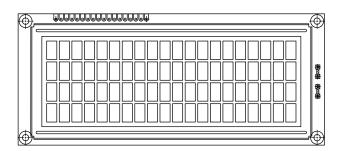
Rohs



## 20 x 4 Character LCD



MECHANICAL D	DATA	
ITEM	STANDARD VALUE	UNIT
Module Dimension	146.0 x 62.5	
Viewing Area	123.5 x 43.0	
Dot Size	0.92 x 1.10	mm
Dot Pitch	0.98 x 1.16	mm
Mounting Hole	139.0 x 55.5	
Character Size	4.84 x 9.22	

### **FEATURES**

· Type: Character

• Display format: 20 x 4 characters

• Built-in controller: ST 7066 (or equivalent)

• 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

 Material categorization: For definitions of compliance please see <a href="https://www.vishay.com/doc?99912">www.vishay.com/doc?99912</a>

ABSOLUTE MAXIMUM RATINGS									
ITEM	SYMBOL	STAN	IDARD V	ALUE	UNIT				
I I EIVI	STIVIDUL	MIN.	MIN. TYP.		ONII				
Power Supply	$V_{DD}$ to $V_{SS}$	- 0.3	-	7.0	V				
Input Voltage	VI	- 0.3	-	$V_{DD}$	]				

#### Note

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

ELECTRICAL CHARACTERISTICS								
ITEM	SYMBOL	CONDITION	ST	UNIT				
I I E I W	STWIBOL	CONDITION	MIN. TYP. N		MAX.	UNIT		
Input Voltage	V	$V_{DD} = + 5 V$	4.7	5.0	5.3	V		
Input voltage	$V_{DD}$	$V_{DD} = + 3 V$	2.7	3.0	5.3	7 °		
Supply Current	I <sub>DD</sub>	$V_{DD} = + 5 V$	-	8.0	10.0	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 $V_{0}$	$V_{DD}$ to $V_0$ 25 °C 4.1			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 <sub>F</sub>	25 °C	-	540	1080	mA		
EL Power Supply Current	I <sub>EL</sub>	V <sub>EL</sub> = 110 V <sub>AC</sub> , 400 Hz	-	-	5.0	mA		

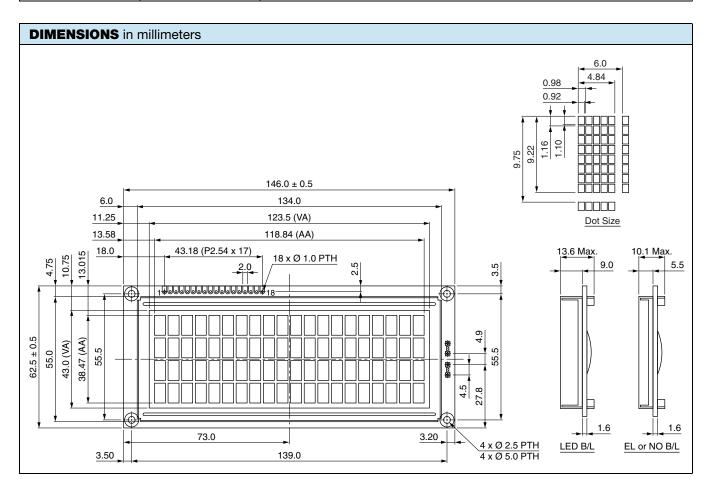
OPTION	S								
		PROCES	S COLOR			BACK	LIGHT		
TN	STN Gray	STN Yellow	STN Blue	FSTN B&W	STN Color	None	LED	EL	CCFL
х	х	х	х	х		х	х	х	

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

DISPLAY CHAR	ACT	ER	ADE	RE	SS C	OD	E													
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
DD RAM Address	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F	20	21	22	23	24	25	26	27
DD RAM Address	54	55	56	57	58	59	5A	5B	5C	5D	5E	5F	60	61	62	63	64	65	66	67



INTERFACE PIN FUNCTION							
PIN NO.	SYMBOL	FUNCTION					
1	V <sub>SS</sub>	Ground					
2	V <sub>DD</sub>	+ 3 V or + 5 V					
3	V <sub>0</sub>	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	Power supply for LED (4.2 V)					
16	К	Power supply for B/L (0 V)					
17	NC/V <sub>EE</sub>	NC or negative voltage output					
18	NC	NC connection					





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