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Vishay

240 x 64 Graphic LCD



FEATURES

• Type: Graphic

• Display format: 240 x 64 dots

• Built-in controller: RA6963

Duty cycle: 1/64+ 5 V power supply

• Built-in N.V.

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



RoHS

| MECHANICAL DATA | | | | | |
|------------------|----------------|------|--|--|--|
| ITEM | STANDARD VALUE | UNIT | | | |
| Module Dimension | 180.0 x 65.0 | | | | |
| Viewing Area | 132.6 x 39.0 | | | | |
| Dot Size | 0.48 x 0.48 | mm | | | |
| Dot Pitch | 0.53 x 0.53 | mm | | | |
| Mounting Hole | 176.0 x 54.0 | | | | |
| Character Size | N/a | | | | |

| ABSOLUTE MAXIMUM RATINGS | | | | | | |
|--------------------------|------------------------------------|-------|------|----------|------|--|
| ITEM | SYMBOL | STAN | | | | |
| IIEWI | STIVIBUL | MIN. | TYP. | MAX. | UNIT | |
| Power Supply | V _{DD} to V _{SS} | 4.75 | 5.0 | 5.25 | ٧ | |
| Input Voltage | VI | - 0.3 | - | V_{DD} | | |

Note

• V_{SS} = 0 V, V_{DD} = 5.0 V

| ELECTRICAL CHARACTERISTICS | | | | | | | |
|--|-----------------------------------|--|----------------|------|------|-------------------|--|
| ITEM | SYMBOL | CONDITION | STANDARD VALUE | | | UNIT | |
| I I E WI | | CONDITION | MIN. | TYP. | MAX. | | |
| Input Voltage | V_{DD} | - | - | 5.0 | - | V | |
| Supply Current | I _{DD} | $V_{DD} = + 5 V$ | - | 17.3 | - | mA | |
| Recommended LC Driving Voltage for Normal Temperature | | - 20 °C | - | - | - | V | |
| | V _{DD} to V ₀ | 25 °C | - | 14.6 | - | | |
| Version Module | | 70 °C | - | - | - | | |
| CCFL Starting Voltage | V _{FLS} | 25 °C | | - | - | V _{RMS} | |
| CCFL Driving Voltage | V _{FLD} | 25 °C | - | - | - | V _{RMS} | |
| CCFL Driving Current | I _{FLD} | $V_{FQ} = 450 V_{RMS}$, 30 kHz | - | - | - | mA _{RMS} | |
| LED Forward Voltage - Array | V _F | 25 °C | - | 4.2 | - | V | |
| LED Forward Voltage - Edge | V _F | 25 °C | - | 2.1 | - | V | |
| LED Forward Current | I _F | 25 °C | - | 660 | - | mA | |
| EL Power Supply Current | I _{EL} | V _{EL} = 110 V _{AC} , 400 Hz | - | - | 5.0 | mA | |

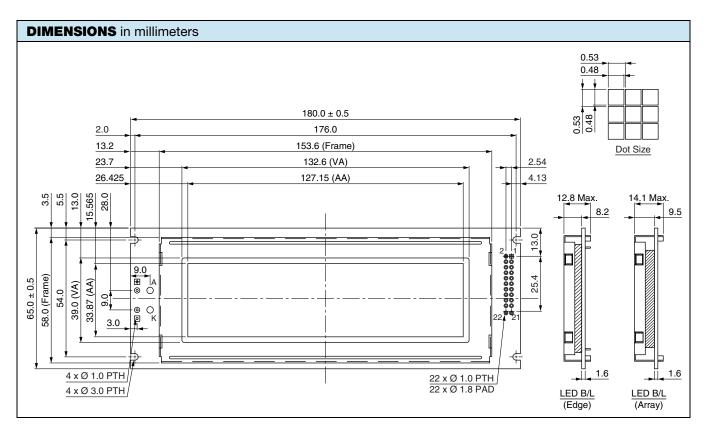
| OPTIONS | | | | | | | | | |
|---------|---------------|---------------|-------------|-------------|--------------|-----------|-----|----|------|
| | PROCESS COLOR | | | | | BACKLIGHT | | | |
| TN | STN GRAY | STN YELLOW | STN BLUE | FSTN B&W | STN COLOR | NONE | LED | EL | CCFL |
| | Х | х | Х | Х | | Х | Х | Х | х |

For detailed information, please see the "Product Numbering System" document.



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| INTERFACE PIN FUNCTION | | | | | |
|------------------------|------------------|---|--|--|--|
| PIN NO. | SYMBOL | FUNCTION | | | |
| 1 | FG | Frame ground | | | |
| 2 | V _{SS} | Ground | | | |
| 3 | V _{DD} | Power supply | | | |
| 4 | V ₀ | Contrast adjustment | | | |
| 5 | /WR | L: Data write | | | |
| 6 | /RD | L: Data read | | | |
| 7 | CE | Enable signal | | | |
| 8 | C/D | WR = L, C/D = H: Command write, C/D = L: Data write RD = L, C/D = H: Status read, C/D = L: Data read | | | |
| 9 | NC | No connection | | | |
| 10 | RESET | H: Normal/L: Initialize T6963C | | | |
| 11 | DB0 | Data bus line | | | |
| 12 | DB1 | Data bus line | | | |
| 13 | DB2 | Data bus line | | | |
| 14 | DB3 | Data bus line | | | |
| 15 | DB4 | Data bus line | | | |
| 16 | DB5 | Data bus line | | | |
| 17 | DB6 | Data bus line | | | |
| 18 | DB7 | Data bus line | | | |
| 19 | FS | Pins for selection of font: H: 6 x 8, L: 8 x 8 | | | |
| 20 | V _{OUT} | Contrast adjustment | | | |
| 21 | SLA | Power supply for B/L (+) | | | |
| 22 | SLK | Power supply for B/L (-) | | | |





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