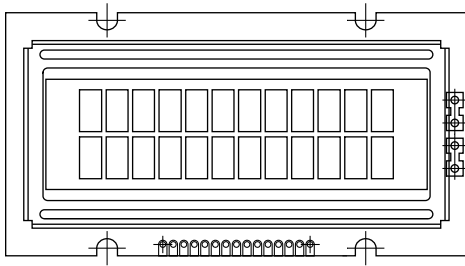


## 12 x 2 Character LCD



### FEATURES

- Type: Character
- Display format: 12 x 2 characters
- Built-in controller: ST 7066 (or equivalent)
- 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 [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS  
COMPLIANT**

MECHANICAL DATA		
ITEM	STANDARD VALUE	UNIT
Module Dimension	55.7 x 32.0	mm
Viewing Area	46.0 x 14.5	
Dot Size	0.45 x 0.60	
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	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

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

ELECTRICAL CHARACTERISTICS						
ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT
			MIN.	TYP.	MAX.	
Input Voltage	$V_{DD}$	$V_{DD} = +5$ V	4.7	5.0	5.3	V
Supply Current	$I_{DD}$	$V_{DD} = +5$ V	-	1.3	1.5	mA
Recommended LC Driving Voltage for Normal Temperature Version Module	$V_{DD}$ to $V_0$	- 20 °C	4.9	5.2	5.5	V
		0 °C	4.5	4.8	5.1	
		25 °C	4.1	4.4	4.7	
		50 °C	3.8	4.2	4.4	
		70 °C	3.5	4.0	4.1	
LED Forward Voltage	$V_F$	25 °C	-	4.2	4.6	V
LED Forward Current	$I_F$	25 °C	-	40	80	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.

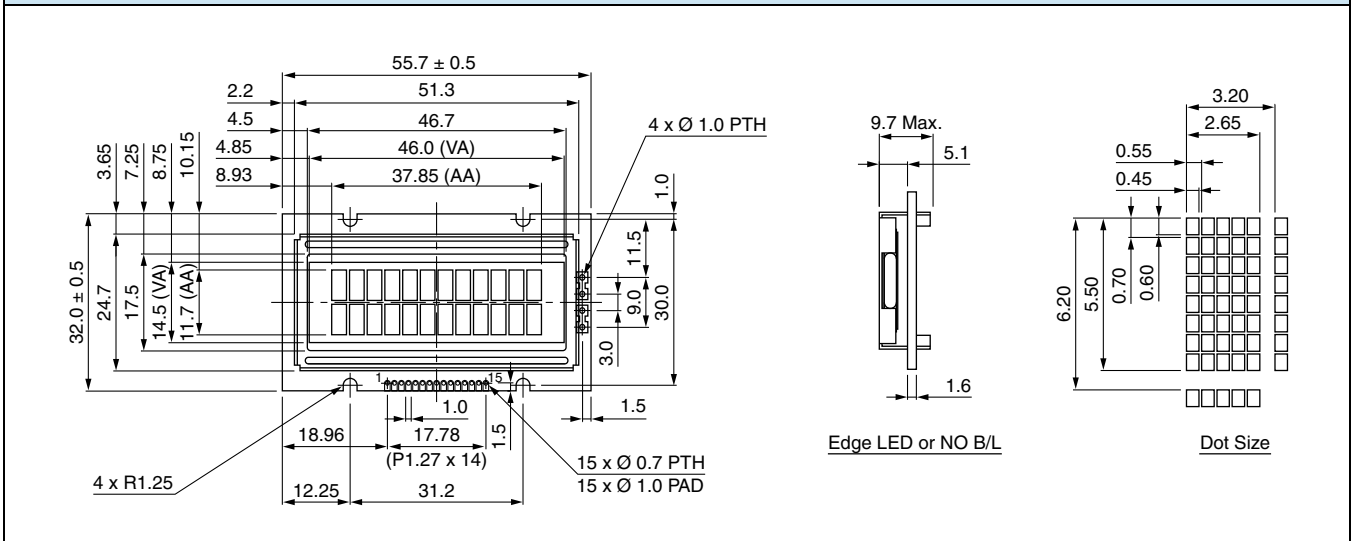
**DISPLAY CHARACTER ADDRESS CODE**

Display Position

	1	2	3	4	5	6	7	8	9	10	11	12
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	$V_{SS}$	Ground
2	$V_{DD}$	+ 5 V
3	$V_0$	Contrast adjustment
4	RS	H/L register select signal
5	$R/\bar{W}$	H/L read/write signal
6	E	H → 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	$A/V_{EE}$	4.2 V for LED ( $R_A = 0 \Omega$ )/negative voltage output

**DIMENSIONS in millimeters**




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## Material Category Policy

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**Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.**

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