



WINSTAR Display Co.,Ltd.
華凌光電股份有限公司

SPECIFICATION

MODULE NO.: WG160128E1

General Specification

Item	Dimension	Unit
Number of dots	160 x 128	—
Module dimension	129.0 x 102.0 x 16.5 (MAX)	mm
View area	101.0 x 82.0	mm
Active area	95.96 x 76.76	mm
Dot size	0.56 x 0.56	mm
Dot pitch	0.60 x 0.60	mm
Duty	1/128	
Backlight Type	LED	
IC	RA6963	
Interface	80 series	

Absolute Maximum Ratings

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

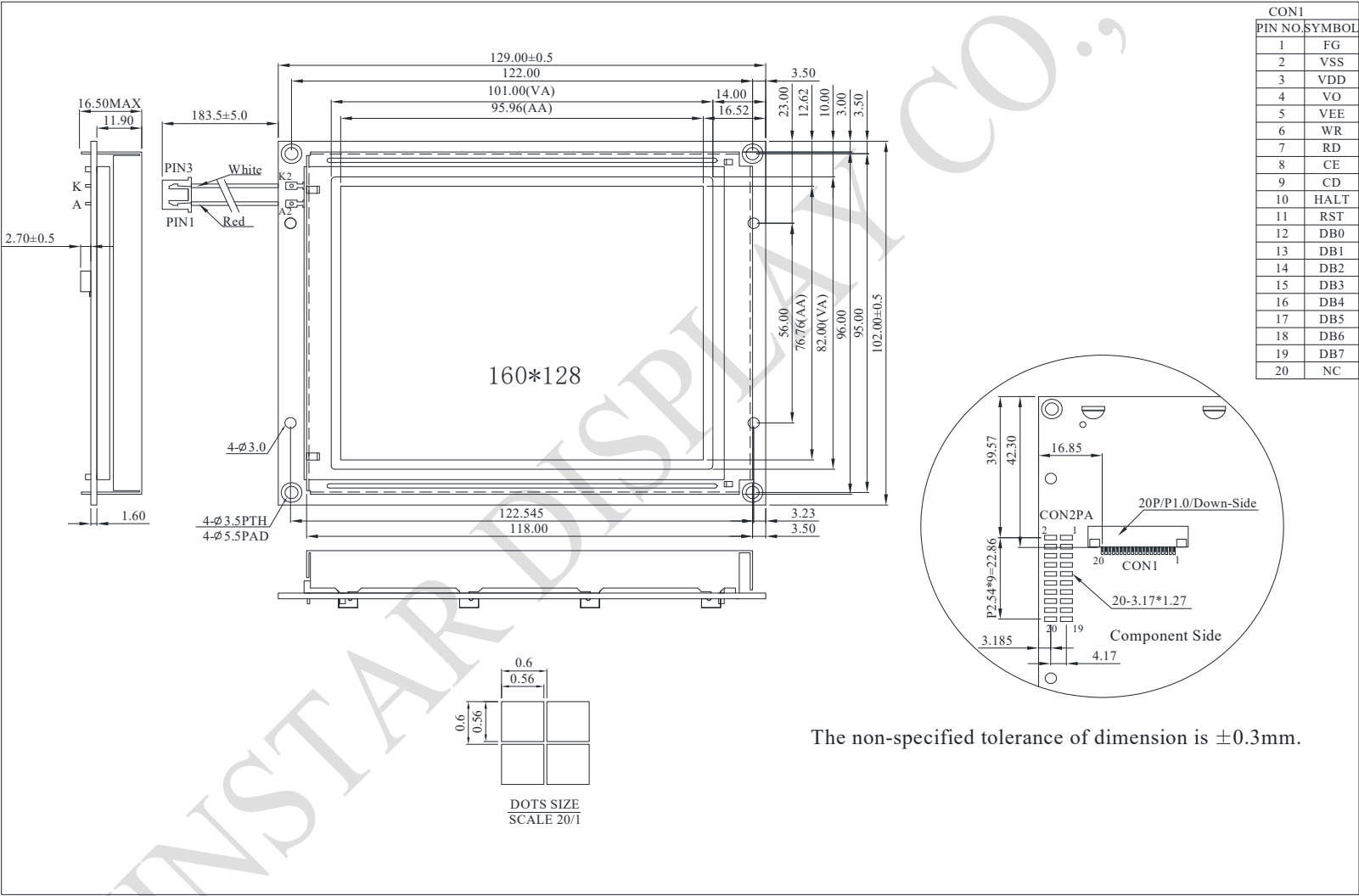
Electrical Characteristics

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage For Logic	$V_{DD}-V_{SS}$	—	4.5	5.0	5.5	V
Supply Voltage For LCD	$V_{DD}-V_0$	$T_a=-20^{\circ}\text{C}$	—	—	—	V
		$T_a=25^{\circ}\text{C}$	18.6	19.2	19.8	V
		$T_a=70^{\circ}\text{C}$	—	—	—	V
Input High Volt.	V_{IH}	—	$0.8V_{DD}$	—	V_{DD}	V
Input Low Volt.	V_{IL}	—	0	—	$0.15 V_{DD}$	V
Output High Volt.	V_{OH}	—	$V_{DD}-0.3$	—	V_{DD}	V
Output Low Volt.	V_{OL}	—	0	—	0.3	V
Supply Current	I_{DD}	—	—	42	63	mA

Interface Pin Function

Pin No.	Symbol	Level	Description
1	FG	—	Frame ground
2	V _{ss}	—	Ground
3	V _{dd}	—	Power supply for logic
4	V _o	—	contrast adjustment
5	V _{ee}	—	Negative Voltage Output
6	/WR	L	Data write. Write data into RA6963when WR = L
7	/RD	L	Data read. Read data from RA6963when RD = L
8	/CE	L	Chip enable the controller RA6963
9	C/D	H / L	WR=L , C/D=H : Command Write C/D=L: Data write RD=L , C/D=H : Status Read C/D=L: Data read
10	/HALT	L	Clock operating stop signal
11	/RST	H / L	Reset signal
12	DB0	H / L	Data bus line
13	DB1	H / L	Data bus line
14	DB2	H / L	Data bus line
15	DB3	H / L	Data bus line
16	DB4	H / L	Data bus line
17	DB5	H / L	Data bus line
18	DB6	H / L	Data bus line
19	DB7	H / L	Data bus line
20	NC		No connection

Contour Drawing



The non-specified tolerance of dimension is $\pm 0.3\text{mm}$.