WINSTAR Display

OLED SPECIFICATION

Model No:

WEH0802W#AP5N00100-FC

first FC components

Represented by:

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SPECIFICATION Version: B

CUSTOMER :
MODULE NO. : WEH0802W#AP5N00100-FC

APPROVED BY: **(FOR CUSTOMER USE ONLY)**	

SALES BY	APPROVED BY	CHECKED BY	PREPARED BY
RELEASE DATE:			

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■APPROVAL FOR SPECIFICATIONS ONLY

□APPROVAL FOR SPECIFICATIONS AND SAMPLE

MODEL NO：

RECORDS OF REVISION			DOC. FIRST ISSUE
VERSION	DATE	REVISED PAGE NO.	SUMMARY
0	2021/02/03		First release
A	2021/02/25		Modify Precautions in use of OLED Modules
B	2022/10/04		Modify Reliability Test and measurement conditions

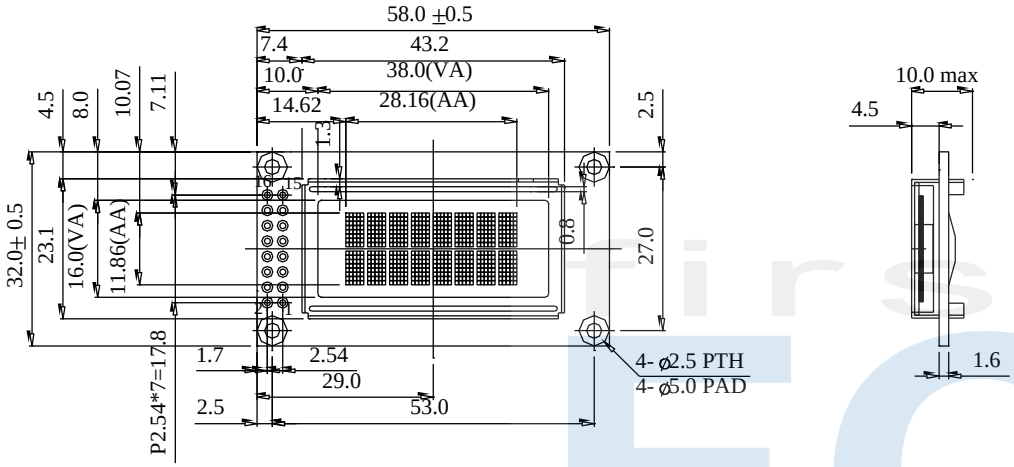
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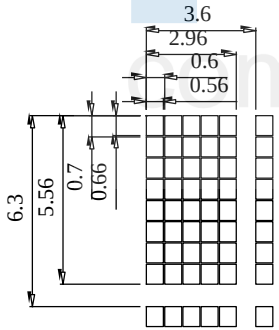
General Specification

Item	Dimension	Unit
Number of Characters	8 characters x 2 Lines	—
Module dimension	58.0 x 32.0 x 10.0(MAX)	mm
View area	38.0 x 16.0	mm
Active area	28.16 x 11.86	mm
Dot size	0.56 x 0.66	mm
Dot pitch	0.60 x 0.70	mm
Character size	2.96 x 5.56	mm
Character pitch	3.6 x 6.3	mm
Panel type	OLED , White	
Duty	1/16	
IC	WS0010-TX	
Interface	6800	
Size	1.2 inch	

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Contour Drawing & Block Diagram





DOT SIZES

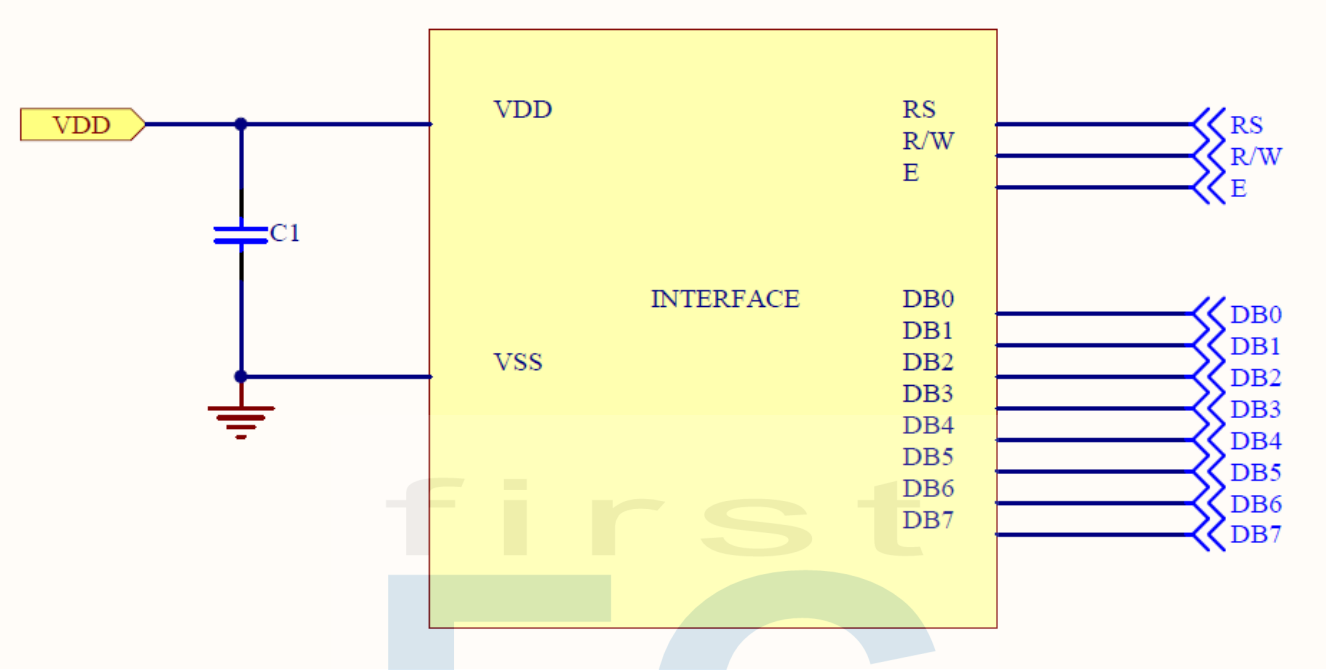
SCALE 5/1

PIN NO.	SYMBOL
1	VSS
2	VDD
3	NC
4	RS
5	R/$\overline{W}$
6	E
7	DB0
8	DB1
9	DB2
10	DB3
11	DB4
12	DB5
13	DB6
14	DB7
15	NC
16	NC

The non-specified tolerance of dimension is ±0.3 mm .

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3.1 Application recommendations



Pin connected to MCU interface: RS, R/W, E, DB0~7

C1：1.0uF (1)

Note
(1) The capacitor value is recommended value. Select appropriate value against module application.

Interface Pin Function

Pin No.	Symbol	Level	Description
1	VSS	0V	Ground
2	VDD	5.0V	Supply Voltage for logic
3	NC	—	
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	—	
16	NC	—	

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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	-

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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=5V	—	19	28.5	mA

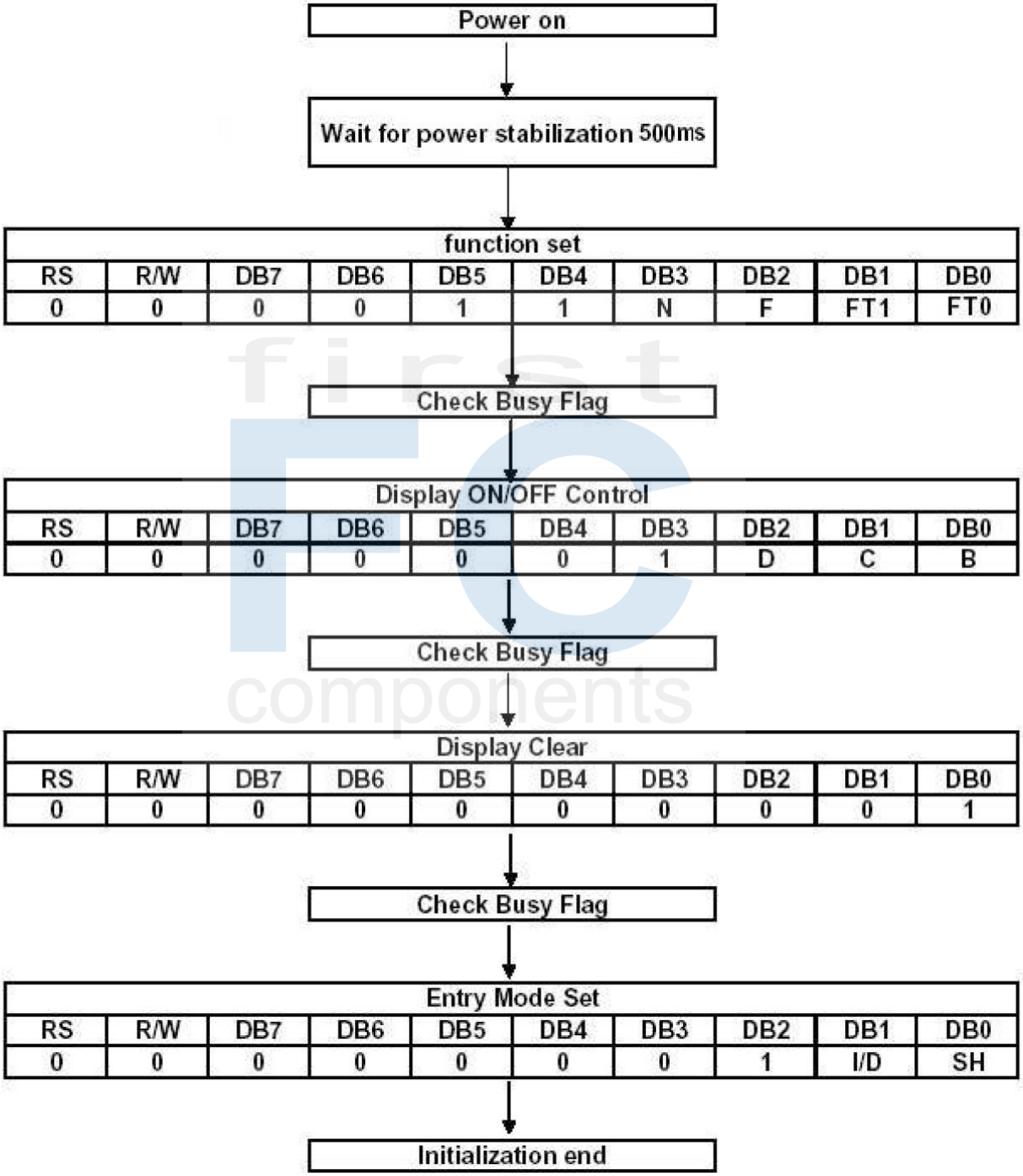
Note: When you use 5V for Vdd please don't use 3V or 3.3V for logic I/O this will cause module does not work.

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6.2 Initial code

INITIALIZATION BY INSTRUCTION

(1)8-bit mode

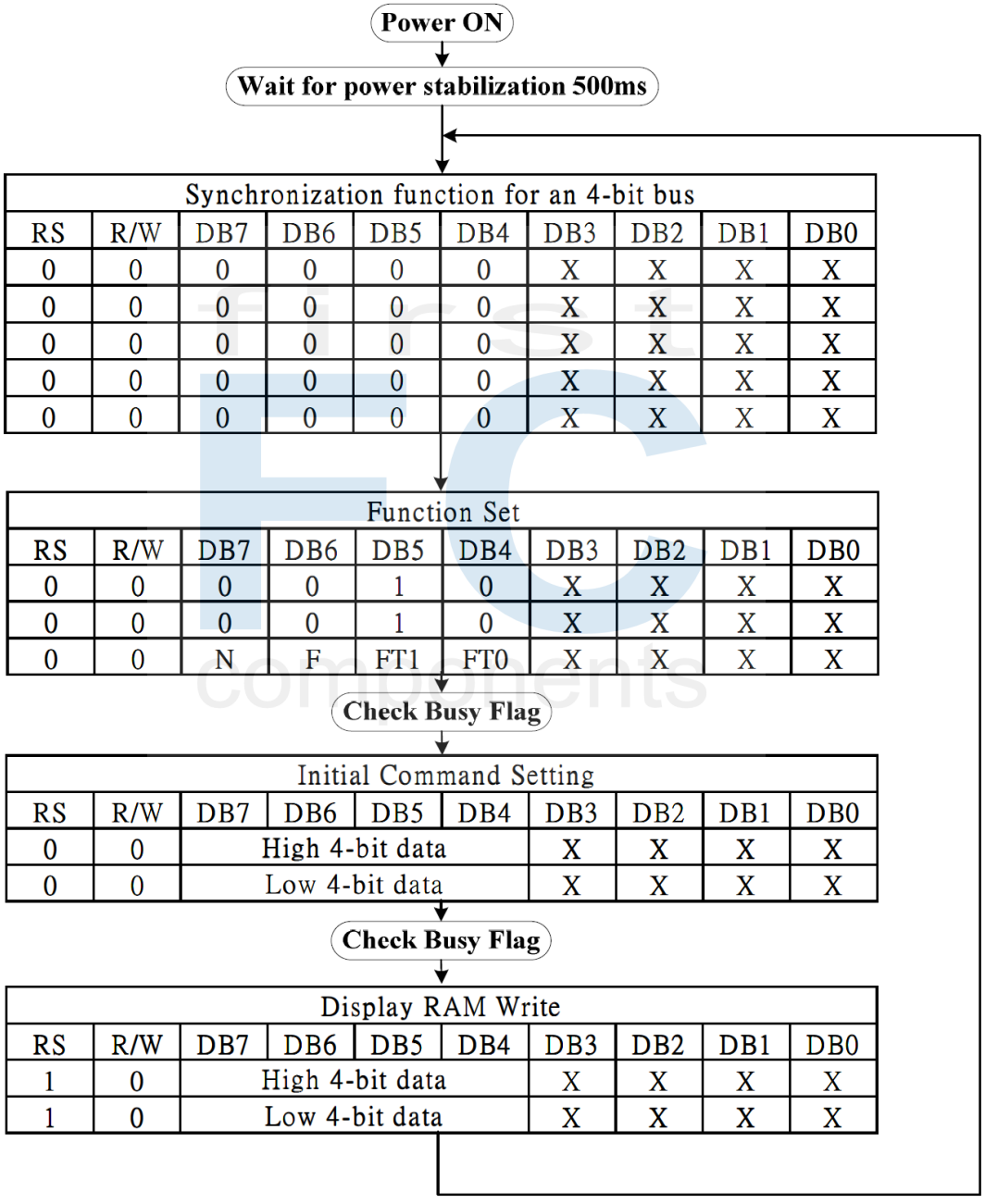


(2)4-bit mode

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.

Optical Characteristics

Item	Symbol	Condition	Min	Typ	Max	Unit
View Angle	(V)θ		160			deg
	(H)φ		160			deg
Contrast Ratio	CR	Dark	10,000:1		—	—
Response Time	T rise	—		10		μs
	T fall	—		10		μs
Display with 50% check Board Brightness			60	80		cd/m2
CIEx(White)		(CIE1931)	0.26	0.28	0.30	
CIEy(White)		(CIE1931)	0.30	0.32	0.34	

