



**WINSTAR Display Co.,Ltd.**  
**華凌光電股份有限公司**

## SPECIFICATION

**MODULE NO.: WG16080C1**

### General Specification

Item	Dimension	Unit
Number of dots	160 x 80	—
Module dimension	100.0 x 54.0 x 14.6 (MAX)	mm
View area	72.0 x 40.0	mm
Active area	67.17 x 33.57	mm
Dot size	0.39 x 0.39	mm
Dot pitch	0.42 x 0.42	mm
Duty	1/80	
Backlight Type	LED	
IC	RA6963	
Interface	8080	

# 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
		$T_a=25^{\circ}\text{C}$	11.0	11.5	12.0	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	$I_{DD}$	—	13.8	14.2	16.0	mA

# Interface Pin Function

Pin No.	Symbol	Level	Description
1	Vee	—	Negative Voltage Output
2	VSS	0V	Ground
3	VDD	—	Power supply for logic
4	V0	—	Power supply for LCD driver
5	/WR	H / L	Data write. Write data into RA6963 when /WR = L
6	/RD	H / L	Data read. Read data from RA6963 when RD = L
7	/CE	H / L	Chip enable the controller RA6963
8	/CD	H / L	Command/data read/write
9	/RST	L	Reset the LCM
10	DB0	H / L	Data bus line
11	DB1	H / L	Data bus line
12	DB2	H / L	Data bus line
13	DB3	H / L	Data bus line
14	DB4	H / L	Data bus line
15	DB5	H / L	Data bus line
16	DB6	H / L	Data bus line
17	DB7	H / L	Data bus line
18	FS	H / L	Pins for selection of font ;
19	A	—	Power supply for B/L +
20	K	—	Power supply for B/L -

