



WINSTAR Display Co.,Ltd.
華凌光電股份有限公司



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SPECIFICATION

MODULE NO.:

WG192128C

General Specification

Item	Dimension	Unit
Number of dots	192 x 128	—
Module dimension	102.3 x 86.0 x 12.2 (MAX)	mm
View area	78.5 x 55.0	mm
Active area	71.02 x 47.34	mm
Dot size	0.35 x 0.35	mm
Dot pitch	0.37 x 0.37	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 *Note	$V_{DD}-V_0$	$T_a=-20^{\circ}\text{C}$	—	—	—	V
		$T_a=25^{\circ}\text{C}$	14.7	15.2	15.7	V
		$T_a=+70^{\circ}\text{C}$	—	—	—	V
Input High Volt.	V_{IH}	—	$0.8 V_{DD}$	—	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}	$V_{DD}=5.0\text{V}$	—	21.0	—	mA

Interface Pin Function

Pin No.	Symbol	Level	Description
1	V _{ss}	—	Ground
2	V _{dd}	5.0V	Power supply for logic circuit
3	V _o	—	Contrast Adjustment
4	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
5	/RD	L	Data read. Read data from RA6963 when RD = L
6	/WR	L	Data write. Write data into RA6963 when /WR = L
7	DB0	H / L	Data bus line
8	DB1	H / L	Data bus line
9	DB2	H / L	Data bus line
10	DB3	H / L	Data bus line
11	DB4	H / L	Data bus line
12	DB5	H / L	Data bus line
13	DB6	H / L	Data bus line
14	DB7	H / L	Data bus line
15	/CE	L	Chip enable the controller RA6963
16	/RST	L	Reset Signal
17	V _{ee}	—	Negative Voltage Output
18	NC	—	No connection
19	A	—	Power supply for B/L(+)
20	K	—	Power supply for B/L(-)

Contour Drawing & Block Diagram

