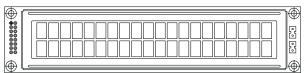


## 20 x 2 Character LCD



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<b>───</b> `\⊕		0 /
		D.,

## **FEATURES**

- x 8 dots includes cursor
- Built-in controller (KS 0066 or Equivalent)
- + 5V power supply (Also available for + 3V)
- 1/16 duty cycle
- B/L to be driven by pin 1, pin 2 or pin 15, pin 16 or A and K (LED)
- N.V. optional for + 3V power supply

MECHANICAL DATA							
ITEM	UNIT						
Module Dimension	180.0 x 40.0	mm					
Viewing Area	149.0 x 23.0	mm					
Mounting Hole	172.0 x 32.0	mm					
Character Size	6.0 x 9.66	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	ST	UNIT				
			MIN.	TYP.	MAX.			
Input Voltage	VDD	VDD = + 5V	4.7	5.0	V			
		VDD = + 3V	2.7	3.0	5.3	V		
Supply Current	IDD	VDD = + 5V	_	1.5	1.8	mA		
		- 20 °C	5.0	5.1	5.7			
Recommended LC Driving	VDD - V0	0°C	4.6	4.8	5.2			
Voltage for Normal Temp.		25°C	4.1	4.5	4.7	V		
Version Module		50°C	3.9	4.2	4.5			
		70°C	_	_	_			
LED Forward Voltage	VF	25°C	_	4.2	4.6	V		
LED Forward Current	IF	25°C	_	360	720	mA		
EL Power Supply Current	IEL	Vel = 110VAC:400Hz	-	_	5.0	mA		

DISPLAY CH	ARAC	TER /	ADDF	RESS	5 CC	DE:										
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	40	41														55

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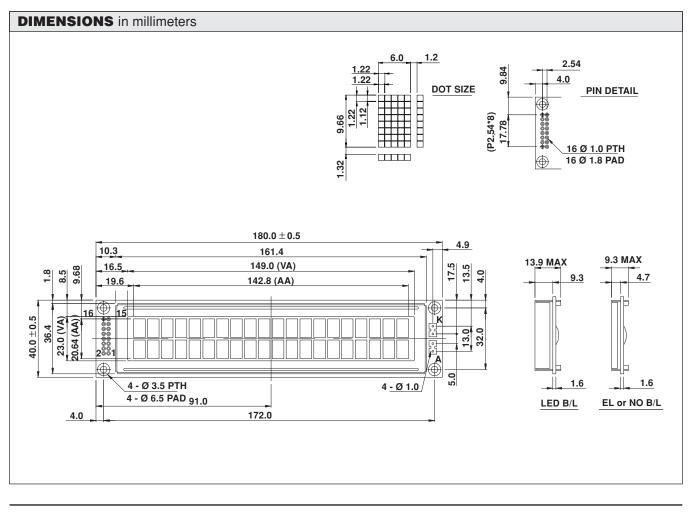
## LCD-020M002L

Vishay

16 x 2 Character LCD



PIN NUMBER	SYMBOL	FUNCTION						
1	Vss	GND						
2	Vdd	+ 3V or + 5V						
3	Vo	Contrast Adjustment						
4	RS	H/L Register Select Signal						
5	R/W	H/L Read/Write Signal						
6	E	$H \rightarrow L$ 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/Vee	+ 4.2V for LED/Negative Voltage 0utput						
16	к	Power Supply for B/L (0V)						





Vishay

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