



RAYSTAR

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SPECIFICATION

Model No:

REC001602CWPP5N00100

CUSTOMER:

APPROVED BY	
PCB VERSION	
DATE	

FOR CUSTOMER USE ONLY

SALES BY	APPROVED BY	CHECKED BY	PREPARED BY

Release DATE:

APPROVAL FOR SPECIFICATIONS ONLY

APPROVAL FOR SPECIFICATIONS AND SAMPLE



Revision History

VERSION	DATE	REVISED PAGE NO.	Note
0	2021/03/29		First release



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1. General Specification

The Features is described as follow:

- Module dimension: 85.0 x 36.0 x 10.0 (max.) mm
- View area: 66.0 x 16.0 mm
- Active area: 56.95 x 11.85 mm
- Number of Characters: 16 Characters x 2 Line
- Dot size: 0.55 x 0.65 mm
- Dot pitch: 0.60 x 0.70 mm
- Character size: 2.95 x 5.55 mm
- Character pitch: 3.6 x 6.3 mm
- Duty: 1/16
- Emitting Color: OLED ,White
- IC: RS0010-TX
- Interface:6800
- Size: 2.29 inch

2.Module Classification Information

1	2	3	4	5	6	7	8	9	10	11	12	13	14
R	E	C	001602	C	W	P	P	5	N	0	0	1	00

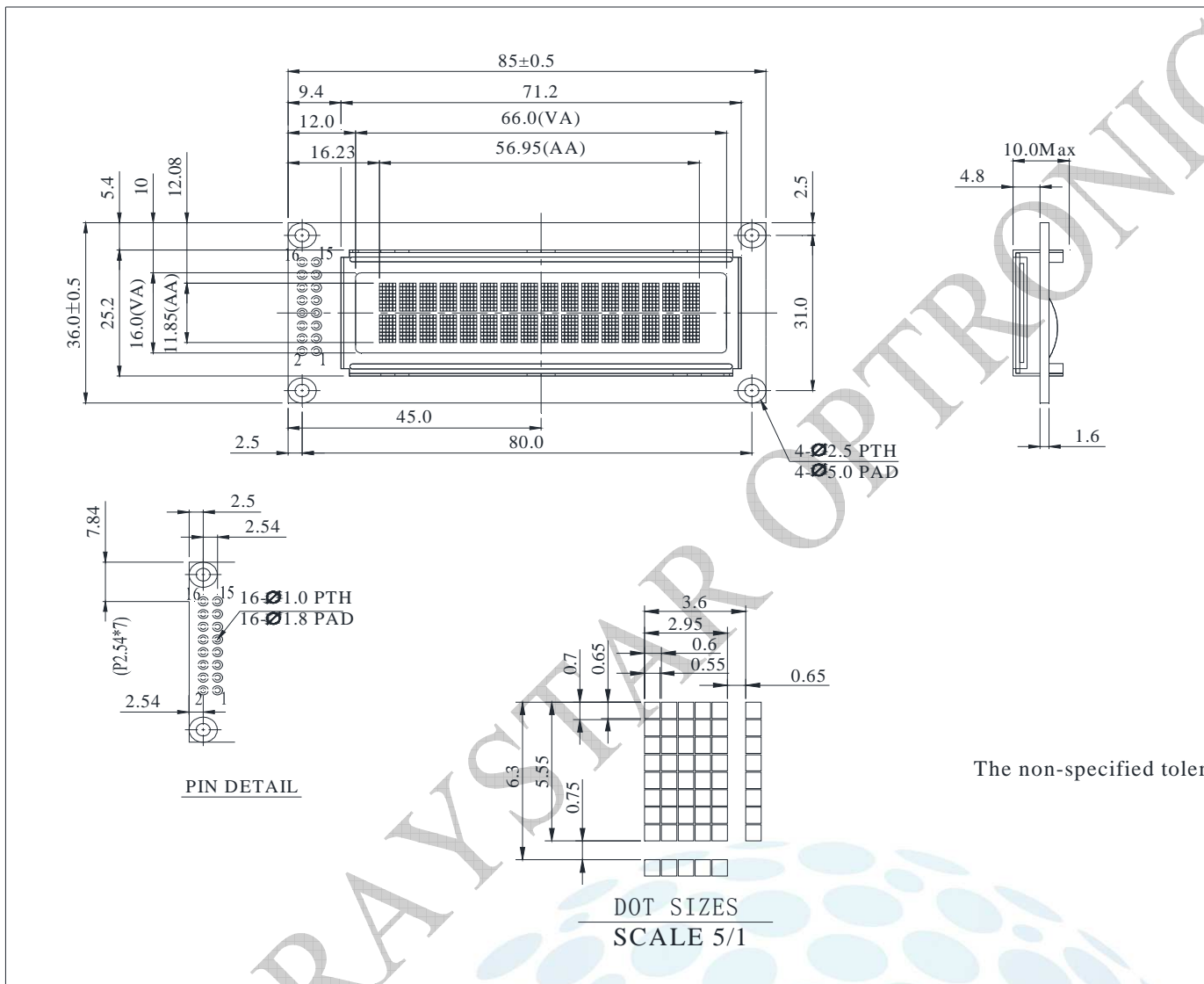
1	Brand : Raystar Optronics Inc.				
2	E : OLED				
3	Display Type	C : COB Character		G : COB Graphic	
		X : COG		H : COG + FR	
		P : COG + FR + PCB		T : COF	
		A : COG + PCB		N : COF + FR + PCB	
4	Number of Characters : 16Characters,02Lines.				
5	Series				
6	Emitting Color	A : Amber		R : Red	C : Full Color
		B : Blue		W : White	
		G : Green		Y : Yellow	
		S : Sky Blue		X : Dual Color	
7	Polarizer	P : With Polarizer; N: Without Polarizer A : Anti-glare Polarizer			
8	Display Mode	P : Passive Matrix ; N : Active Matrix			
9	Driver Voltage	3 : 3.0~3.3V ; 5 : 5.0V			
10	Touch Panel	N : Without touch panel; T: With touch panel			
11	Product type	0 : Standard 1 : Daylight Readable 2 : Transparent OLED (TOLED) 3 : Flexible OLED (FOLED) 4 : OLED Lighting			
12	Inspection Grade	0 : Standard 2 : B grade C : Automotive grade Y : Consumer grade			
13	Option	0 : Default ; 1 : COB_6800 ; 2 : COB_8080 ; 3 : COB_SPI D : Demo Kit ; Z : Semi-customized			
14	Serial No.	Serial number(00~ZZ)			

3.Interface Pin Function

Pin No.	Symbol	Level	Description
1	VSS	0V	Ground
2	VDD	—	Supply Voltage for logic
3	NC	—	No Connection
4	RS	H/L	H: DATA, L: Instruction code
5	R/W	H/L	H: Read(Module→MPU) L: Write(MPU→Module)
6	E	H,H→L	Chip enable signal
7	DB0	H/L	Data bit 0
8	DB1	H/L	Data bit 1
9	DB2	H/L	Data bit 2
10	DB3	H/L	Data bit 3
11	DB4	H/L	Data bit 4
12	DB5	H/L	Data bit 5
13	DB6	H/L	Data bit 6
14	DB7	H/L	Data bit 7
15	NC	—	No Connection
16	NC	—	No Connection

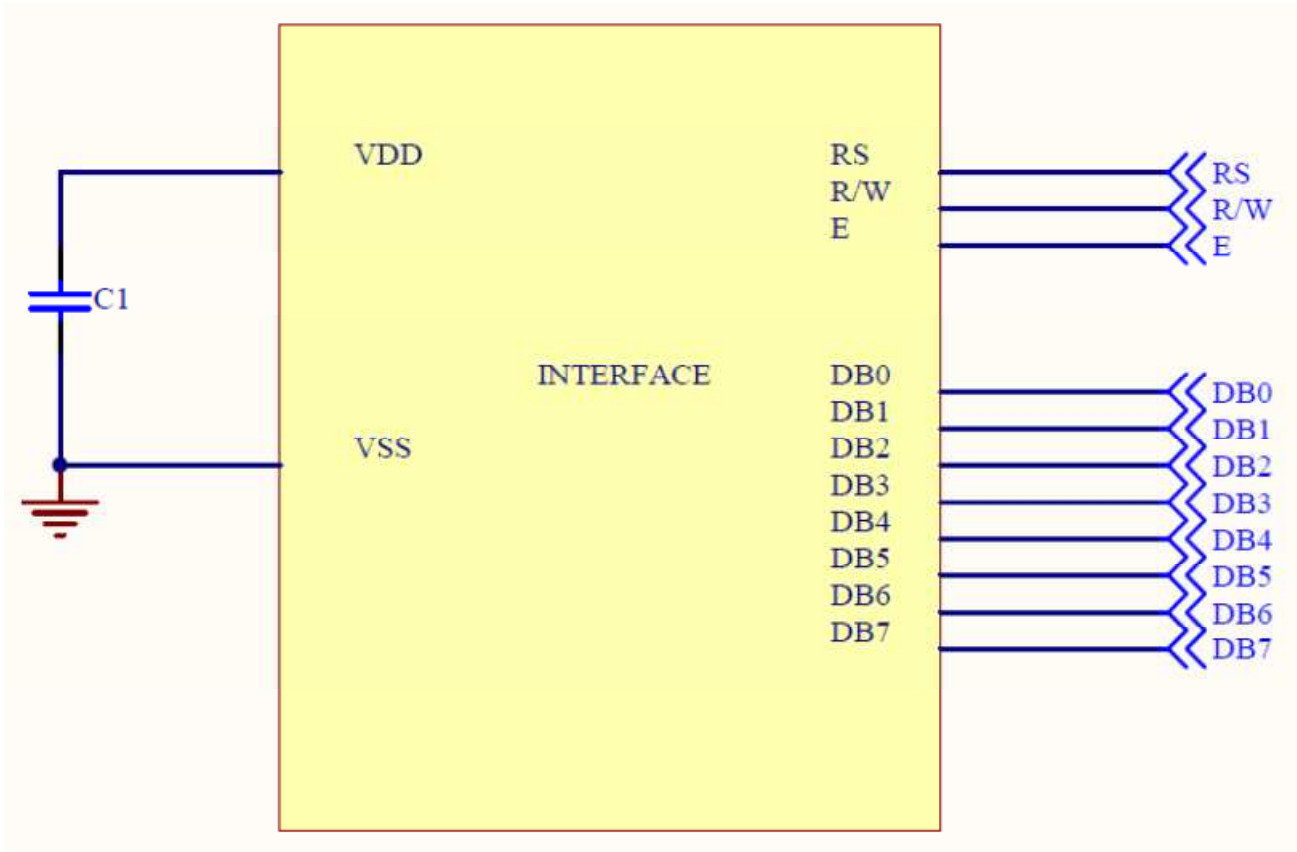


4. Contour Drawing & Block Diagram





4.1 Application recommendations

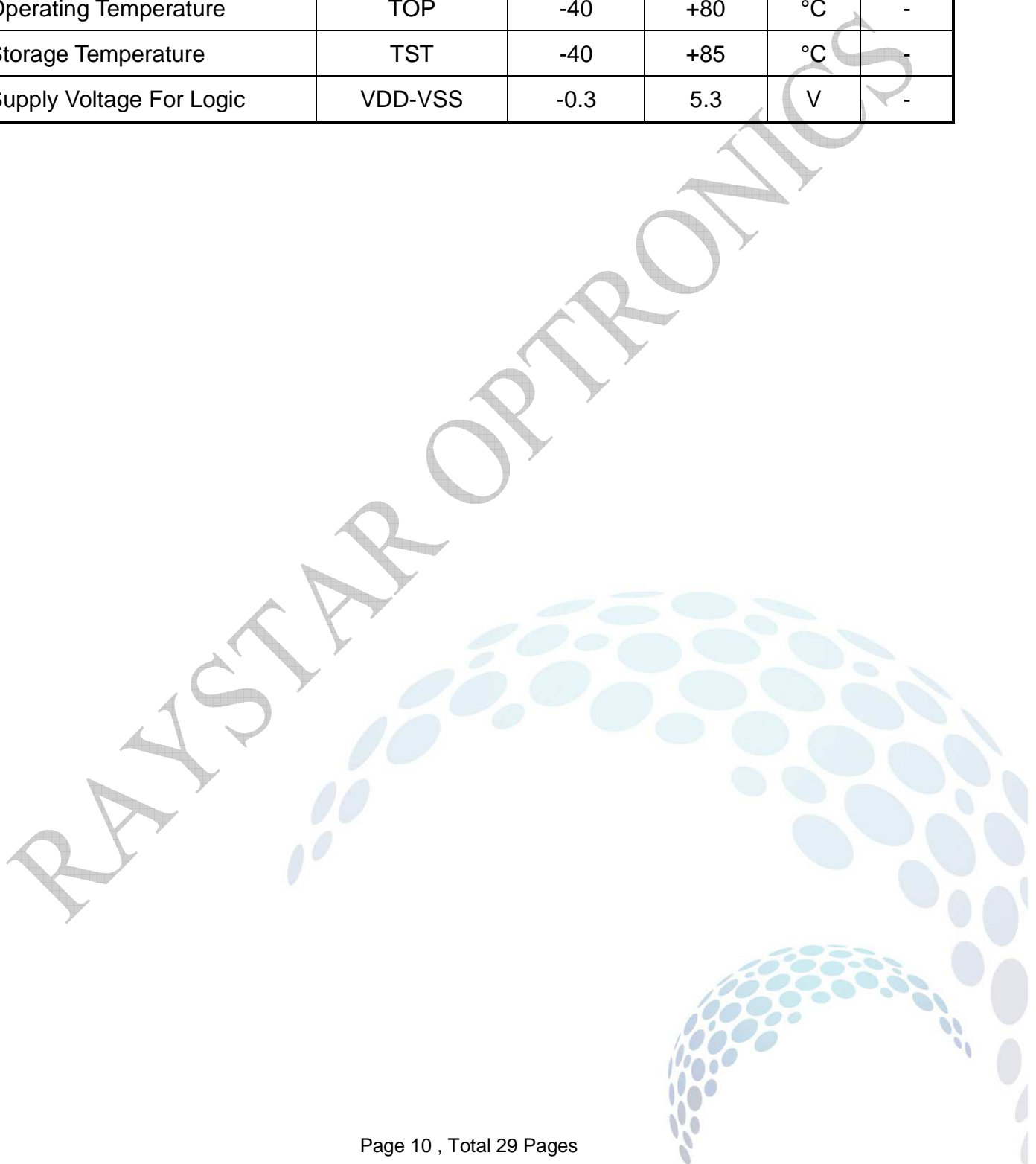


Recommended components :

C1 : 1.0uF

5. Absolute Maximum Ratings

Item	Symbol	Min	Max	Unit	Notes
Operating Temperature	TOP	-40	+80	°C	-
Storage Temperature	TST	-40	+85	°C	-
Supply Voltage For Logic	VDD-VSS	-0.3	5.3	V	-



6. Electrical Characteristics

6.1 DC Electrical Characteristics

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage For Logic	VDD-VSS	—	4.8	5.0	5.3	V
Input High Volt.	VIH	—	0.8xVDD	—	VDD	V
Input Low Volt.	VIL	—	GND	—	0.2xVDD	V
Output High Volt.	VOH	IOH=-0.5mA	0.8xVDD	—	VDD	V
Output Low Volt.	VOL	IOL=0.5mA	GND	—	0.2xVDD	V
50% Check Board Operating Current	IDD	VDD=5.0V	—	35	52.5	mA

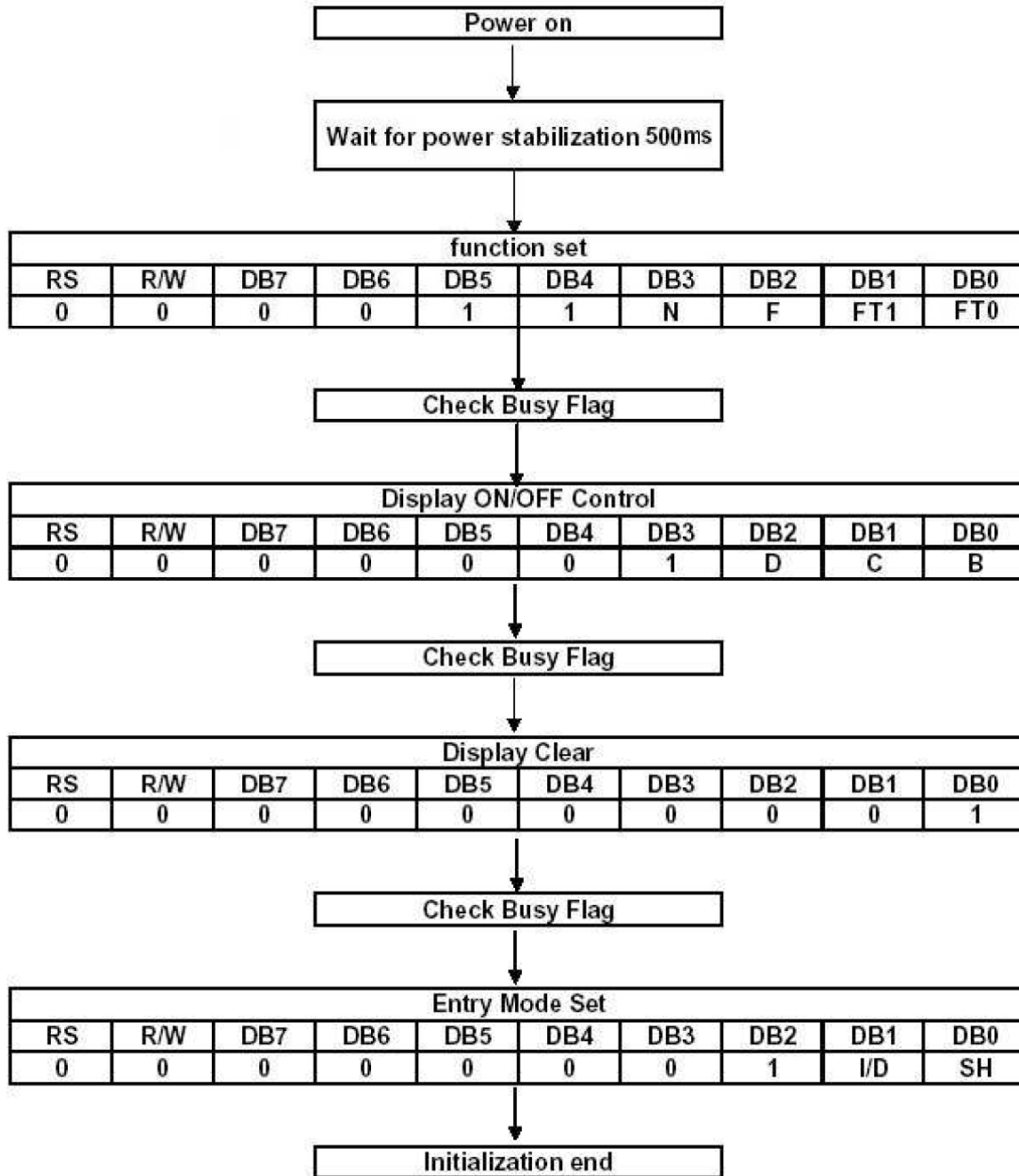
Note: In order to avoid any possible damages, 3V or 3.3V logic I/O for VDD 5V OLED module is not recommended.



6.2 Initial code

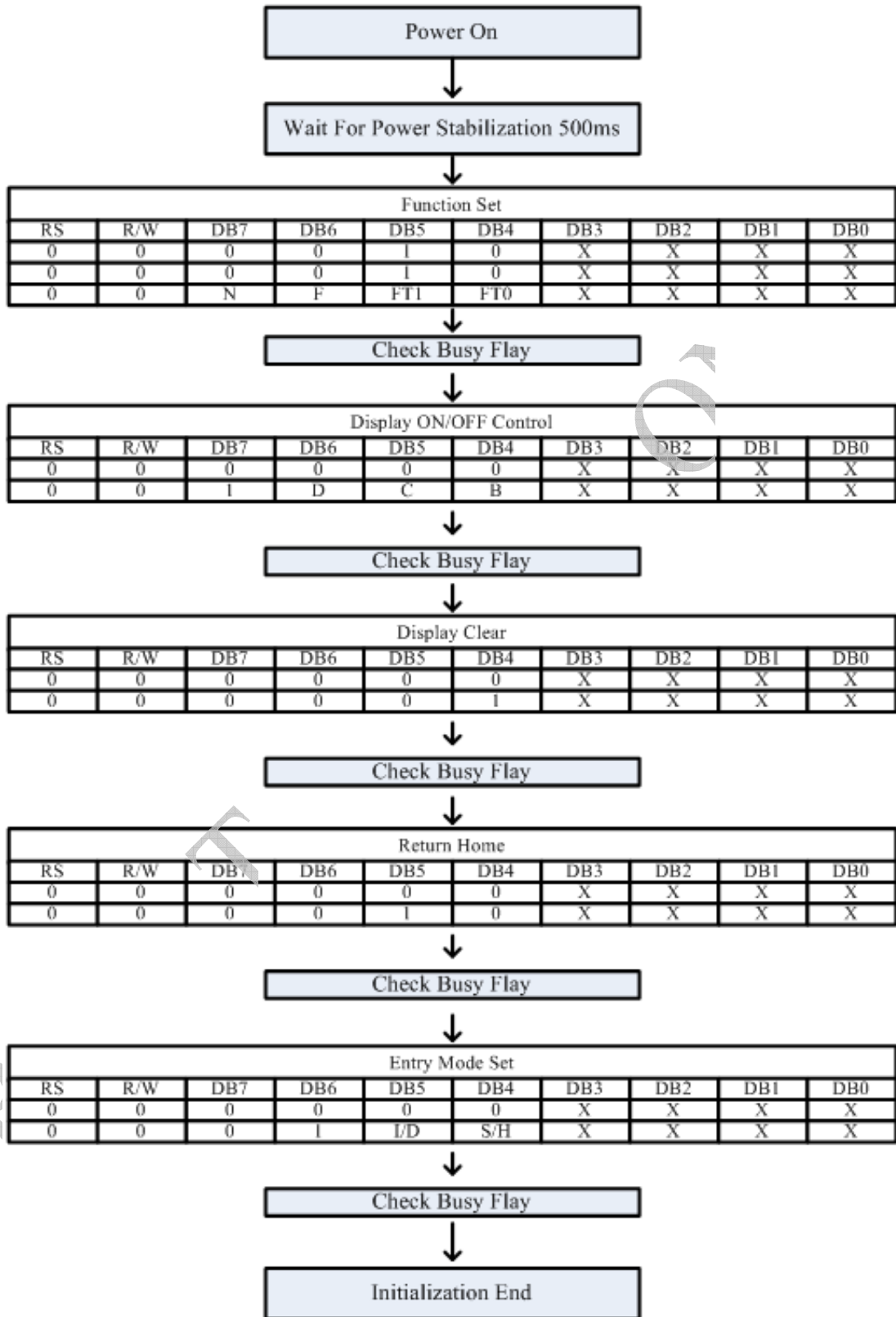
INITIALIZATION BY INSTRUCTION

(1)8-bit mode





(2)4-bit mode

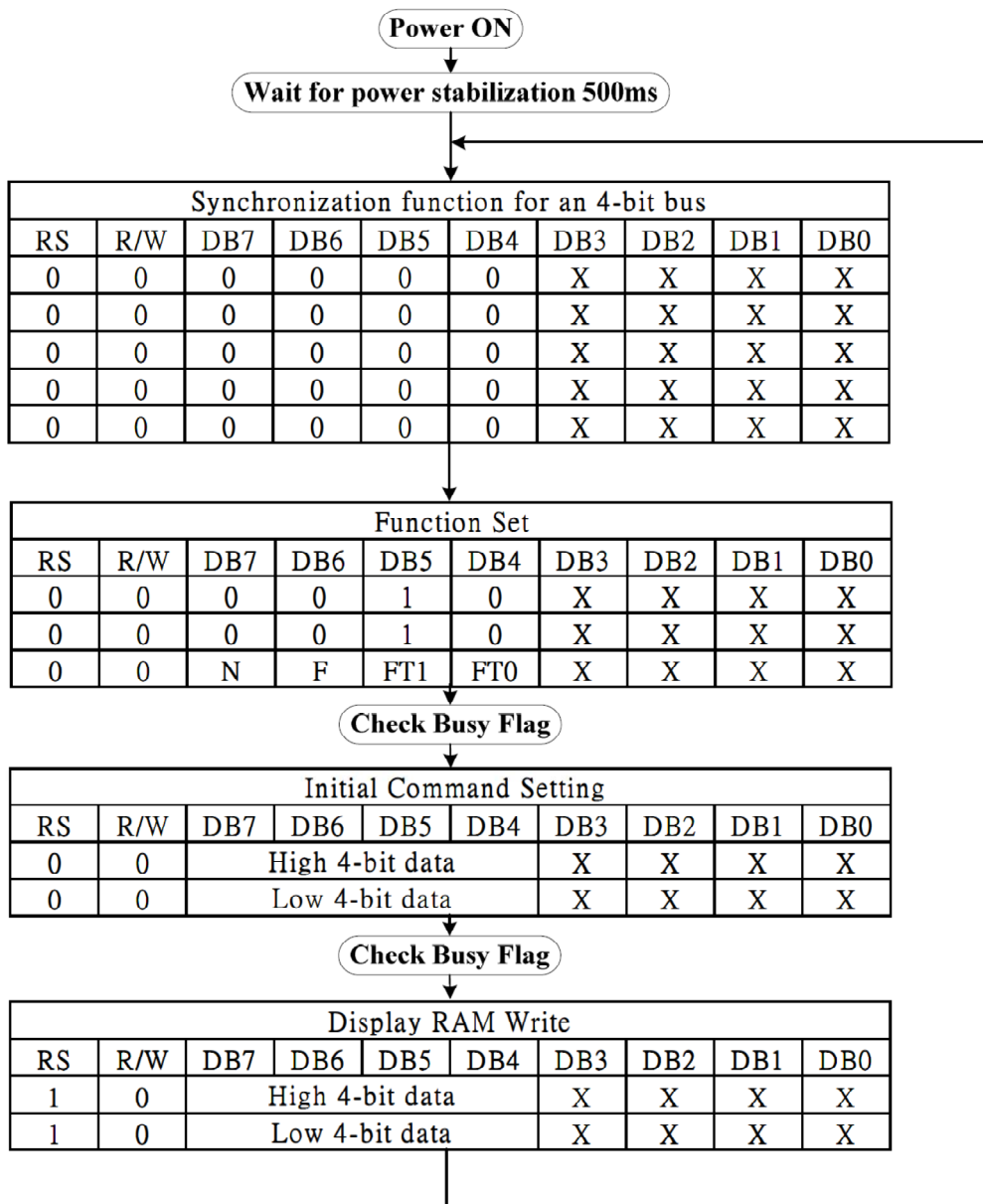


Notes

Repeated procedures for an 4-bit bus interface

Noise causing transfer mismatch between the four upper and lower bits can be corrected by a reset triggered by consecutively writing a “0000” instruction five times. The next transfer starts from the lower four bits and then first instruction “Function set” can be executed normally.

Please insert the synchronization function in the head of procedures. The repeated procedures are show as follows :



Note: Initial code is for reference only. Please make the best adjustment with the OLED module.

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