



PC4004A-O (40x4) Character LCD Display

Features

- *40 Character, 4 Line
- *View Angle 12H or 6H
- *STN Gray, Yellow or Blue
- *LED B/L available
- *Extended Temperature available
- *RoHS Compliant

Absolute Maximum Ratings at T_A = 25°C

| Item | Symbol | Min | Max | Unit |
|----------------------------------|--------|-------|----------|------|
| Power Supply (Logic) | Vdd | -0.3 | 7.0 | V |
| Power Supply (LCD) | Vo | -13.5 | +0.3 | V |
| Input Voltage | Vi | - 0.3 | Vdd +0.3 | V |
| Operating Temperature (Standard) | Topr | 0 | 50 | °C |
| Storage Temperature (Standard) | Tstg | - 20 | 70 | °C |
| Extended Operating Temperature | Topr | - 20 | 70 | °C |
| Extended Storage Temperature | Tstg | - 30 | 80 | °C |

Electrical Characteristics at T_A = 25°C, Vdd=5V±0.25V

| Item | Symbol | Min | Typ | Max | Unit |
|------------------------|---------|-----|-----|-----|------|
| Power Supply (Logic) | Vdd | 4.5 | 5.0 | 5.5 | V |
| Supply Current (Logic) | Idd | 1.0 | 1.2 | 3.0 | mA |
| LCD Driving Voltage | Vdd -Vo | 4.6 | 5.0 | 5.5 | V |
| LCD Supply Current | Ilcd | - | 0.3 | 0.6 | V |

Interface Pin Connection

| No | Symbol | Function | No | Symbol | Function |
|----|--------|----------------------------|----|--------|------------------------------------|
| 1 | DB7 | Data Bus Line 7 | 10 | RS | Read/Write |
| 2 | DB6 | Data Bus Line 6 | 11 | R/W | Instruction/Register Select |
| 3 | DB5 | Data Bus Line 5 | 12 | Vo | Contrast Adjust |
| 4 | DB4 | Data Bus Line 4 | 13 | Vss | Power Supply (GND) |
| 5 | DB3 | Data Bus Line 3 | 14 | Vdd | Power Supply (+5V) |
| 6 | DB2 | Data Bus Line 2 | 15 | E2 | Enable Signal for Chip (2) |
| 7 | DB1 | Data Bus Line 1 | 16 | NC | NC |
| 8 | DB0 | Data Bus Line 0 | 17 | A | Power Supply for LED Backlight (+) |
| 9 | E1 | Enable Signal for Chip (1) | 18 | K | Power Supply for LED Backlight (-) |

LED Backlight Specifications

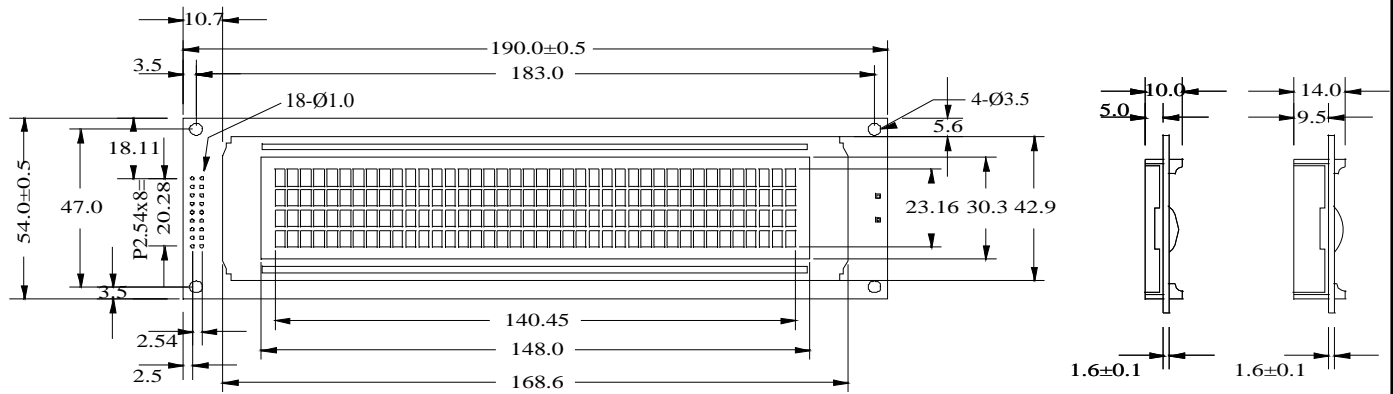
| Forward Voltage | Forward Current | Power Dissipation | Peak Wavelength |
|-----------------|-----------------|-------------------|-----------------|
| 4.1V (Typ) | 500mA (Typ) | 2050mW (Typ) | 570nm (Typ) |

Mechanical Specifications

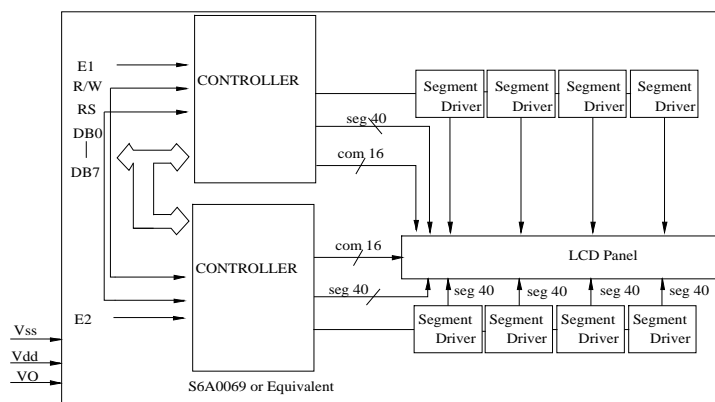
| Item | Overall Size | Viewing Area | Character Size | Character Pitch | Dot Size |
|----------------|-----------------------------|----------------|----------------|-----------------|--------------|
| Specifications | 190.0W x 54.0H x 10.0/14.0T | 148.0W x 30.3H | 2.78W x 4.89H | 3.53W x 6.09H | 0.5W x 0.55H |



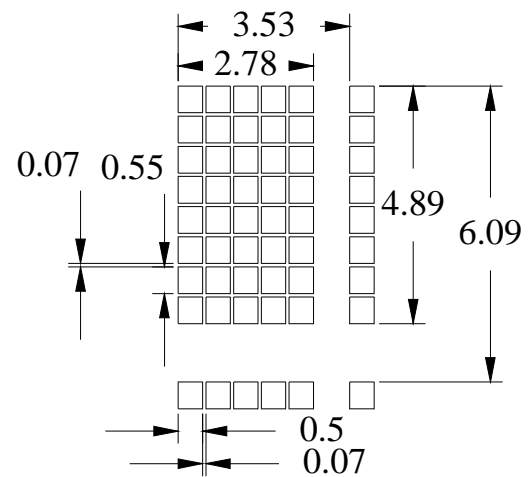
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LCD Block Diagram



Dot Layout



All dimensions are in mm. Tolerance is ± 0.3 Unless otherwise specified