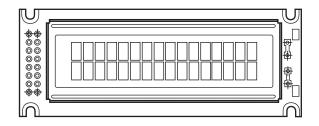




## 16 x 2 Character LCD



#### **MECHANICAL DATA** ITEM STANDARD VALUE UNIT Module Dimension 85.0 x 32.6 mm Viewing Area 66.0 x 16.0 mm Mounting Hole 79.0 x 25.2 mm Character Size 2.95 x 5.55 mm

#### **FEATURES**

- 5 x 8 dots includes cursor
- Built in controller (KS 0066 or Equivalent)
- + 5V power supply
- 1/16 duty cycle
- · LED can be driven by pin 1, pin 2 or A and K
- N.V. optional for + 3V power supply

| ABSOLUTE MAXIMUM RATING |         |                   |      |      |   |  |  |  |  |  |
|-------------------------|---------|-------------------|------|------|---|--|--|--|--|--|
| ITEM                    | SYMBOL  | STANDARD VALUE UN |      |      |   |  |  |  |  |  |
|                         |         | MIN.              | TYP. | MAX. |   |  |  |  |  |  |
| Power Supply            | VDD-VSS | - 0.3             | _    | 7.0  | V |  |  |  |  |  |
| Input Voltage           | VI      | - 0.3             | _    | VDD  | V |  |  |  |  |  |

NOTE: VSS = 0 Volt, VDD = 5.0 Volt

| ELECTRICAL SPECIFICATIONS |          |                     |       |      |      |      |    |  |  |
|---------------------------|----------|---------------------|-------|------|------|------|----|--|--|
| ITEM                      | SYMBOL   | CONDITIO            | N     | S1   | UNIT |      |    |  |  |
|                           |          |                     |       | MIN. | TYP. | MAX. |    |  |  |
| Input Voltage             | VDD      | VDD = + 5V          | ,     | 4.7  | 5.0  | 5.3  | V  |  |  |
| Supply Current            | IDD      | VDD = + 5V          | ,     | _    | 1.2  | 1.5  | mA |  |  |
|                           |          | - 20 °C             |       | _    | _    | 5.2  |    |  |  |
| Recommended LC Driving    | VDD - V0 | 0°C                 |       | _    | _    | 4.2  | V  |  |  |
| Voltage for Normal Temp.  |          | 25°C                |       | _    | 3.8  | _    |    |  |  |
| Version Module            |          | 50°C                |       | 3.5  | _    | _    |    |  |  |
|                           |          | 70°C                |       | 3.2  | -    | _    |    |  |  |
| LED Forward Voltage       | VF       | 25°C                |       | _    | 4.2  | 4.6  | V  |  |  |
| LED Forward Current       | IF       | 25°C                | Array | _    | 130  | 260  | mA |  |  |
|                           |          | 25°C                | Edge  | _    | 20   | 40   | mA |  |  |
| EL Power Supply Current   | IEL      | Vel = 110VAC; 400Hz |       | _    | _    | 5.0  | mA |  |  |

| 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 |   |   |   |   |   |   |   |    |    |    |    |    |    | 0F |
| DD RAM Address                  | 40 | 41 |   |   |   |   |   |   |   |    |    |    |    |    |    | 4F |

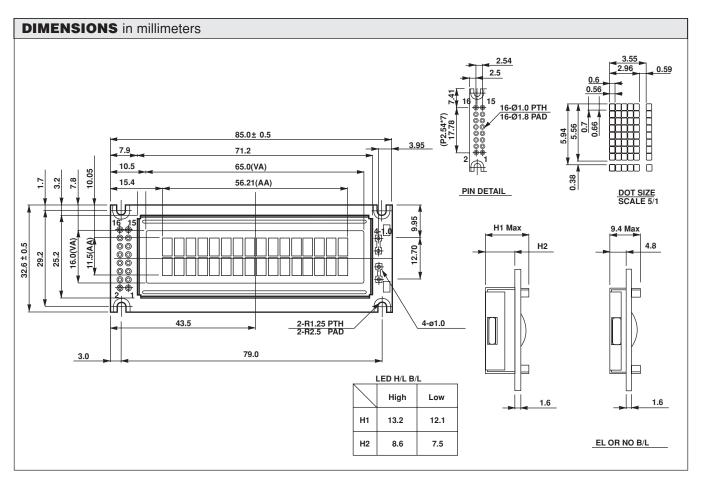
# LCD-016M002M

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### 16 x 2 Character LCD



| PIN NUMBER | SYMBOL | FUNCTION   |  |  |  |  |  |  |
|------------|--------|--|--|--|--|--|--|--|
| 1          | Vss    | GND  |  |  |  |  |  |  |
| 2          | Vdd    | + 3V or + 5V   |  |  |  |  |  |  |
| 3          | Vo     | 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/Vee  | + 4.2V for LED (RA = $0\Omega$ )/Negative Voltage Output |  |  |  |  |  |  |
| 16         | К      | Power Supply for B/L (0V)                                |  |  |  |  |  |  |





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Revision: 18-Jul-08

Document Number: 91000 www.vishay.com