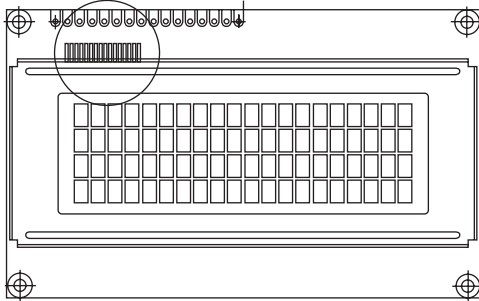


## 20 x 4 Character LCD



### FEATURES

- 5 x 8 dots includes cursor
- Built - in controller (KS 0066 or Equivalent)
- + 5V power supply (Also available for + 3V)
- 1/16 duty cycle
- LED can be driven by pin 1, pin 2, pin 15, pin 16 or A and K
- N.V. optional for + 3V power supply
- FFC and FFC connector is for LCD-020M004B only

MECHANICAL DATA		
ITEM	STANDARD VALUE	UNIT
Module Dimension	98.0 x 60.0	mm
Viewing Area	77.0 x 25.2	mm
Mounting Hole	93.0 x 55.0	mm
Character Size	2.95 x 4.75	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

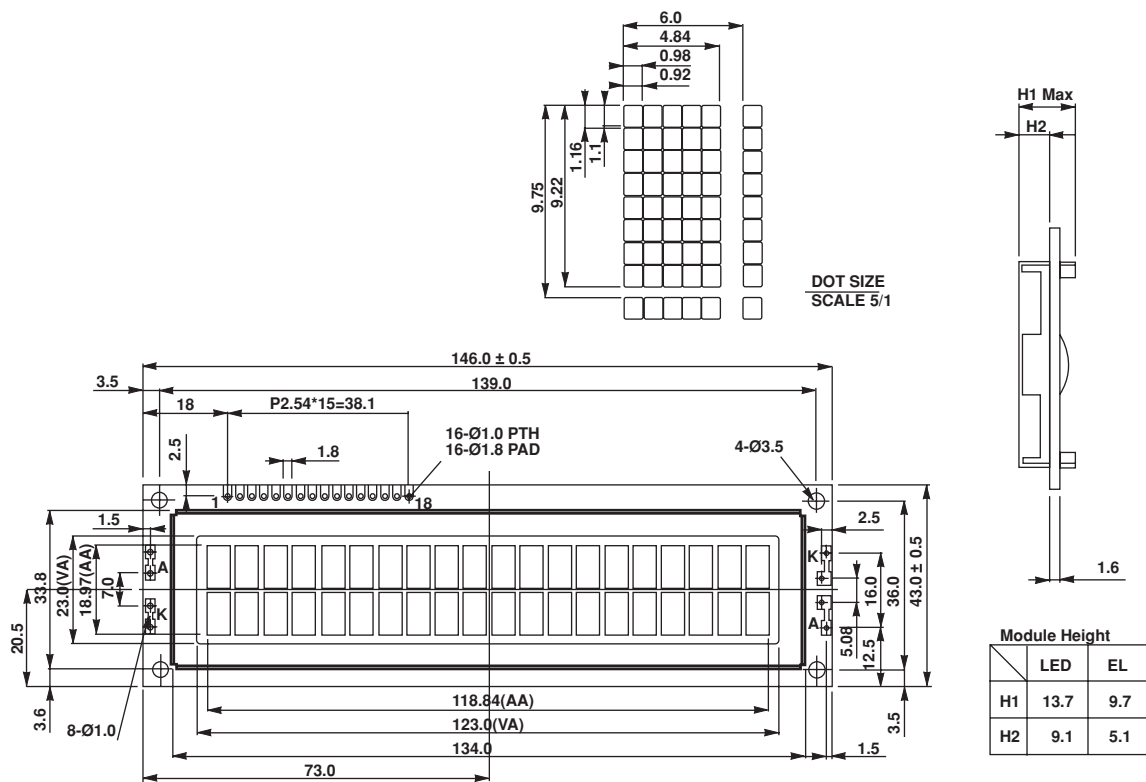
**NOTE:** VSS = 0 Volt, VDD = 5.0 Volt

ELECTRICAL SPECIFICATIONS						
ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT
			MIN.	TYP.	MAX.	
Input Voltage	VDD	VDD = + 5V	4.7	5.0	5.3	V
		VDD = + 3V	2.7	3.0	5.3	V
Supply Current	IDD	VDD = + 5V	-	1.0	1.2	mA
Recommended LC Driving Voltage for Normal Temp. Version Module	VDD - V0	- 20 °C	5.0	5.1	5.7	V
		0 °C	4.6	4.8	5.2	
		25 °C	4.1	4.5	4.7	
		50 °C	3.9	4.2	4.5	
		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	-	280	560	mA
EL Power Supply Current	IEL	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														13
DD RAM Address	40	41														53
DD RAM Address	14	15														27
DD RAM Address	54	55														67

PIN NUMBER	SYMBOL	FUNCTION
1	V <sub>ss</sub>	GND
2	V <sub>dd</sub>	+ 3V or + 5V
3	V <sub>o</sub>	Contrast Adjustment
4	RS	H/L Register Select Signal
5	R/ $\bar{W}$	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/V <sub>ee</sub>	+ 4.2V for LED (RA = 0)/Negative Voltage Output
16	K	Power Supply for B/L (0V)

## DIMENSIONS in millimeters





## Disclaimer

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