5X7 Dot Character VFD Module

- 2 Lines of 20 Characters 5mm High
- High Speed Parallel/Serial Interface
- Operating Temp -40°C to +85°C
- Single 5V Supply
- High Brightness Blue Green Display
- ASCII, Katakana & Extended Character Font
- 8 User Definable Character RAM

The module includes the Vacuum Fluorescent Display glass, driver and micro-controller ICs with refresh RAM, character generator and interface logic. The high speed 8 bit parallel interface is 5V CMOS compatible suitable for connection to a host CPU bus. The asynchronous serial interface accepts baud rates up to 19,200 with or without parity. Two character font tables can be hardware or software selected. User defined characters and many control commands are available.

ELECTRICAL SPECIFICATION

Parameter | Symbol | Value | Condition
--- | --- | --- | ---
Power Supply Voltage | $V_{CC}$ | 5.0VDC +/- 5% | $GND=0V$
Power Supply Current | $I_{CC}$ | 290mA typ. $V_{cc}=5V$
Logic High Input | $V_{IH}$ | 2.0VDC min. $V_{CC}=5V$
Logic Low Input | $V_{IL}$ | 0.8VDC max. $V_{CC}=5V$
Logic High Output | $V_{OH}$ | 4.4VDC min. $I_{OH}=-2.0mA$
Logic Low Output | $V_{OL}$ | 0.5VDC max. $I_{OL}=2.0mA$

The power on rise time should be less than 100ms. The inrush current at power on can be 2 x $I_{CC}$.

OPTICAL and ENVIRONMENTAL SPECIFICATIONS

- Character Size/Pitch (XxY mm): 3.3 x 5.05/5.1 x 9.95
- Dot Size/Pitch (XxY mm): 0.5 x 0.55/0.7 x 0.75
- Luminance: 700 cd/m² (204 fL) Typ.
- Colour of Illumination: Blue-Green (Filter for colours)
- Operating Temperature: -40°C to +85°C
- Storage Temperature: -40°C to +85°C
- Operating Humidity (non condensing): 20 to 80% RH @ 25°C

SOFTWARE COMMANDS

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<td>08H</td>
<td>Blinking Cursor</td>
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<tr>
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<tr>
<td>Line Feed</td>
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<tr>
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<td>0DH</td>
<td>&gt; Send User Font</td>
<td>+43H</td>
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<tr>
<td>Clear Display</td>
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<td>&gt; Position cursor</td>
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<td>Increment Write Mode</td>
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<td>Vertical Scroll Mode</td>
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<td>+4CH</td>
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<tr>
<td>Horizontal Scroll Mode</td>
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<tr>
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<td>&gt; Cursor Blink Speed</td>
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<td>Sx7 Block Cursor On</td>
<td>15H</td>
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<td>20H+</td>
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<td>Cursor Off</td>
<td>16H</td>
<td>User Character Data</td>
<td>00H+</td>
</tr>
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TIMING PARAMETERS (min)

- Data Set Up To Write: 100ns
- Write Pulse Width: 160ns
- Hold After Write: 10ns

Subject to change without notice. Detailed specification on request.

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Dimensions in mm & subject to tolerances. Mounting holes 3.5mm dia.

software commands