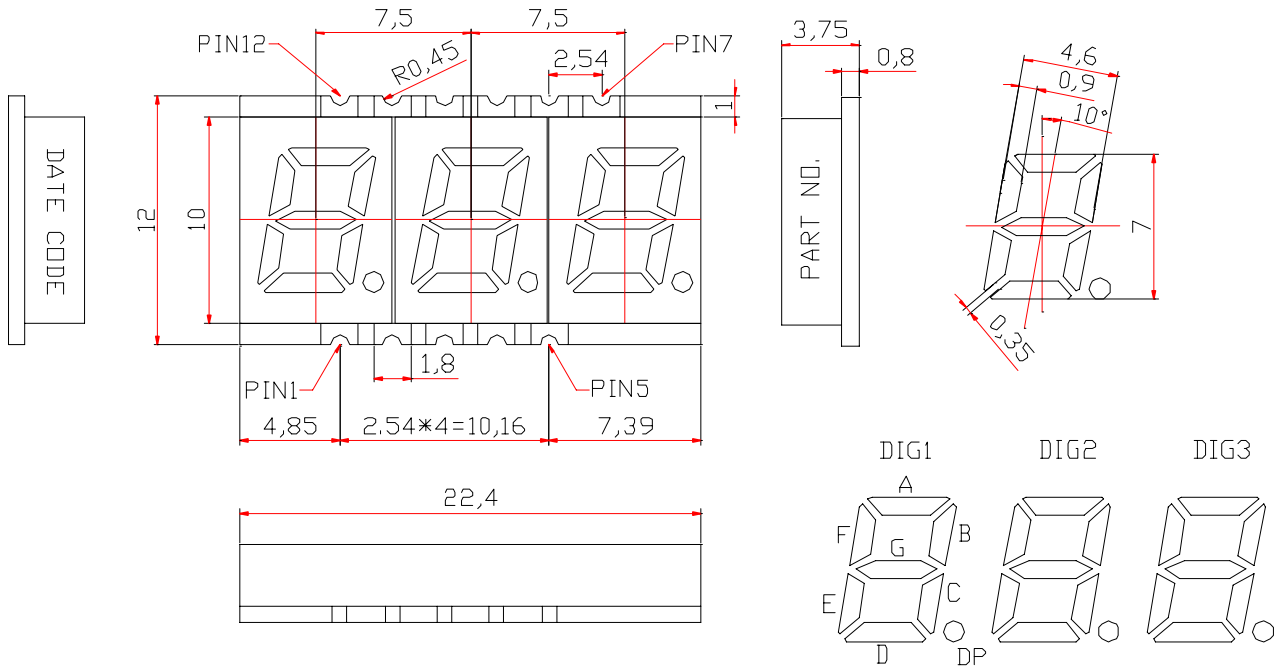
5.1. We recommend the re-flow temperature $245^{\circ}\text{C} (\pm 5^{\circ}\text{C})$. the maximum soldering temperature should be limited to 260°C .

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:

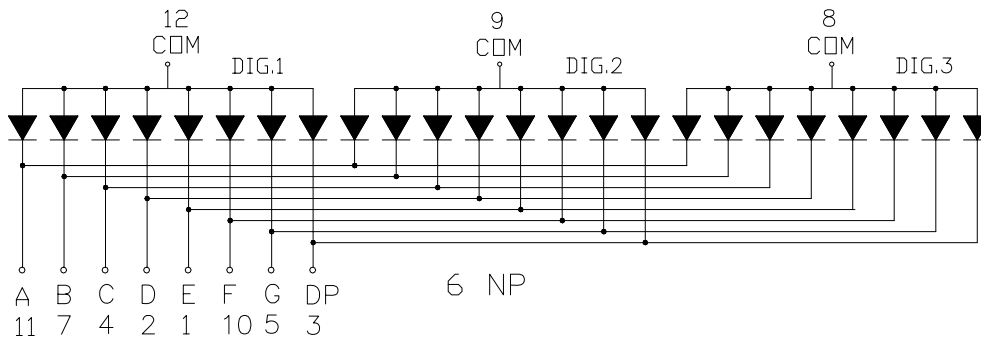
- Three Digit LED Display
- Digit Height: 7.0mm (0.28")
- Gray Face and Milky Segment
- Color: Yellow

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	NP	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	—	Yellow	65	mW
Forward Current Per Segment	I_F	—	Yellow	25	mA
Peak Forward Current Per Segment	I_{FP}	1/10 Duty 1KHz	Yellow	100	mA
Reverse Voltage Per Segment	V_R	—	Yellow	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	1.80	2.00	2.60	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	—	595	—	nm
	λ_D			586	589	592	
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	

■ 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	ucd
N	N	$I_F=10mA$	6101	7200	ucd
O	O	$I_F=10mA$	7201	8500	ucd
P	P	$I_F=10mA$	8501	10500	ucd

Typical Optical-Electronic Characteristic Curves

光电特性曲线

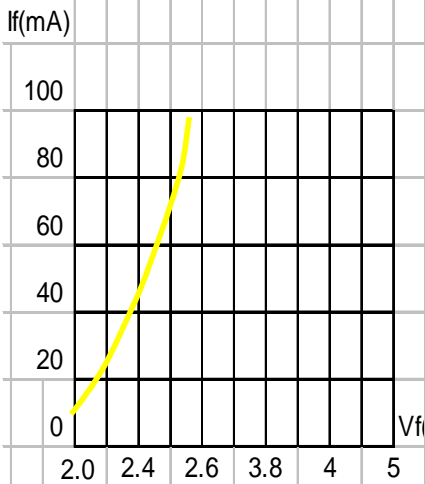


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

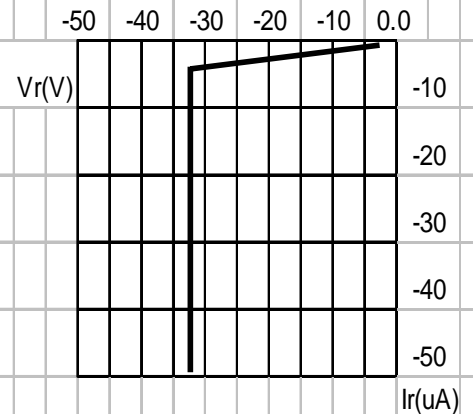
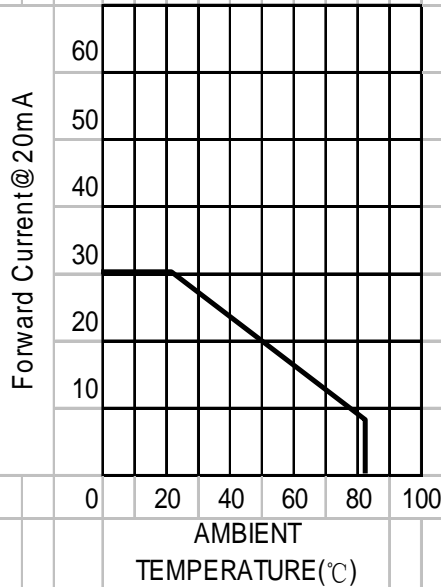
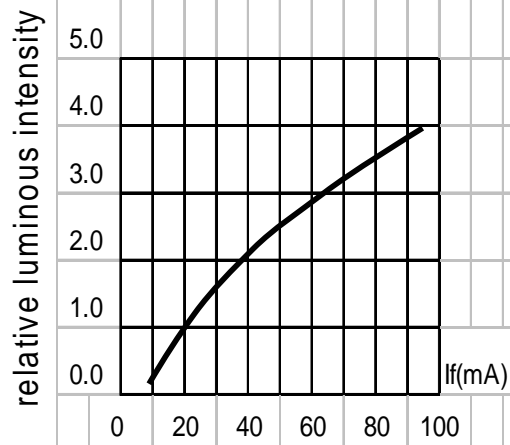
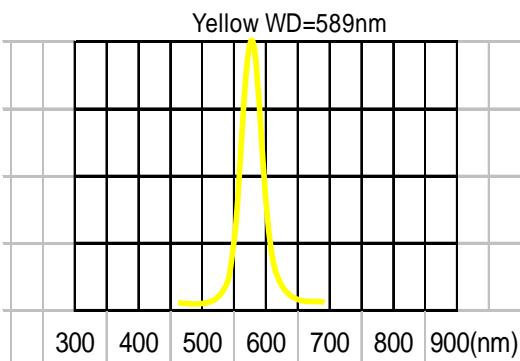
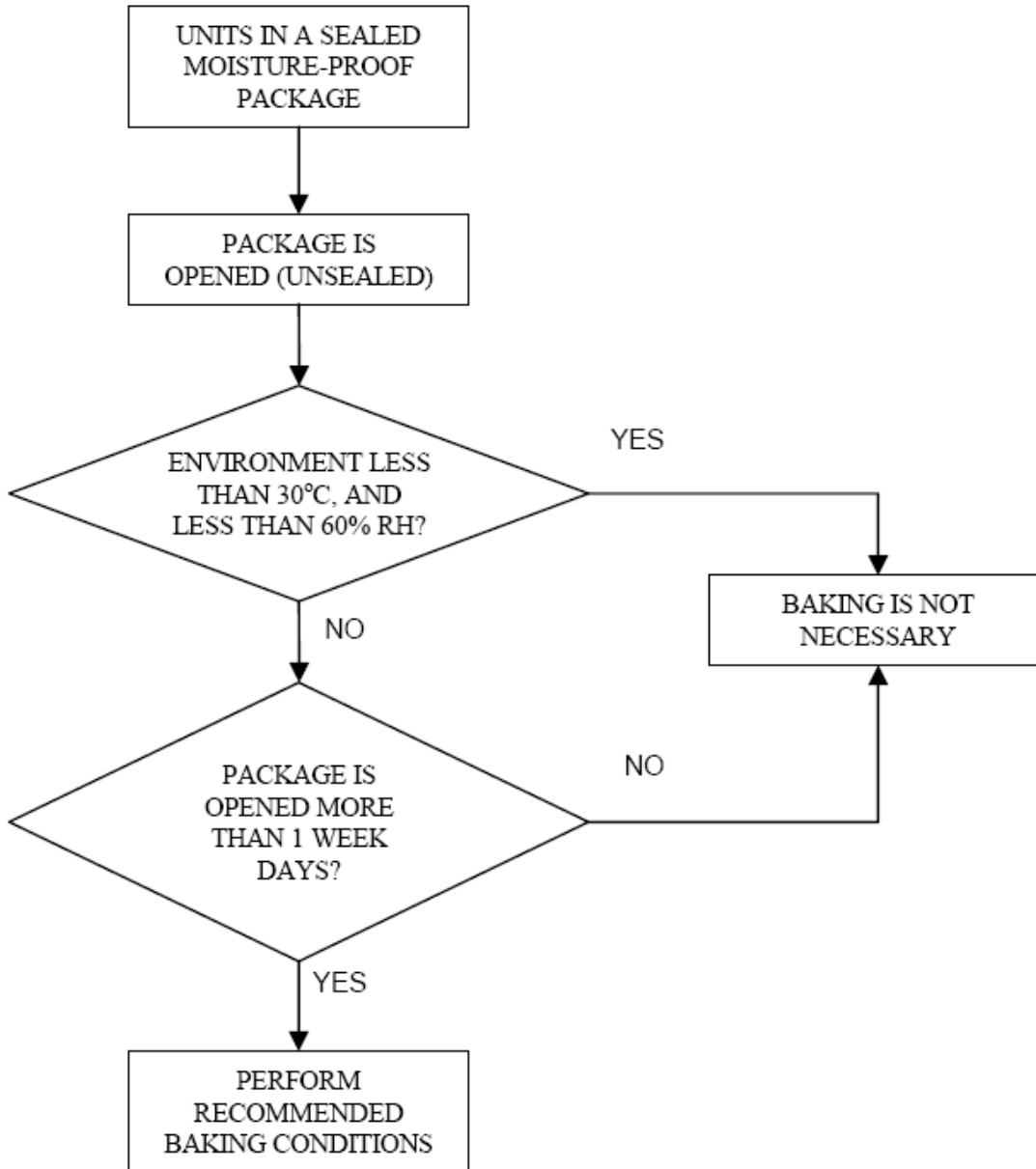


Fig.2 REVERSE CURRENT VS. REVERSE VOLTAGE.



■ **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.**