



WINSTAR Display Co.,Ltd.
華凌光電股份有限公司

SPECIFICATION

MODULE NO.:

WG12864I

General Specification

Item	Dimension	Unit
Number of dots	128 x 64	—
Module dimension	80.0 x 70.0 x 13.6(MAX)	mm
View area	72.0 x 40.0	mm
Active area	66.52 x 33.24	mm
Dot size	0.48 x 0.48	mm
Dot pitch	0.52 x 0.52	mm
Duty	1/64	
Backlight Type	LED	
IC	NT7107, NT7108	
Interface	68 series	

Absolute Maximum Ratings

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

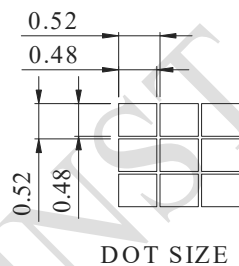
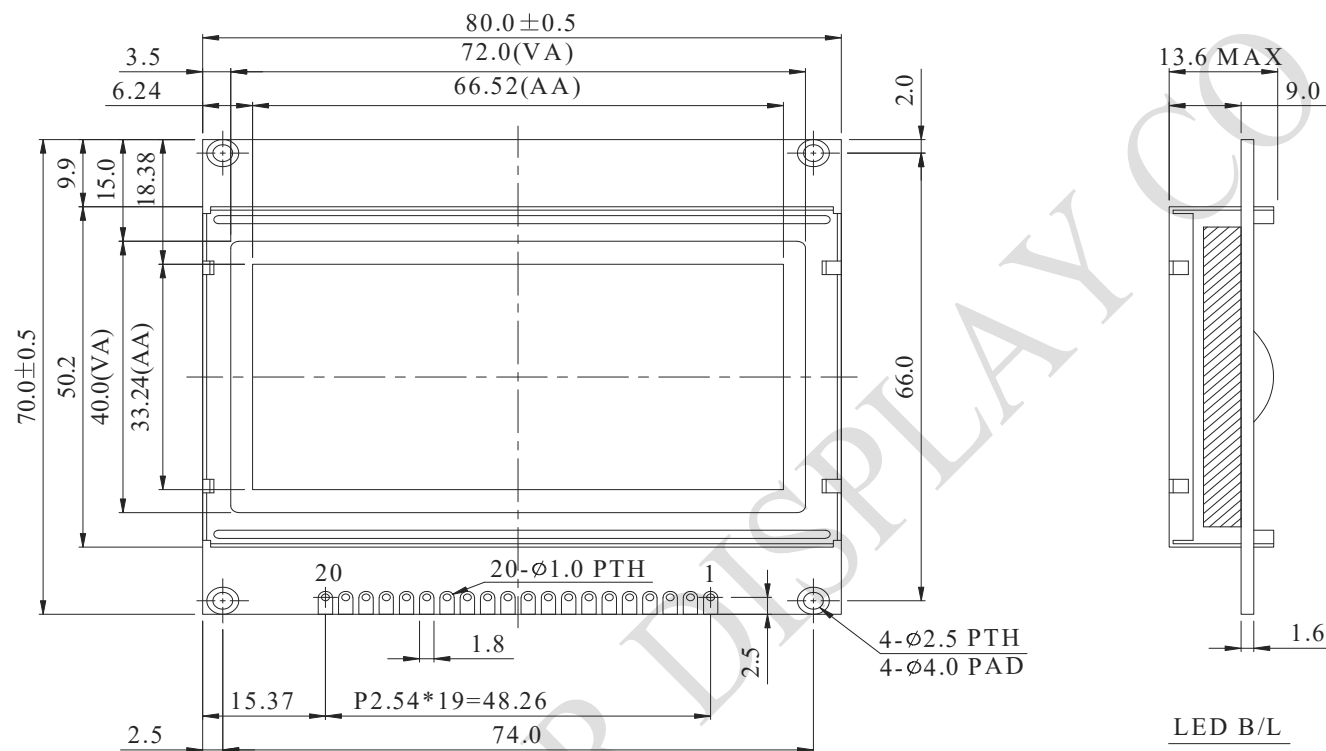
Electrical Characteristics

Item	Symbol	Min	Typ	Max	Unit	Item
Supply Voltage For Logic	$V_{DD}-V_{SS}$	—	4.5	5.0	5.5	V
Supply Voltage For LCD	$V_{DD}-V_O$	$T_a=-20^{\circ}\text{C}$	—	—	10.5	V
		$T_a=25^{\circ}\text{C}$	8.4	8.7	9.0	V
*Note		$T_a=70^{\circ}\text{C}$	7.6	—	—	V
Input High Volt.	V_{IH}	—	$0.7V_{DD}$	—	V_{DD}	V
Input Low Volt.	V_{IL}	—	0	—	0.8	V
Output High Volt.	V_{OH}	—	2.4	—	—	V
Output Low Volt.	V_{OL}	—	—	—	0.4	V
Supply Current	I_{DD}	$V_{DD}=5.0\text{V}$	—	3.0	—	mA

Interface Pin Function

Pin No.	Symbol	Level	Description
1	V _{SS}	0V	Ground
2	V _{DD}	5.0V	Supply voltage for logic
3	V _O	(Variable)	Operating voltage for LCD
4	D/I	H/L	H: Data , L: Instruction
5	R/ W	H/L	H: Read(MPU←Module) , L :Write(MPU→Module)
6	E	H	Enable signal
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	CS1	H	Chip Select for IC1
16	CS2	H	Chip Select for IC2
17	/RES	L	Reset signal
18	V _{out}	—	Negative Voltage output
19	A	—	Power supply for B/L +
20	K	—	Power supply for B/L -

Contour Drawing & Block Diagram



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

PIN NO	SYMBOL
1	V _{ss}
2	V _{dd}
3	V _o
4	D/I
5	R/ $\overline{W}$
6	E
7	DB0
8	DB1
9	DB2
10	DB3
11	DB4
12	DB5
13	DB6
14	DB7
15	CS1
16	CS2
17	$\overline{RES}$
18	V _{out}
19	A
20	K