LCD / LCM SPECIFICATION

WINSTAR Display Co.,Ltd.

華凌光電股份有限公司

SPECIFICATION

MODULE NO.: WG19264A

General Specification

Item	Dimension	Unit
Number of dots	192 x 64	—
Module dimension	130.0 x 65.0 x 12.9 (MAX)	mm
View area	102.0 x39.0	mm
Active area	96.0 x 32.0	mm
Dot size	0.46 x 0.46	mm
Dot pitch	0.50 x 0.50	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	℃
Storage Temperature	T_{ST}	-30	–	+80	℃
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

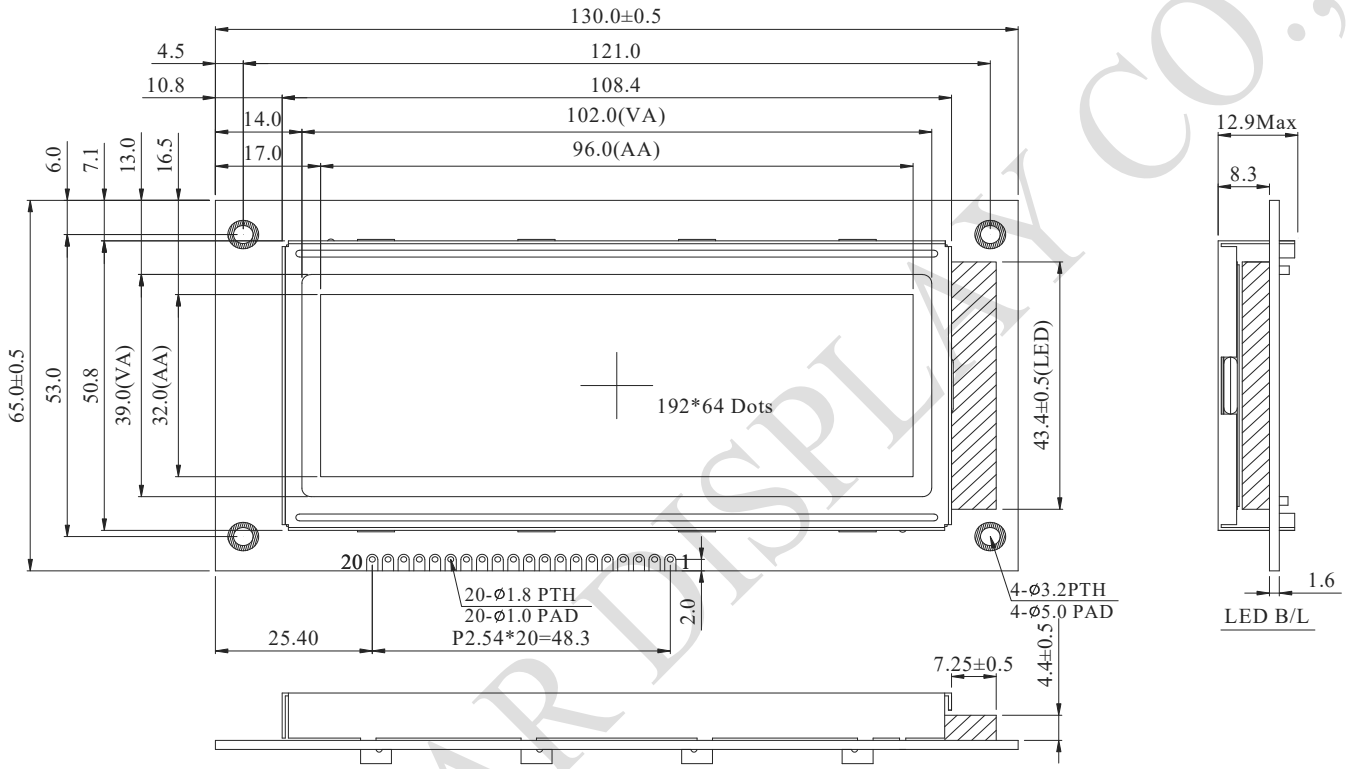
Electrical Characteristics

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℃	–	–	9.2	V
		Ta=25℃	7.8	8.0	8.2	V
		Ta=70℃	7.2	–	–	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	3.0	3.6	4.5	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	RS	H/L	H: DATA, L: Instruction code
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	RES	L	Reset signal
17	CS2	H	Select Column 65~ Column 128
18	CS3	H	Select Column 129~ Column 192
19	Vee		Negative Voltage output
20	A	—	LED(+)

Contour Drawing



PIN NO.	SYMBOL
1	VSS
2	VDD
3	VO
4	RS
5	R/W
6	E
7	DB0
8	DB1
9	DB2
10	DB3
11	DB4
12	DB5
13	DB6
14	DB7
15	CS1
16	RES
17	CS2
18	CS3
19	VEE
20	A

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