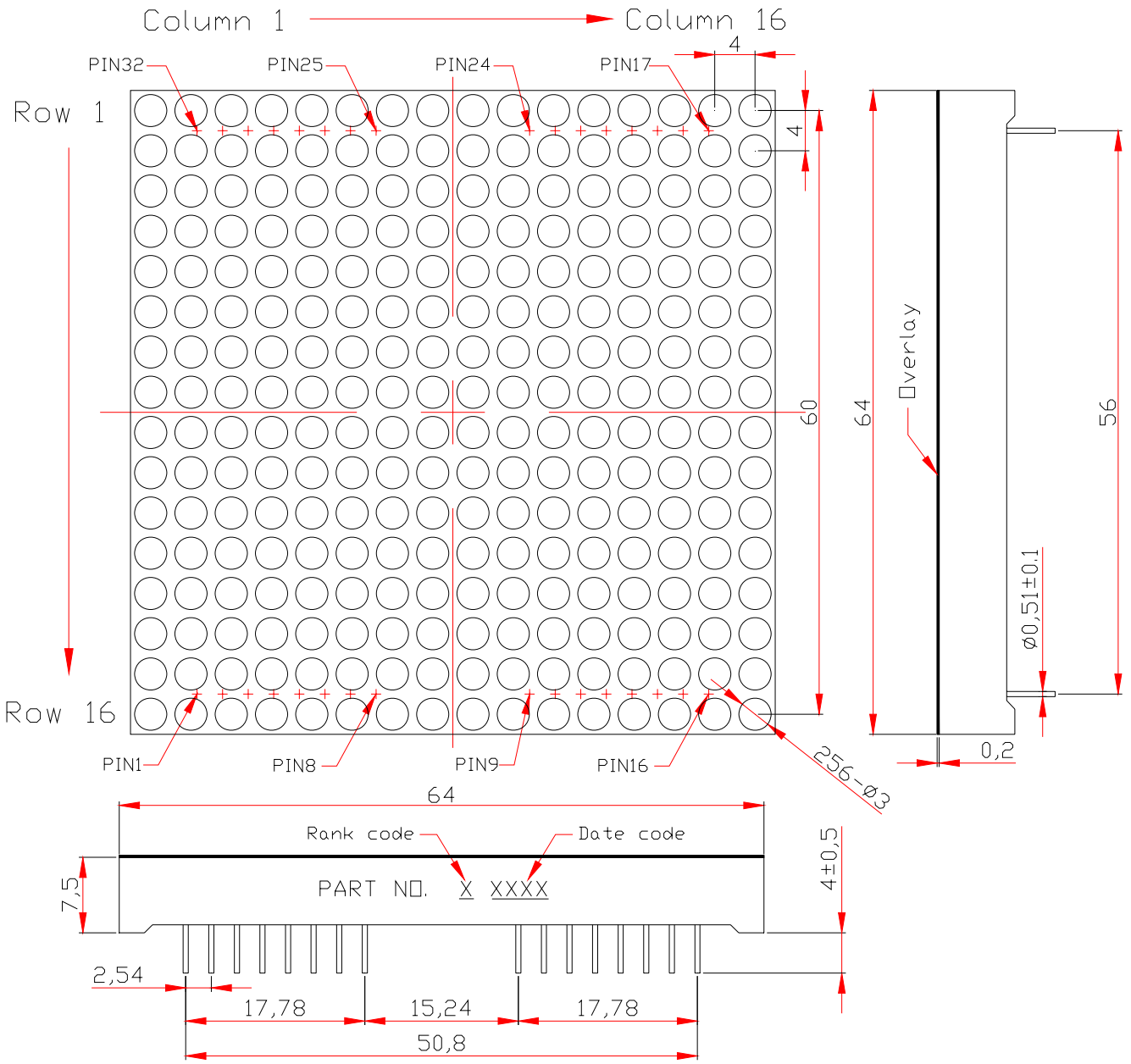
WCN-GG25R7-DA02-F

SPECIFICATION

WCN			CUSTOMER Confirmed
Prepared by	Checked by	Approved by	
Zhang 2018-6-13	Athena		

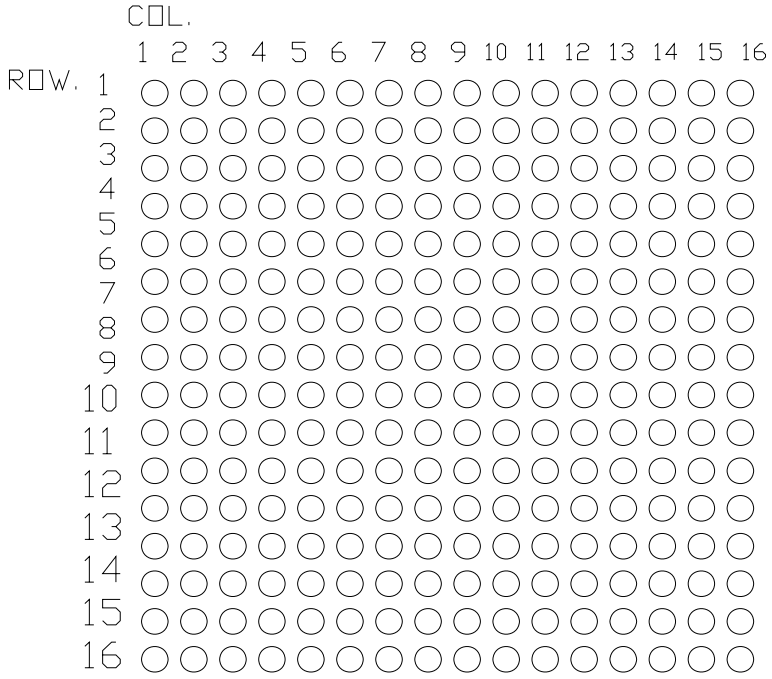
REVISION: A0

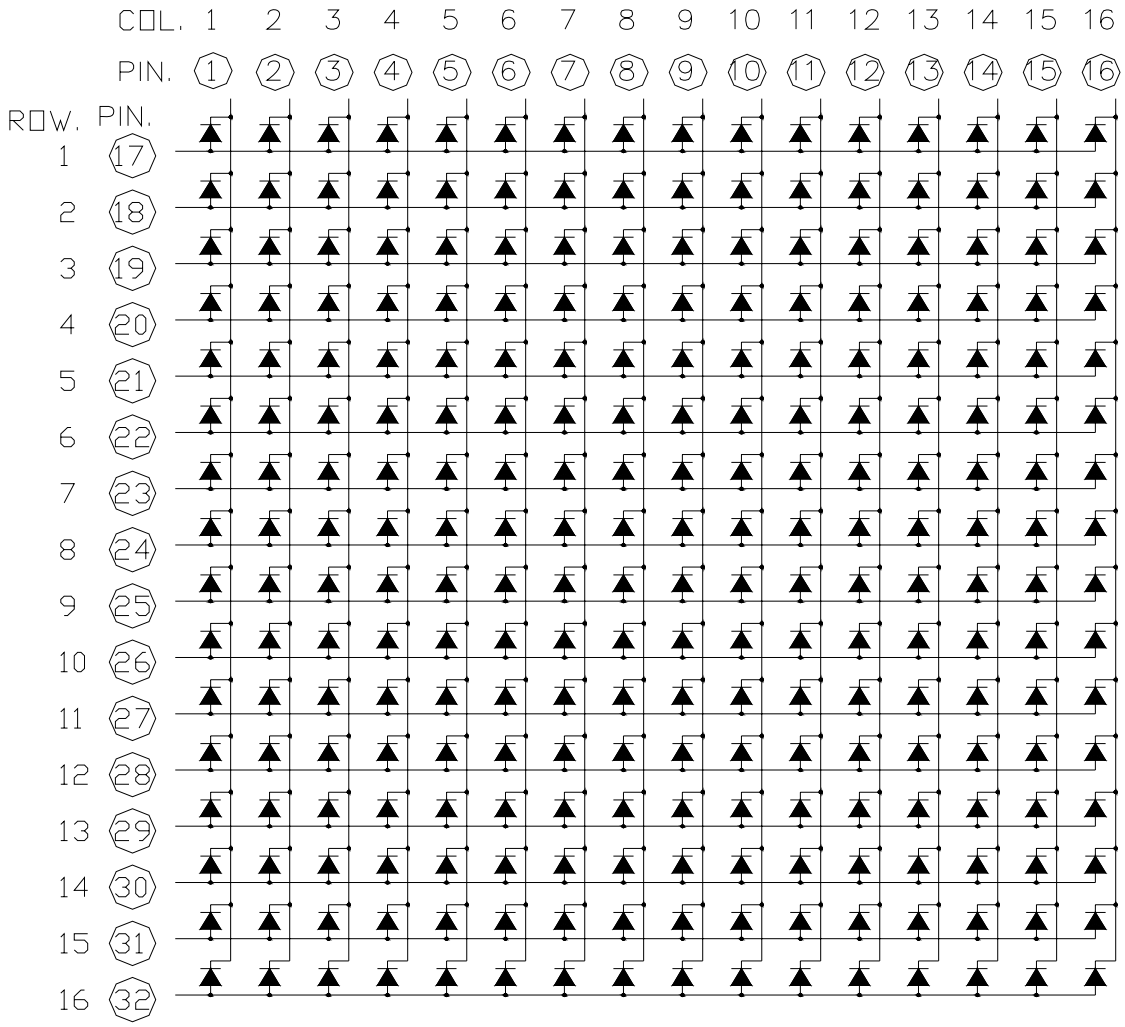
Outer Dimension:



Notes: Unless otherwise stated, the tolerance is ±0.25mm.

■ **Circuit Diagram:**





■ **Features:**

- **High Reliability**
- **Color: Super Bright Red**
- **Low Power Requirement**
- **Easy Assembly**

■ **Description:**

- **16*16 Dot Matrix Anode Row**
- **Φ3.0 mm Dot and Pitch 4 mm**
- **Black Face and White Dots with White Overlay**

■ **Absolute Maximum Rating (Ta=25℃):**

Parameter	Symbol	Condition	Color	Rating	Units
Maximal Power Dissipation (When completely Lighting) Per Dot	P_d	—	Red	65	mW
Maximal Forward Current (When completely Lighting) Per Dot	I_F	—	Red	25	mA
Peak Forward Current Per Dot	I_{FP}	1/8Duty 10khz	Red	80	mA
Reverse Voltage Per Dot	V_R	—	Red	5	V
Operating Temperature Range	Topr	—	—	-35～+85	℃
Storage Temperature Range	Tstg	—	—	-35～+85	℃

■ **Electrical/Optical Characteristics Rating(Ta=25℃)**

Item	Symbol	Test conditions	Location	Color	Rating			Uint
					Min.	Typ.	Max.	
Forward Voltage	V_F	I_F=20mA	Per Dot	Red	—	2.00	2.60	V
Reverse Current	I_R	VR=5V	Per Dot	Red	—	—	100	μA
Luminance	I_V	I_{FP}=40mA 1/8 Duty	Per Dot	Red	—	7.8	—	mcd
Emission Wave Length	λ_D	I_F=20mA	Per Dot	Red	—	621	—	nm
Spectral Line Half Width	△λ	I_F=20mA	Per Dot	Red	—	20	—	nm

■ **Luminous Intensity Sorting: (Luminous Intensity Tolerance is +/-10%)**

BIN	N	O	P
Luminous Intensity (mcd)	6.101~7.200	7.201~8.500	8.501~10.500

■ **Wave-Soldering Conditions: Soldering Temp. ≦+260℃, Soldering Time. ≦3sec.**

Handmade Conditions: Soldering Temp. ≦+320℃, Soldering Time. ≦3sec.

■ **Electrostatic Discharge Threshold: HBM 1500VS**

■ LED Displays Reliability Test:

CLASSIFICATION	TEST ITEM	DESCRIPTION AND TEST CONDITION
ENDURANCE TEST	OPERATION LIFE	EVALUATES RESISTANCE OF THE DEVICE WHEN OPERATED AT ELECTRICAL STRESS T_a = UNDER ROOM TEMPERATURE $I_F = I_F$ max
	HIGH TEMPERATURE HIGH HUMIDITY STORAGE	EVALUATES MOISTURE RESISTANCE OF THE DEVICE WHEN STORED FOR A LONG TERM AT HIGH TEMPERATURE AND HUMIDITY T_a =65±5°C RH=90~95%RH TEST TIME=240± 2Hrs
	HIGH TEMPERATURE STORAGE	EVALUATES DEVICE DURABILITY FOR LONG TERM STORAGE IN HIGH TEMPERATURE T_a =85±5°C(COB: Ta=65±5°C) TEST TIME=1000Hrs(-24Hrs, +72Hrs)
	IOW TEMPERATURE STORAGE	EVALUATES DEVICE DURABILITY FOR LONG TERM STORAGE IN LOW TEMPERATURE T_a =-35±5°C TEST TIME=1000Hrs(-24Hrs, +72Hrs)
ENVIRONMENTAL TEST	TEMPERATURE CYCLING	EVALUATES RESISTANCE OF DEVICE AT THERMAL STRESSES OR EXPANSION AND CONTRACTION 85°C ~ 25°C ~ -35°C ~ 25°C 30min 5min 30min 5min 10 CYCLES(COB: Thot=65°C, Tcold=-25°C
	THERMAL SHOCK	EVALUATES DEVICE STRUCTURE AND STRUCTURE AND MECHANICAL RESISTANCE WHEN SUDDENLY EXPOSED AT SERVE CHANGES 85±5°C ~-35±5°C 10min 10min 10 CYCLES(COB: Thot=65°C,Tcold=-25°C
	SOLDERABILITY	EVALUATES SOLDERABILITY ON LEADS OF DEVICE T.SOL=230±5°C DWELL TIME=5±1sec.
	SOLDER RESISTANCE	EVALUATES RESISTANCE TO THERMAL STRESS CAUSED BY SOLDERING T.SOL=260±5°C DWELL TIME=10±1sec.

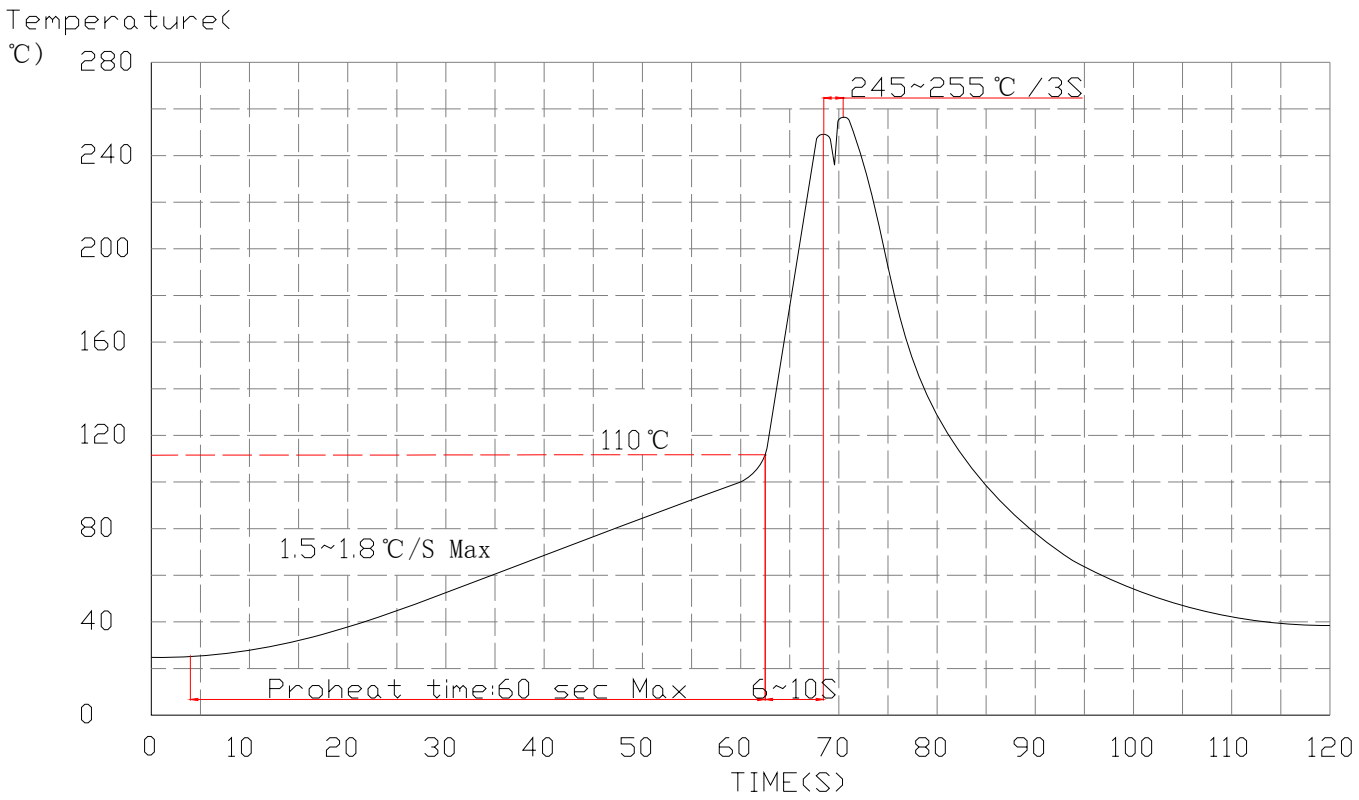
■ Packing method A:

15 pcs / Red Expandable Polyethylene.

195 pcs / Box(360*260*240mm).

390 pcs / Catton(550*380*280mm).

■ Recommended Wave Soldering Profiles:



■ Notes:

1.Recommend pre-heat temperature of 110℃ or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of 260℃.

2.Peak wave soldering temperature between 245℃~255℃ for 3 sec .

3.Do not apply stress to the epoxy resin while the temperature is above 85℃.

4.Fixtures should not incur stress on the component when mounting and during soldering process.

5.SAC 305 solder alloy is recommended.

6.No more than one wave soldering pass.

■ Recommended Soldering Pad :