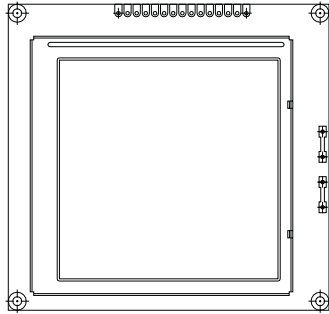


160 x 160 Dots Graphic LCD



FEATURES

- No Built-in controller
- + 5V power supply
- 1/160 duty cycle
- 4-Bit parallel or 1-Bit serial interface mode

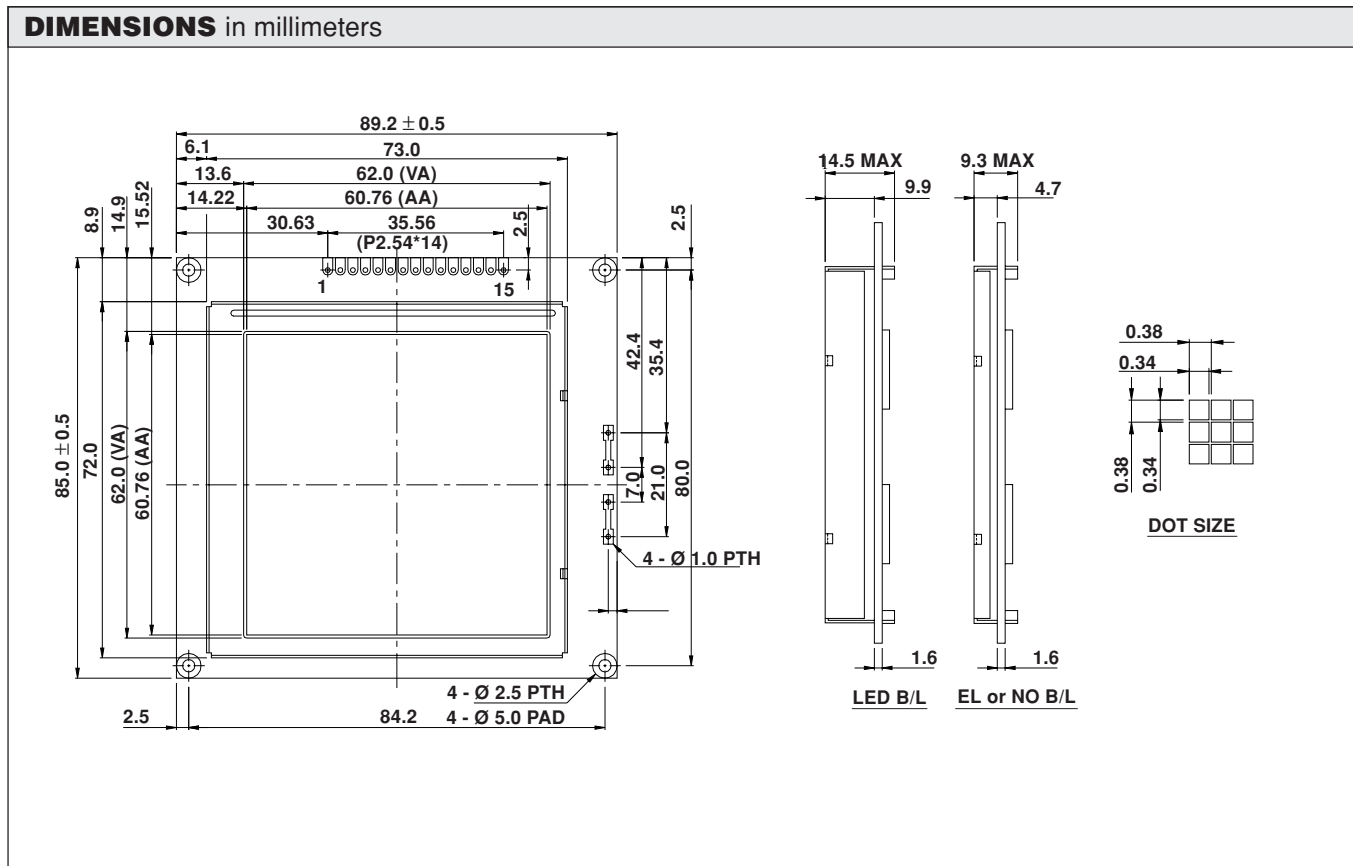
| MECHANICAL DATA | | |
|------------------|----------------|------|
| ITEM | STANDARD VALUE | UNIT |
| Module Dimension | 89.2 x 85.0 | mm |
| Viewing Area | 62.0 x 62.0 | mm |
| Dot Size | 0.34 x 0.34 | mm |
| Dot Pitch | 0.38 x 0.38 | mm |

| ABSOLUTE MAXIMUM RATING | | | | | |
|-------------------------|---------|----------------|------|------|------|
| ITEM | SYMBOL | STANDARD VALUE | | | UNIT |
| | | MIN. | TYP. | MAX. | |
| Power Supply | VDD-VSS | 4.75 | 5.0 | 5.52 | V |
| Input Voltage | VI | - 0.3 | - | VDD | V |

NOTE: VSS = 0 Volt, VDD = 5.0 Volt

| ELECTRICAL SPECIFICATIONS | | | | | | |
|--|--------|---------------------|----------------|------|-------------|------|
| ITEM | SYMBOL | CONDITION | STANDARD VALUE | | | UNIT |
| | | | MIN. | TYP. | MAX. | |
| Input Voltage | VDD | L level | $0.7V_{DD}$ | - | V_{DD} | V |
| | VIO | H level | - | - | $0.3V_{DD}$ | V |
| Supply Current | IDD | VDD = 5V | - | 1.5 | 3.0 | mA |
| Recommended LC Driving Voltage for Normal Temp. Version Module | VDD-V0 | - 20°C | 16.5 | 18.0 | 19.5 | V |
| | | 25°C | 15.5 | 17.0 | 18.5 | |
| | | 60°C | 14.5 | 16.0 | 17.5 | |
| LED Forward Voltage | VF | 25°C | - | 4.2 | 4.6 | V |
| LED Forward Current | IF | 25°C | - | 500 | 1000 | mA |
| EL | IEL | Vel = 110VAC; 400Hz | - | - | 5.0 | mA |

| PIN NUMBER | SYMBOL | FUNCTION |
|------------|-----------|--|
| 1 | Vss (GND) | Ground |
| 2 | M | Control signal for A.C.driving |
| 3 | FLM | The FLM Signal Indicates the Beginning of each Display Cycle |
| 4 | CL1 | The CL1 Latches the Serial Data in Shift Register |
| 5 | CL2 | Clock Signal for Shifting the Serial Data |
| 6 | DB3 | Data Bus Line |
| 7 | DB2 | Data Bus Line |
| 8 | DB1 | Data Bus Line |
| 9 | DB0 | Data Bus Line |
| 10 | Vee | Power Supply for LCD Driving |
| 11 | Vdd | Power Supply (+ 5V) |
| 12 | Vo | Contrast Adjustment |
| 13 | DISPOFF | Controls Display off, 0: off, 1: on |
| 14 | A | Power Supply for B/L |
| 15 | K | Power Supply for B/L |





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