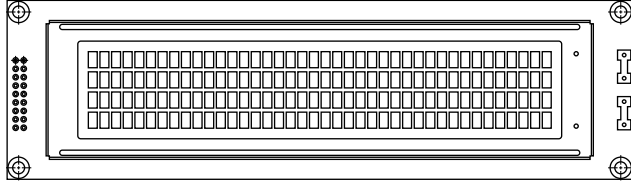


## 40 x 4 Character LCD



### 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 [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

MECHANICAL DATA		
ITEM	STANDARD VALUE	UNIT
Module Dimension	190.0 x 54.0	mm
Viewing Area	147.0 x 29.5	
Dot Size	0.50 x 0.55	
Dot Pitch	0.57 x 0.62	
Mounting Hole	183.0 x 47.0	
Character Size	2.78 x 4.89	

ABSOLUTE MAXIMUM RATINGS					
ITEM	SYMBOL	STANDARD VALUE			UNIT
		MIN.	TYP.	MAX.	
Power Supply	$V_{DD}$ to $V_{SS}$	- 0.3	-	7.0	V
Input Voltage	$V_I$	- 0.3	-	$V_{DD}$	

### Note

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

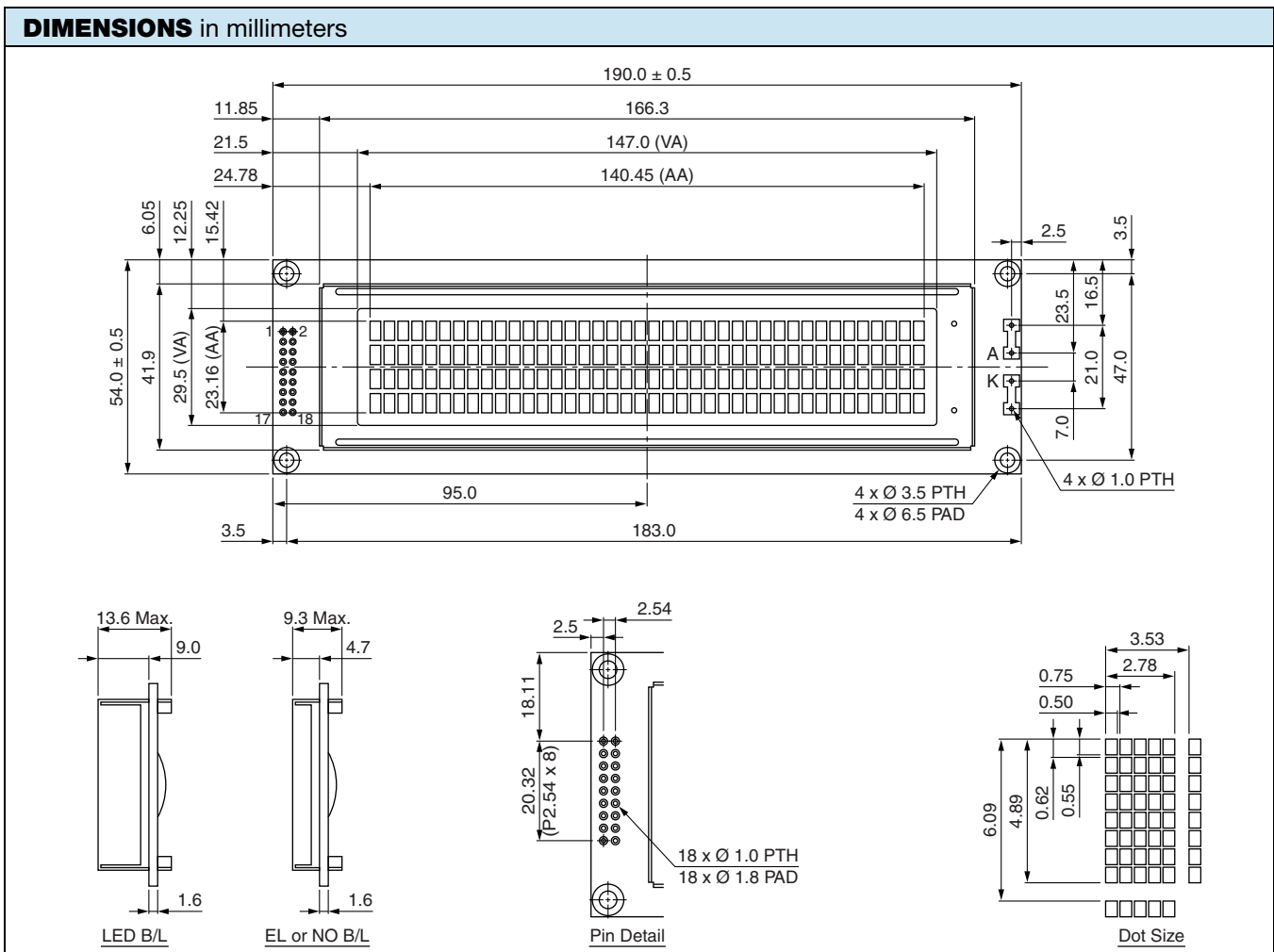
ELECTRICAL CHARACTERISTICS						
ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT
			MIN.	TYP.	MAX.	
Input Voltage	$V_{DD}$	$V_{DD} = + 5\text{ V}$	4.7	5.0	5.3	V
		$V_{DD} = + 3\text{ V}$	2.7	3.0	5.3	
Supply Current	$I_{DD}$	$V_{DD} = + 5\text{ V}$	-	2.4	3.0	mA
Recommended LC Driving Voltage for Normal Temperature Version Module	$V_{DD}$ to $V_0$	- 20 °C	4.9	5.1	5.5	V
		0 °C	4.5	4.8	5.1	
		25 °C	4.1	4.5	4.7	
		50 °C	3.8	4.2	4.4	
		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	$I_{EL}$	$V_{EL} = 110\text{ V}_{AC}$ , 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	40	
DD RAM Address	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	...	23	24	25	26	27	Line 1
DD RAM Address	40	41	42	43	44	45	46	47	48	49	4A	4B	4C	4D	...	63	64	65	66	67	Line 2
DD RAM Address	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	...	23	24	25	26	27	Line 3
DD RAM Address	40	41	42	43	44	45	46	47	48	49	4A	4B	4C	4D	...	63	64	65	66	67	Line 4

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 → L enable signal IC1
10	R/W	H/L read/write
11	RS	Register select
12	V <sub>0</sub>	Contrast adjustment
13	V <sub>SS</sub>	Ground
14	V <sub>DD</sub>	+ 5 V
15	E2	H → L enable signal IC2
16	NC/V <sub>EE</sub>	NC/negative voltage output
17	A	
18	K	Ground





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