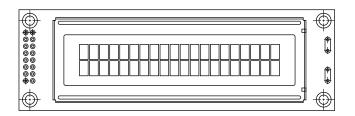




20 x 2 Character LCD



FEATURES

• Type: Character

• Display format: 20 x 2 characters

• Built-in controller: KS 0066 (or equivalent)

RoHS

• Duty cycle: 1/16

• 5 x 8 dots includes cursor

- + 5 V power supply (also available for + 3 V)
- LED can be driven by pin 1, pin 2, pin 15, pin 16 or A and K
- N.V. optional for + 3 V power supply
- Compliant to RoHS directive 2002/95/EC

MECHANICAL DATA								
ITEM	STANDARD VALUE	UNIT						
Module Dimension	116.0 x 37.0							
Viewing Area	85.0 x 18.6							
Dot Size	0.60 x 0.65	mm						
Dot Pitch	0.65 x 0.70	mm						
Mounting Hole	108.0 x 29.0							
Character Size	3.2 x 5.55							

ABSOLUTE MAXIMUM RATINGS										
ITEM	CVMPOL	STAN	UNIT							
ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT					
Power Supply	V _{DD} to V _{SS}	- 0.3	-	7.0	V					
Input Voltage	VI	- 0.3	-	V _{DD}	V					

Note

• $V_{SS} = 0 \text{ V}, V_{DD} = 5.0 \text{ V}$

ELECTRICAL CHARACTERISTICS									
ITEM	SYMBOL	CONDITION	ST	LINIT					
IIEW	STINIBUL	CONDITION	MIN. TYP. MA		MAX.	UNIT			
Input Voltage	V _{DD}	V _{DD} = + 5 V	4.7	5.0	5.3	V			
input voitage	V DD	V _{DD} = + 3 V	2.7	3.0	5.3	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			
Supply Current	I _{DD}	V _{DD} = + 5 V	-	1.0	1.2	mA			
Recommended LC Driving		- 20 °C	5.0	5.1	5.7				
		0 °C	4.6	4.8	5.2				
Voltage for Normal Temperature	V_{DD} to V_{0}	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	V _F	25 °C	-	4.2	4.6	V			
LED Forward Current	I _F	25 °C	-	210	420	mA			
EL Power Supply Current	I _{EL}	V _{EL} = 110 V _{AC} , 400 Hz	-	-	5.0	mA			

OPTION	OPTIONS								
		PROCES		BACK	LIGHT				
TN	STN Gray	STN Yellow	STN Blue	FSTN B&W	STN Color	None	LED	EL	CCFL
х	х	Х	х			Х	х	х	

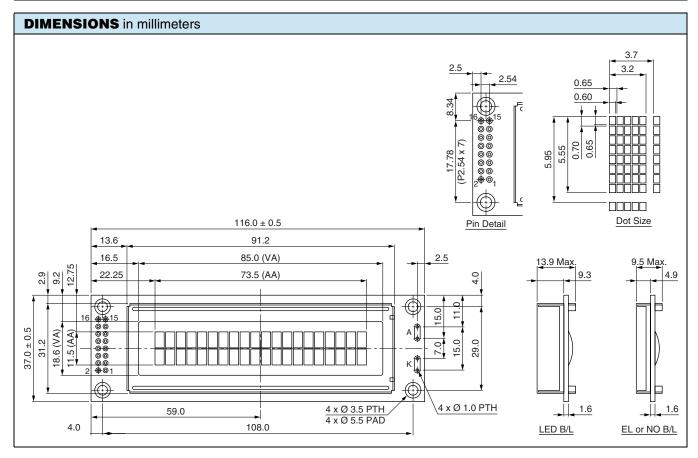
For detailed information, please see the "Product Numbering System" document.

20 x 2 Character LCD



DISPLAY CHARACTER ADDRESS CODE																				
Display Position																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
DD RAM Address	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	10	11	12	13
DD RAM Address	40	41	42	43	44	45	46	47	48	49	4A	4B	4C	4D	4E	4F	50	51	52	53

INTERFACE PIN FUNCTION								
PIN NO.	SYMBOL	FUNCTION						
1	V _{SS}	Ground						
2	V _{DD}	+ 3 V or + 5 V						
3	V ₀	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/V _{EE}	+ 4.2 V for LED/negative voltage output						
16	К	Power supply for B/L (0 V)						





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Vishay

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