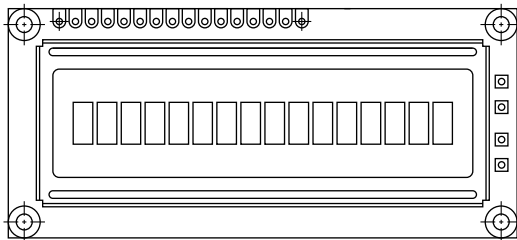


## 16 x 1 Character LCD



### FEATURES

- Type: Character
- Display format: 16 x 1 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 15, pin 16, 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 | 80.0 x 36.0    | mm   |
| Viewing Area     | 66.0 x 16.0    |      |
| Dot Size         | 0.55 x 0.75    |      |
| Dot Pitch        | 0.63 x 0.83    |      |
| Mounting Hole    | 75.0 x 31.0    |      |
| Character Size   | 3.07 x 6.56    |      |

| ABSOLUTE MAXIMUM RATING |                      |                |      |          |      |
|-------------------------|----------------------|----------------|------|----------|------|
| 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               | -              | 1.2  | 1.4  | 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                          | -              | 130  | 260  | 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.

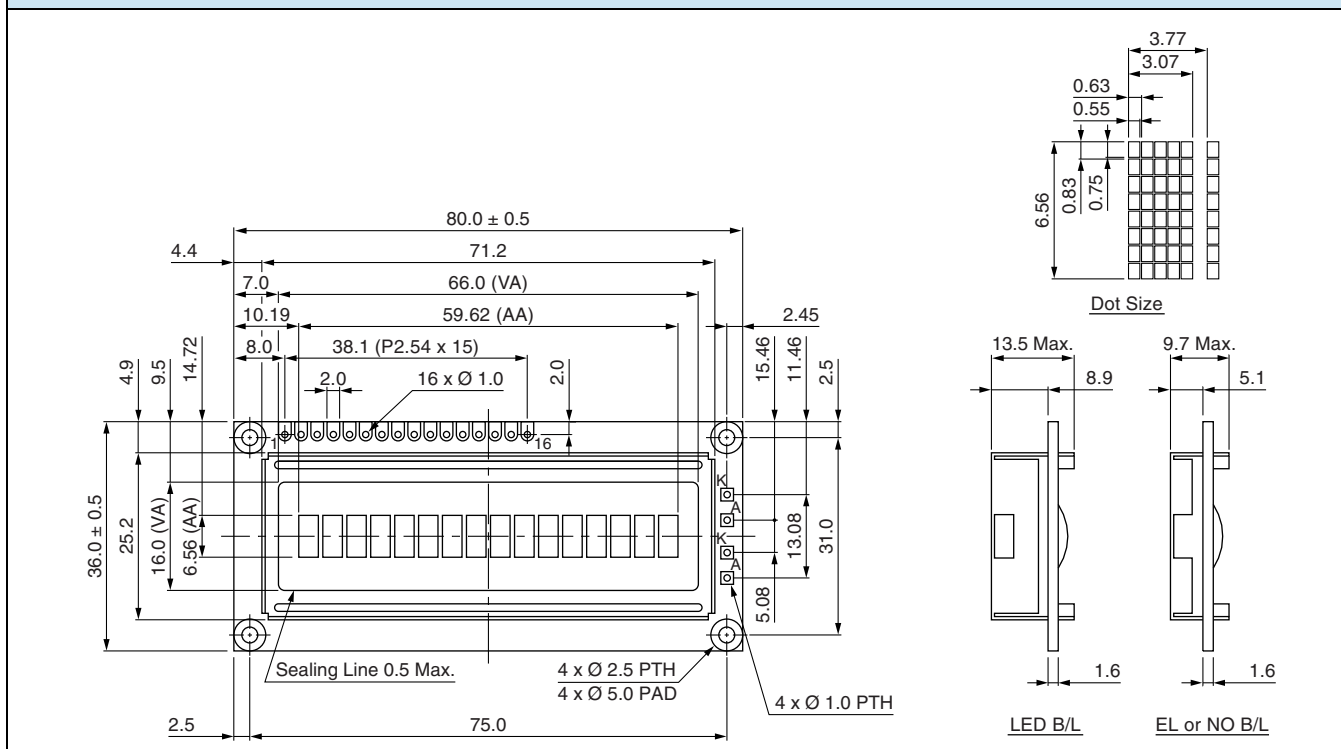
**DISPLAY CHARACTER ADDRESS CODE**

Display Position

|                | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|----------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| DD RAM Address | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 |

**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       | 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               | + 4.2 V for LED (R <sub>A</sub> = 0 Ω) |
| 15      | K               | Power supply for B/L (0 V)             |

**DIMENSIONS** in millimeters




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