## LCD-016N002O



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### 16 x 2 Character LCD

#### FEATURES

- Type: Character
- Display format: 16 x 2 characters
- Built-in controller: ST 7066 (or equivalent)
- Duty cycle: 1/16
- 5 x 8 dots includes cursor
- + 5 V power supply
- Optional: Smaller character size (2.95 mm x 4.35 mm)
- Material categorization: For definitions of compliance please see <u>www.vishay.com/doc?99912</u>

MECHANICAL DATA						
ITEM	STANDARD VALUE	UNIT				
Module Dimension	85.0 x 25.2					
Viewing Area	66.0 x 16.0					
Dot Size	0.55 x 0.65					
Dot Pitch	0.60 x 0.70	mm				
Mounting Hole	80.3 x 22.0					
Character Size	2.95 x 5.55					

ABSOLUTE MAXIMUM RATINGS								
SAMBOI	STAN	IDARD V	ALUE	UNIT				
STNIDUL	MIN.	TYP.	MAX.	UNIT				
$V_{\text{DD}}$ to $V_{\text{SS}}$	- 0.3	-	7.0	v				
oltage V <sub>I</sub> - 0.3 -		-	V <sub>DD</sub>	v				
	SYMBOL	SYMBOL STAN   MIN. VDD to VSS - 0.3	SYMBOL STANDARD V/   MIN. TYP.   V <sub>DD</sub> to V <sub>SS</sub> - 0.3 -	SYMBOL STANDARD VALUE   MIN. TYP. MAX.   V <sub>DD</sub> to V <sub>SS</sub> - 0.3 - 7.0				

Note

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• V_{SS} = 0 V, V_{DD} = 5.0 V
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ELECTRICAL CHARACTERISTICS								
ITEM	SYMBOL	CONDITION	ST	STANDARD VALUE				
	STMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT		
Input Voltage	V <sub>DD</sub>	$V_{DD} = +5 V$	4.7	5.0	5.3	V		
Supply Current	I <sub>DD</sub>	$V_{DD} = +5 V$	-	1.2	1.5	mA		
		- 20 °C	-	-	5.2			
Recommended LC Driving Voltage for Normal Temperature Version Module		0 °C	-	-	4.2	1		
	$V_{DD}$ to $V_0$	25 °C	-	3.8	-	V		
		50 °C 3.5			-	1		
		70 °C	3.2	-	-	1		
LED Forward Voltage	V <sub>F</sub>	25 °C	-	4.2	4.6	V		
LED Forward Current - Array		05.00	-	100	-			
LED Forward Current - Edge	- I <sub>F</sub>	25 °C	-	20	40	mA		
EL Power Supply Current	I <sub>EL</sub>	V <sub>EL</sub> = 110 V <sub>AC</sub> , 400 Hz	-	-	5.0	mA		

OPTIONS									
PROCESS 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.

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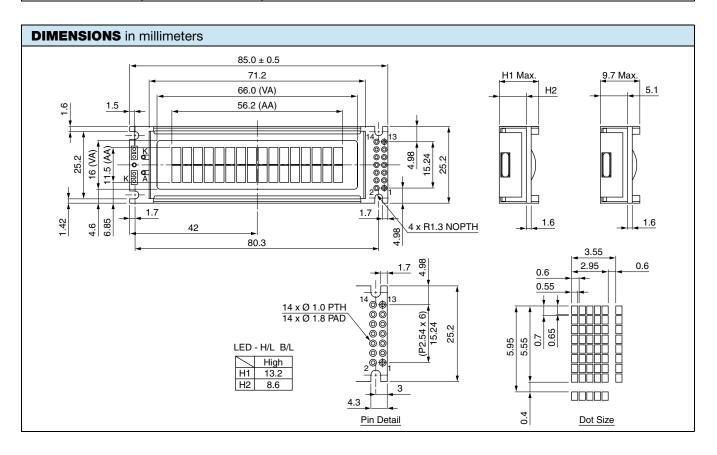


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#### **DISPLAY CHARACTER ADDRESS CODE**

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

INTERFACE PIN FUNCTION						
PIN NO.	SYMBOL	FUNCTION				
1	DB7	H/L data bus line				
2	DB6	H/L data bus line				
3	DB5	H/L data bus line				
4	DB4	H/L data bus line				
5	DB3	H/L data bus line				
6	DB2	H/L data bus line				
7	DB1	H/L data bus line				
8	DB0	H/L data bus line				
9	E	$H \rightarrow L$ enable signal				
10	R/W	H/L read/write signal				
11	RS	H/L register select signal				
12	V <sub>0</sub>	Contrast adjustment				
13	V <sub>SS</sub>	Ground				
14	V <sub>DD</sub>	Power supply (+ 5 V)				



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