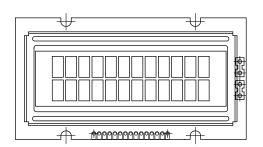


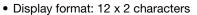


## 12 x 2 Character LCD



### **FEATURES**

• Type: Character







• Duty cycle: 1/16

• 5 x 8 dots includes cursor

• + 5 V power supply

• LED can be driven by pin 1, pin 2, or A and K

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

MECHANICAL DATA							
ITEM	STANDARD VALUE	UNIT					
Module Dimension	55.7 x 32.0						
Viewing Area	46.0 x 14.5						
Dot Size	0.45 x 0.60	mm					
Dot Pitch	0.55 x 0.70	] """					
Mounting Hole	31.2 x 30.0						
Character Size	2.65 x 5.50						

ABSOLUTE MAXIMUM RATINGS									
ITEM	CVMPOL	STAN	LINIT						
ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT				
Power Supply	V <sub>DD</sub> to V <sub>SS</sub>	- 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	STANDARD VALUE				
	STWIBOL	CONDITION	MIN. TYP.		MAX.	UNIT		
Input Voltage	$V_{DD}$	$V_{DD} = + 5 V$	4.7	5.0	5.3	V		
Supply Current	I <sub>DD</sub>	$V_{DD} = + 5 V$	-	1.3	1.5	mA		
Recommended LC Driving Voltage for Normal Temperature Version Module		- 20 °C	4.9	5.2	5.5			
		0 °C	4.5	4.8	5.1			
	$V_{DD}$ to $V_{0}$	25 °C	4.1	4.4	4.7	V		
		50 °C	3.8	4.2	4.4			
		70 °C	3.5	4.0	4.1			
LED Forward Voltage	V <sub>F</sub>	25 °C	-	4.2	4.6	V		
LED Forward Current	I <sub>F</sub>	25 °C	-	40	80	mA		

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

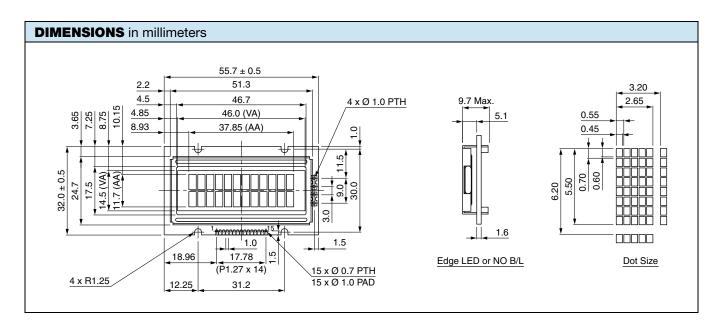
For detailed information, please see the "Product Numbering System" document.



www.vishay.com

DISPLAY CHAR	DISPLAY CHARACTER ADDRESS CODE											
Display Position												
	1	2	3	4	5	6	7	8	9	10	11	12
DD RAM Address	00	01	02	03	04	05	06	07	08	0A	0B	0C
DD RAM Address	40	41	42	43	44	45	46	47	48	4A	4B	4C

INTERFACE PIN FUNCTION							
PIN NO.	SYMBOL	FUNCTION					
1	V <sub>SS</sub>	Ground					
2	V <sub>DD</sub>	+ 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	Е	$H \rightarrow L$ 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 <sub>EE</sub>	4.2 V for LED ( $R_A = 0 \Omega$ )/negative voltage output					





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