



WINSTAR Display Co.,Ltd.
華凌光電股份有限公司

SPECIFICATION

MODULE NO.: WG12864A

General Specification

Item	Dimension	Unit
Number of dots	128 x 64	—
Module dimension	93.0 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	6800	

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

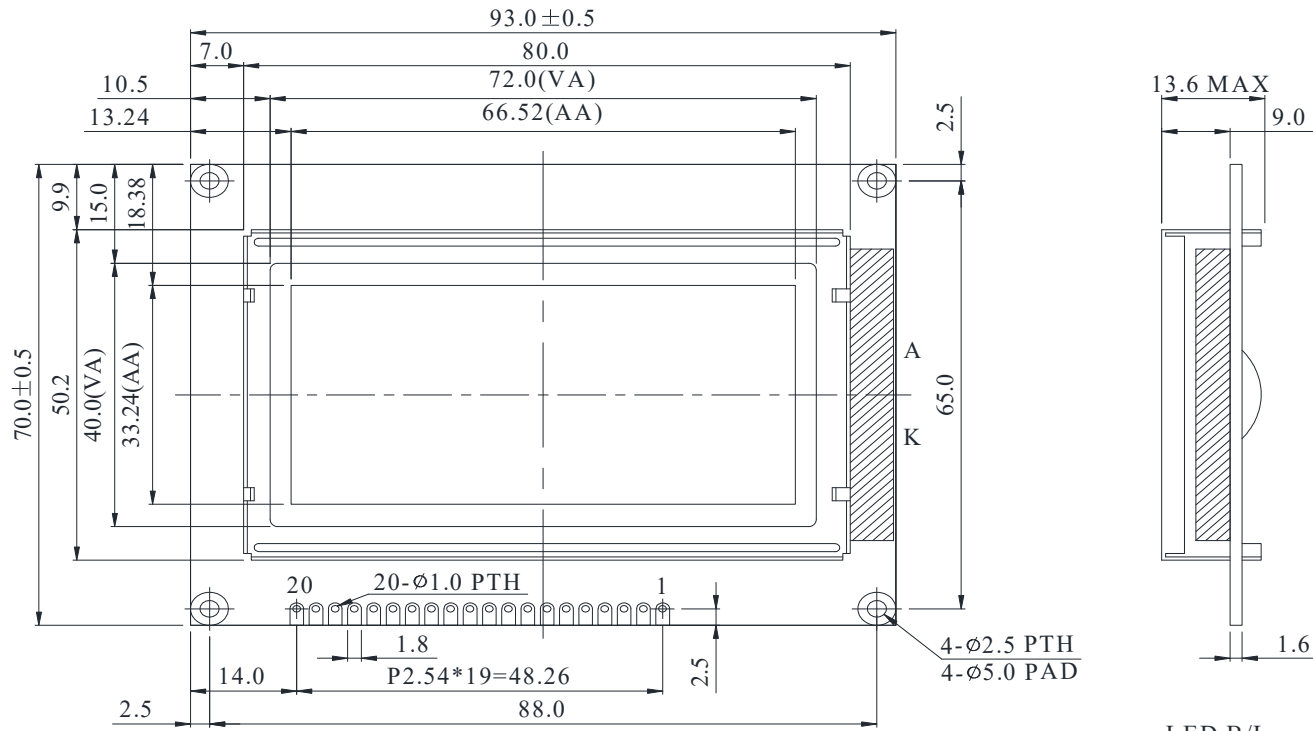
Electrical Characteristics

ITEM	SYMBOL	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 _O	Ta=-20°C	—	—	10.6	V
		Ta=25°C	8.6	8.9	9.2	V
		Ta=70°C	7.6	—	—	V
Input High Volt.	V _{IH}	—	0.7 V _{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} =5.0V	—	29.2	—	mA

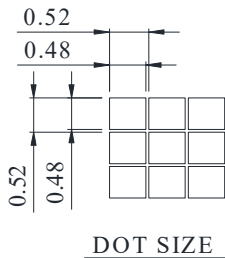
Interface Pin Function

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	Select Column 1~ Column 64
16	CS2	H	Select Column 65~ Column 128
17	/RES	L	Reset signal
18	V _{out}	—	Negative Voltage output
19	A	—	Power Supply for LED backlight (+)
20	K	—	Power Supply for LED backlight (-)

Contour Drawing



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



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