



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

## SPECIFICATION

**MODULE NO.: WG14432B**

### General Specification

Item	Dimension	Unit
Number of dots	144 x 32	—
Module dimension	80.0x36.0x13.2 (MAX)	mm
View area	66.0 x 16.0	mm
Active area	60.44 x 13.4	mm
Dot size	0.38 x 0.38	mm
Dot pitch	0.42 x 0.42	mm
LCD type	STN Negative, Blue Transmissive (In LCD production, It will occur slightly color difference. We can only guarantee the same color in the same batch.)	
Duty	1/32	
View direction	6 o'clock	
Backlight Type	LED, White	
IC	ST7920	
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
Input Voltage	$V_{IN}$	-0.3	—	$V_{DD}+0.3$	V
Supply Voltage For Logic	$V_{DD}-V_{SS}$	-0.3	—	5.5	V
Supply Voltage For LCD	$V_O-V_{SS}$	0	—	7.0	V

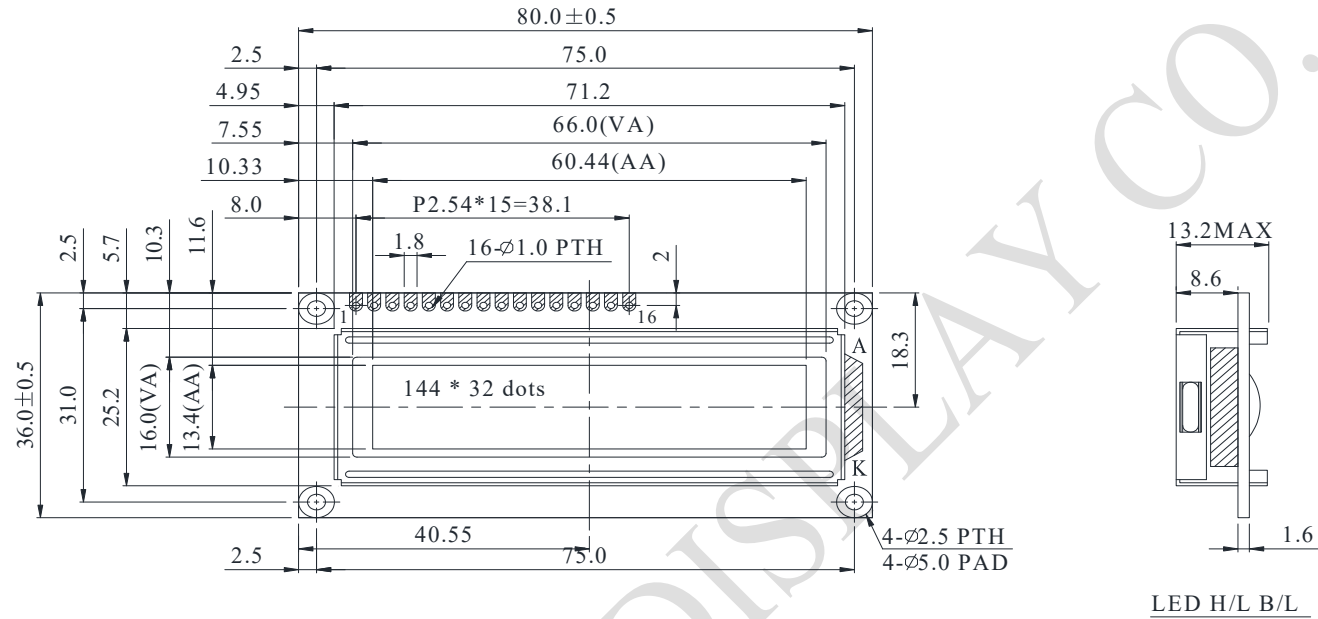
## Electrical Characteristics

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	$V_O-V_{SS}$	$T_a=-20^{\circ}\text{C}$	—	—	—	V
		$T_a=25^{\circ}\text{C}$	—	—	—	V
		$T_a=+70^{\circ}\text{C}$	—	—	—	V
Input High Volt.	$V_{IH}$	—	$0.7V_{DD}$	—	$V_{DD}$	V
Input Low Volt.	$V_{IL}$	—	-0.3	—	0.6	V
Output High Volt.	$V_{OH}$	—	$0.8 V_{DD}$	—	$V_{DD}$	V
Output Low Volt.	$V_{OL}$	—	—	—	0.4	V
Supply Current	$I_{DD}$	$V_{DD}=5.0\text{V}$	2.0	2.5	3.5	mA

# Interface Pin Function

Pin No.	Symbol	Level	Description
1	VSS	0V	GND
2	VDD	5.0V	Power Supply (+5V)
3	Vo	—	No connection
4	RS	H/L	H/L register select signal
5	R/W	H/L	H/L Read/Write signal
6	E	H/L	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	A	—	LED+
16	K	—	LED-

# Contour Drawing



PIN NO.	SYMBOL
1	V <sub>ss</sub>
2	V <sub>dd</sub>
3	V <sub>o</sub>
4	RS
5	R/ $\bar{W}$
6	E
7	DB0
8	DB1
9	DB2
10	DB3
11	DB4
12	DB5
13	DB6
14	DB7
15	A
16	K

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

