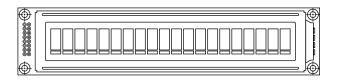




20 x 1 Character LCD



FEATURES

• Type: Character

• Display format: 20 x 1 characters

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

• Duty cycle: 1/16

• 5 x 7 dots includes cursor

• + 5 V power supply

• Compliant to RoHS directive 2002/95/EC



MECHANICAL DATA								
STANDARD VALUE	UNIT							
180.0 x 40.0								
149.0 x 23.0								
1.152 x 1.765	mm							
1.212 x 1.825								
172.0 x 32.0								
1.152 x 1.765								
	STANDARD VALUE 180.0 x 40.0 149.0 x 23.0 1.152 x 1.765 1.212 x 1.825 172.0 x 32.0							

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

Note

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

ELECTRICAL CHARACTERISTICS										
ITEM	SYMBOL	CONDITION	ST	UNIT						
IIEM	STWIBOL	CONDITION	MIN.	MAX.	ONIT					
Input Voltage	V_{DD}	-	4.5	5.0	5.5	V				
Supply Current	I _{DD}	V _{DD} = + 5 V	1.0	1.2	1.5	mA				
Recommended LC Driving		- 20 °C	-	=	5.7					
		0 °C	-	-	-					
Voltage for Normal Temperature	V_{DD} to V_{0}	25 °C	-	4.2	-	V				
Version Module		50 °C	-	-	-					
		70 °C	3.2	-	-					
LED Forward Voltage	V _F	25 °C	3.4	3.5	3.6	V				
LED Forward Current - Array	,	05.00	-	-	-	m 1				
LED Forward Current - Edge	- I _F	25 °C	50	60	75	mA				
EL Power Supply Current	I _{EL}	V _{EL} = 110 V _{AC} , 400 Hz	=	=	5.0	mA				

OPTION	OPTIONS											
		PROCES	S COLOR				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.

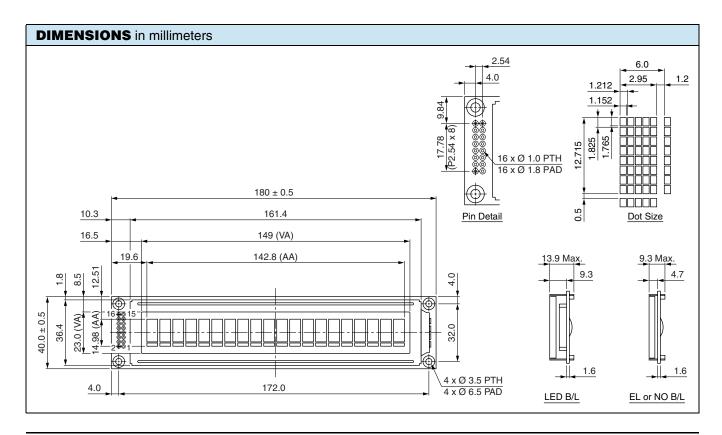
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20 x 1 Character LCD



DISPLAY CHA	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

INTERFACE PIN FUNCTION								
PIN NO.	SYMBOL	FUNCTION						
1	V _{SS}	Ground						
2	V _{DD}	Supply voltage for logic						
3	V ₀	Operating voltage for LCD						
4	RS	H: Data/L: Instruction						
5	R/W	H: Read data/L: Write data						
6	E	Chip enable signal						
7	DB0	Data bit 0						
8	DB1	Data bit 1						
9	DB2	Data bit 2						
10	DB3	Data bit 3						
11	DB4	Data bit 4						
12	DB5	Data bit 5						
13	DB6	Data bit 6						
14	DB7	Data bit 7						
15	A	LED +						
16	К	LED -						





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Revision: 18-Jul-08

Document Number: 91000 www.vishay.com