SPECIFICATION

MODULE NO.: WO320240D-TFH-V#

General Specification

ITEM	STANDARD VALUE	UNIT
Number of dots	320x240	—
Outline dimension	94.7 x 83.3 x 8.6max	mm
View area	81.4 x 61.0	mm
Active area	76.785 x 57.11	mm
Dot size	0.223 x 0.225	mm
Dot pitch	0.238 x 0.24	mm
Duty	1/240	
Backlight	LED	
IC	RA8835	

Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	T_{OP}	-20	—	+70	℃
Storage Temperature	T_{ST}	-30	—	+80	℃
Input Voltage	V_{IN}	-0.3	—	$V_{DD+0.3}$	V
Supply Voltage For Logic	V_{DD}-V_{SS}	-0.3	—	7.0	V
Supply Voltage For LCD	V_{DD} -V_0	0	—	32	V

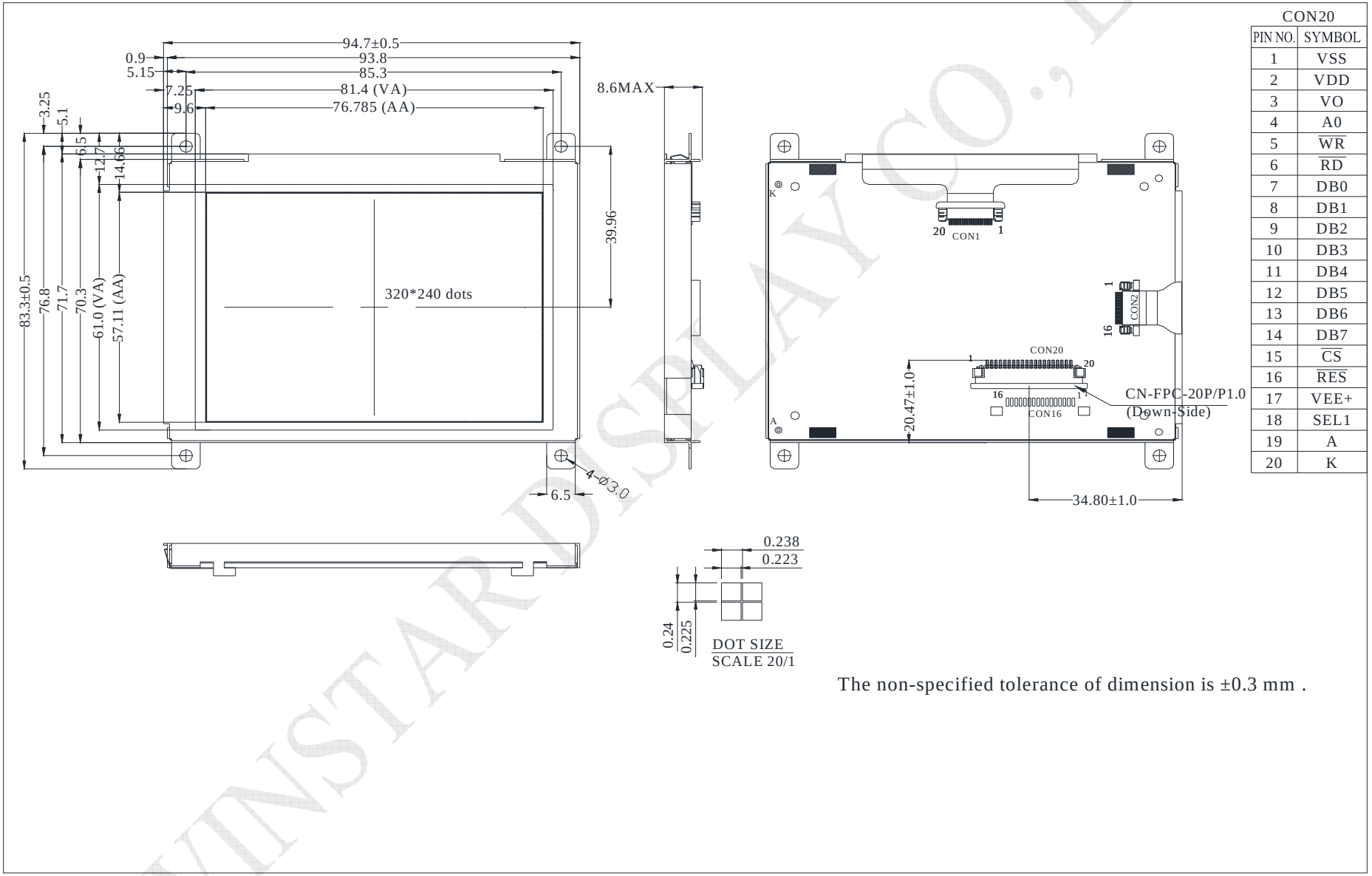
Electrical Characteristics

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage For Logic	V_{DD}-V_{SS}	—	3.0	3.3	3.6	V
	V_{DD}-V_{SS}	—	4.7	5.0	5.3	V
Supply Voltage For LCD	V_{OP}	Ta=-20℃	—	—	—	V
		Ta=25℃	22.7	23.0	23.3	V
		Ta=70℃	—	—	—	V
Input High Volt.	V_{IH}	—	0.5V_{DD}	—	V_{DD}	V
Input Low Volt.	V_{IL}	—	V_{SS}	—	0.2V_{DD}	V
Output High Volt.	V_{OH}	—	V_{DD}-0.4	—	—	V
Output Low Volt.	V_{OL}	—	—	—	V_{SS}+0.4	V
Supply Current	I_{DD}	V_{DD}=3.3V	—	63.5	100.0	mA
	I_{DD}	V_{DD}=5.0V	—	52.0	80.0	mA

Interface Pin Function

Pin No.	Symbol	Level	Description
1	V_{SS}		Ground
2	V_{DD}		Power supply for Logic
3	V_O	(Variable)	Operation voltage LCD driving
4	A_0	H/L	H:Data L:Instruction
5	$\overline{WR}$	H	8080 family: Write signal, 6800 family: R/W signal
6	$\overline{RD}$	L	8080 family: Read signal, 6800 family: Enable clock
7-14	DB0-DB7	H/L	DB0 Data bus line
15	$\overline{CS}$	H/L	Chip Enable
16	$\overline{RES}$	H/L	Reset
17	VEE		Positive voltage output
18	SEL1	H/L	8080 OR 6800 Family Interface Select ; H:68xx , L:80xx
19	A		Power supply for B/L+
20	K		Power supply for B/L-

Contour Drawing & Block Diagram



CON20	
PIN NO.	SYMBOL
1	VSS
2	VDD
3	VO
4	A0
5	$\overline{WR}$
6	$\overline{RD}$
7	DB0
8	DB1
9	DB2
10	DB3
11	DB4
12	DB5
13	DB6
14	DB7
15	$\overline{CS}$
16	$\overline{RES}$
17	VEE+
18	SEL1
19	A
20	K

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