

16 x 2 Character LCD

FEATURES

• Type: Character

• Display format: 16 x 2 characters

• Built-in controller: ST 7066 (or equivalent)

equivalent) RoHS

• Duty cycle: 1/16

• 5 x 8 dots includes cursor

• + 5 V power supply

• Optional: Smaller character size (2.95 mm x 4.35 mm)

 Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

| MECHANICAL DATA | | | | | | | |
|------------------|----------------|------|--|--|--|--|--|
| ITEM | STANDARD VALUE | UNIT | | | | | |
| Module Dimension | 85.0 x 25.2 | | | | | | |
| Viewing Area | 66.0 x 16.0 | | | | | | |
| Dot Size | 0.55 x 0.65 | mm | | | | | |
| Dot Pitch | 0.60 x 0.70 | mm | | | | | |
| Mounting Hole | 80.3 x 22.0 | | | | | | |
| Character Size | 2.95 x 5.55 | | | | | | |

| ABSOLUTE MAXIMUM RATINGS | | | | | | | | |
|--------------------------|------------------------------------|-------|-------|----------|------|--|--|--|
| ITEM | CVMBOL | STAN | LINIT | | | | | |
| IIEM | SYMBOL | MIN. | TYP. | MAX. | UNIT | | | |
| Power Supply | V _{DD} to V _{SS} | - 0.3 | - | 7.0 | V | | | |
| Input Voltage | V_{I} | - 0.3 | - | V_{DD} | v | | | |

Note

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

| ELECTRICAL CHARACTERISTICS | | | | | | | | | |
|--------------------------------|-----------------------------------|--|-------|----------------|------|------|--|--|--|
| ITEM | SYMBOL | CONDITION | ST | STANDARD VALUE | | | | | |
| ITEM | STINIBUL | CONDITION | MIN. | TYP. | MAX. | UNIT | | | |
| 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 | 1.5 | mA | | | |
| Recommended LC Driving | | - 20 °C | - | - | 5.2 | | | | |
| | V _{DD} to V ₀ | 0 °C | - | - | 4.2 | | | | |
| Voltage for Normal Temperature | | 25 °C | - | 3.8 | - | V | | | |
| Version Module | | 50 °C | 3.5 - | | - | | | | |
| | | 70 °C | 3.2 | - | - | | | | |
| LED Forward Voltage | V _F | 25 °C | - | 4.2 | 4.6 | V | | | |
| LED Forward Current - Array | | 05.00 | - | 100 | - | A | | | |
| LED Forward Current - Edge | - I _F | 25 °C | - | 20 | 40 | mA | | | |
| EL Power Supply Current | I _{EL} | V _{EL} = 110 V _{AC} , 400 Hz | - | - | 5.0 | mA | | | |

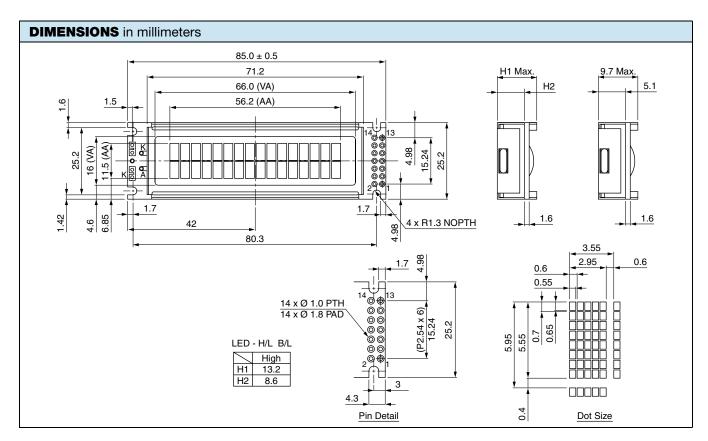
| OPTIONS | | | | | | | | | |
|---------|-------------|---------------|-------------|-------------|--------------|------|-----|----|------|
| | | BACKLIGHT | | | | | | | |
| TN | STN Gray | STN Yellow | STN Blue | FSTN B&W | STN Color | None | LED | EL | CCFL |
| х | х | х | х | х | | х | х | х | |

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 | 08 | 09 | 0A | 0B | 0C | 0D | 0E | 0F |
| DD RAM Address | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 4A | 4B | 4C | 4D | 4E | 4F |
| | | | | | | | | | | | | | | | | |

| INTERFACE PIN FUNCTION | | | | | | | |
|------------------------|-----------------|---------------------------------|--|--|--|--|--|
| PIN NO. | SYMBOL | FUNCTION | | | | | |
| 1 | DB7 | H/L data bus line | | | | | |
| 2 | DB6 | H/L data bus line | | | | | |
| 3 | DB5 | H/L data bus line | | | | | |
| 4 | DB4 | H/L data bus line | | | | | |
| 5 | DB3 | H/L data bus line | | | | | |
| 6 | DB2 | H/L data bus line | | | | | |
| 7 | DB1 | H/L data bus line | | | | | |
| 8 | DB0 | H/L data bus line | | | | | |
| 9 | E | $H \rightarrow L$ enable signal | | | | | |
| 10 | R/W | H/L read/write signal | | | | | |
| 11 | RS | H/L register select signal | | | | | |
| 12 | V ₀ | Contrast adjustment | | | | | |
| 13 | V _{SS} | Ground | | | | | |
| 14 | V _{DD} | Power supply (+ 5 V) | | | | | |





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