

MECHANICAL DATA

Module Dimension

Viewing Area

Mounting Hole

Character Size

Dot Size

Dot Pitch

STANDARD VALUE

190.0 x 54.0

147.0 x 29.5

0.50 x 0.55

0.57 x 0.62

183.0 x 47.0

2.78 x 4.89

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ITEM

LCD-040N004A

Vishay

40 x 4 Character LCD

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UNIT

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FEATURES

- Type: Character
- Display format: 40 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 17, pin 18 or A and K
- N.V. optional for + 3 V power supply
- Material categorization: For definitions of compliance please see <u>www.vishay.com/doc?99912</u>

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

Note

• $V_{SS} = 0 V, V_{DD} = 5.0 V$

ELECTRICAL CHARACTERISTICS							
ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT	
		CONDITION	MIN.	TYP.	MAX.		
Input Voltage	V _{DD}	$V_{DD} = +5 V$	4.7	5.0	5.3	v	
		V _{DD} = + 3 V	2.7	3.0	5.3		
Supply Current	I _{DD}	V _{DD} = + 5 V	-	2.4	3.0	mA	
Recommended LC Driving Voltage for Normal Temperature Version Module	V_{DD} to V_0	- 20 °C	4.9	5.1	5.5		
		0 °C	4.5	4.8	5.1		
		25 °C	4.1	4.5	4.7	V	
		50 °C	3.8	4.2	4.4	1	
		70 °C	3.5	3.9	4.1		
LED Forward Voltage	V _F	25 °C	-	4.2	4.6	V	
LED Forward Current	I _F	25 °C	-	600	1200	mA	
EL Power Supply Current	I _{EL}	V _{EL} = 110 V _{AC} , 400 Hz	-	-	5.0	mA	

OPTIONS									
PROCESS COLOR					BACKLIGHT				
TN	STN Gray	STN Yellow	STN Blue	FSTN B&W	STN Color	None	LED	EL	CCFL
x	x	x	x	x		x	x	x	

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

DISPLAY CHARACTER ADDRESS CODE Display Position 1 2 3 4 5 6 7 8 9 10 11 12 13 14 36 37 38 39 . . . 0C DD RAM Address 00 01 02 03 04 05 06 07 08 09 0A 0B 0D 23 24 25 26 ... **DD RAM Address** 40 41 42 43 44 45 46 48 49 4A 4B 4C 4D 64 65 66 47 63 ... **DD RAM Address** 00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 23 24 25 26 ... **DD RAM Address** 40 41 42 43 44 45 46 47 48 49 4A 4B 4C 4D 63 64 66 65

Revision: 09-Oct-12

For technical questions, contact: displays@vishay.com

Document Number: 37317

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Line 2

Line 3

Line 4



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INTERFACE PIN FUNCTION				
PIN NO.	SYMBOL	FUNCTION		
1	DB7	Data bus line		
2	DB6	Data bus line		
3	DB5	Data bus line		
4	DB4	Data bus line		
5	DB3	Data bus line		
6	DB2	Data bus line		
7	DB1	Data bus line		
8	DB0	Data bus line		
9	E1	$H \rightarrow L$ enable signal IC1		
10	R/W	H/L read/write		
11	RS	Register select		
12	V ₀	Contrast adjustment		
13	V _{SS}	Ground		
14	V _{DD}	+ 5 V		
15	E2	$H \rightarrow L$ enable signal IC2		
16	NC/V _{EE}	NC/negative voltage output		
17	A			
18	К	Ground		



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2 For technical questions, contact: <u>displays@vishay.com</u>

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