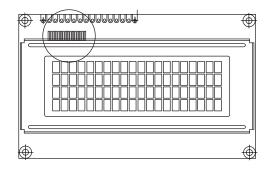


Vishay



20 x 4 Character LCD



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				

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

ABSOLUTE MAXIMUM RATING									
ITEM	SYMBOL	STANDARD VALUE UN							
		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	ANDARD VALU	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		
		- 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	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

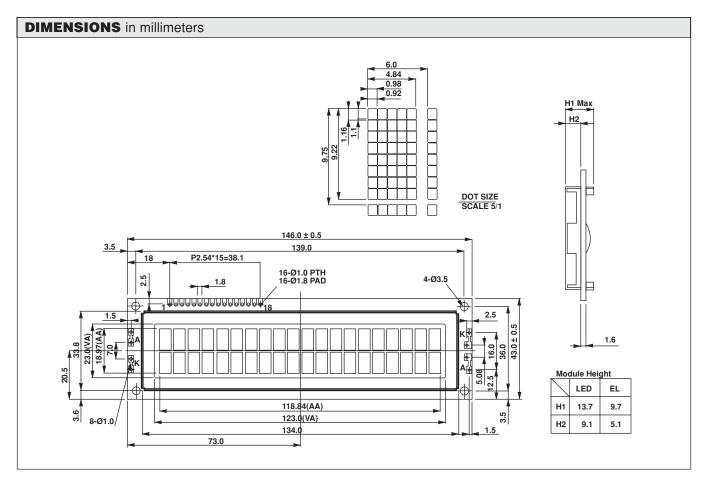
LCD-020M004B

Vishay

20 x 4 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 (RA = 0)/Negative Voltage Output					
16	К	Power Supply for B/L (0V)					





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