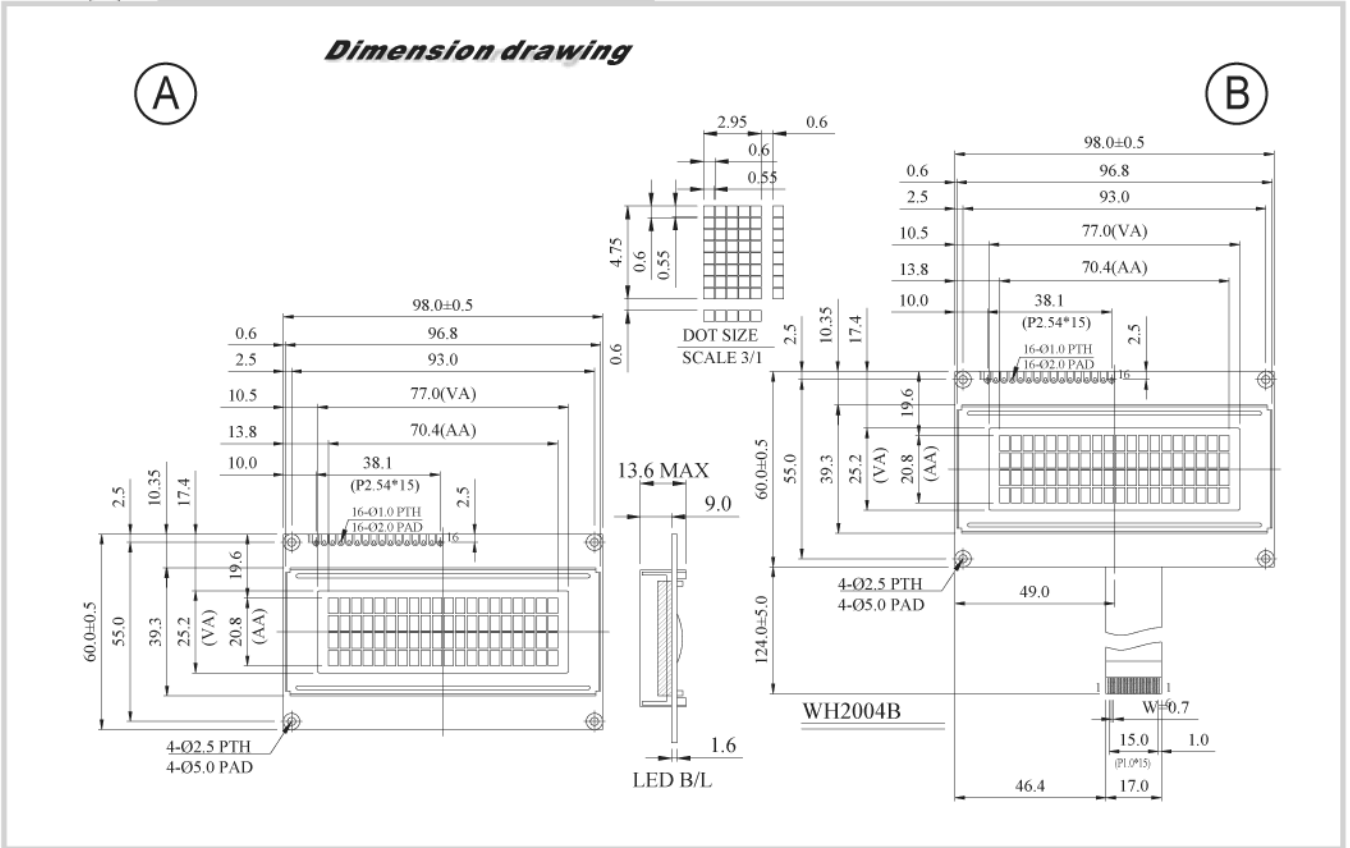


**WH2004A/B** Character20x4



Character type

**Feature**

1. 5x8 dots includes cursor
2. Built-in controller (KS 0066 or Equivalent)
3. +5V power supply (Also available for +3V)
4. 1/16 duty cycle
5. LED can be driven by pin1, pin2, pin15, pin16 or A and K
6. N.V. optional for +3V power supply
7. FFC and FFC connector is for WH2004B only

Pin NO.	Symbol	Function
1	Vss	Ground
2	Vdd	Supply voltage for logic
3	Vo	Contrast Adjustment
4	RS	H: Data L: Instruction
5	R/W	H: read data L: write data
6	E	Enable signal
7	DB0	Data bus line
8	DB1	Data bus line
9	DB2	Data bus line
10	DB3	Data bus line
11	DB4	Data bus line
12	DB5	Data bus line
13	DB6	Data bus line
14	DB7	Data bus line
15	A	+4.2V for LED
16	K	Power supply for B/L(-)

**Mechanical Data**

Item	Standard Value	Unit
Module Dimension	98.0x60.0x13.6	mm
Viewing Area	77.0x25.2	mm
Mounting hole	93.0x55.0	mm
Character Size	2.95x4.75	mm

**Absolute Maximum Rating**

Item	Symbol	Standard Value			Unit
		min.	typ.	max.	
Power Supply	VDD-VSS	-0.3	---	7.0	V
Input Voltage	VI	-0.3	---	VDD	V

Note : VSS=0 Volt, VDD=5.0 Volt.

**Electronical Characteristics**

Item	Symbol	Conditio	Standard Value			Unit	
			min.	typ.	max.		
Input Voltage	VDD	VDD=+5V	2.7	---	5.3	V	
Supply Current	IDD	VDD=5V	---	1.0	1.2	mA	
Recommended LC Driving Voltage for Normal Temp. Version module	VDD-VO	-20°C	5.0	5.1	5.7	V	
		25°C	4.1	4.5	4.7		
		70°C	3.7	3.9	4.3		
LED Forward Voltage	VF	25°C	---	4.2	4.6	V	
LED Forward Current	IF	25°C	Array	---	280	560	mA
			Edge	---	---	---	mA
EL Power Supply Current	IEF	Vel=110VAC;400Hz	---	---	5.0	mA	

**Display Character Address Code :**

Display position	1	2	3	4	5	6	7	8	9	10	11	12	13	---	---	20
DD RAM Address	00	01	02													13
DD RAM Address	40	41	42													53
DD RAM Address	14	15	16													27
DD RAM Address	54	55	56													67