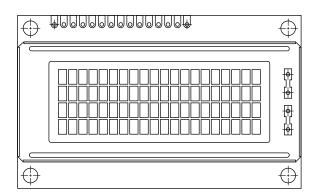
**RoHS** 

COMPLIANT



## 20 x 4 Character LCD



### **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 www.vishay.com/doc?99912

MECHANICAL DATA							
ITEM	STANDARD VALUE	UNIT					
Module Dimension	77.0 x 47.0						
Viewing Area	60.0 x 22.0						
Dot Size	0.42 x 0.46	mm					
Dot Pitch	0.47 x 0.51	mm					
Mounting Hole	70.0 x 40.0						
Character Size	2.3 x 4.03						

ABSOLUTE MAXIMUM RATINGS									
ITEM	CVMBOL	STAN	IDARD V	ALUE	LINIT				
IIEM	SYMBOL	TYP.	MAX.	UNIT					
Power Supply	V <sub>DD</sub> to V <sub>SS</sub>	- 0.3	-	7.0	V				
Input Voltage	$V_{I}$	- 0.3	-	$V_{DD}$	v				

#### Note

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

ELECTRICAL CHARACTERISTICS										
ITEM	SYMBOL	CONDITION	ST	STANDARD VALUE						
I I E IVI	STINIBOL	CONDITION	MIN. TYP. MAX			UNIT				
Input Voltage	V <sub>DD</sub>	$V_{DD} = + 5 V$	4.7	5.0	5.3	V				
input voltage	V DD	V <sub>DD</sub> = + 3 V	2.7	3.0	5.3	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \				
Supply Current	I <sub>DD</sub>	V <sub>DD</sub> = + 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 $V_{0}$	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 <sub>F</sub>	25 °C	-	4.2	4.6	V				
LED Forward Current	I <sub>F</sub>	25 °C	-	-	-	mA				
EL Power Supply Current	I <sub>EL</sub>	$V_{EL} = 110 V_{AC}, 400 Hz$	-	-	5.0	mA				

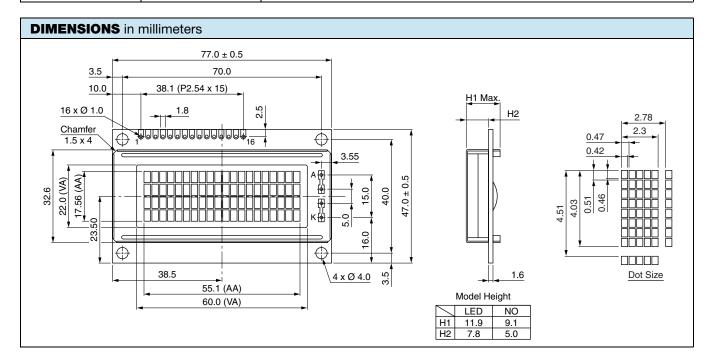
OPTIONS	OPTIONS								
		PROCES	S COLOR		BACK	LIGHT			
TN	STN Gray	STN Yellow	STN Blue	FSTN B&W	STN Color	None	LED	EL	CCFL
х	х	х	х	х		х	х	х	

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



DISPLAY CHAP	RACT	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
İ																				

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)					





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