

Signal Consulting, LLC

www.signallc.com

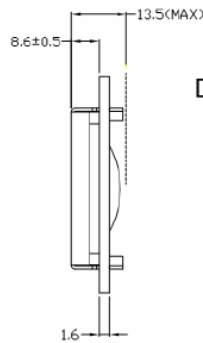
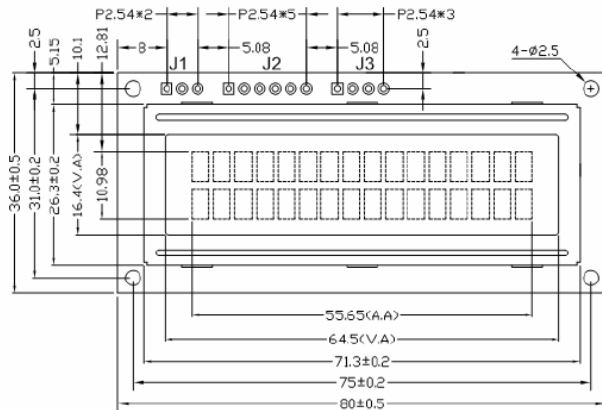
16 Wilelinor Drive, Edgewater, MD 21037-1003 USA

Phone: 410-224-8429, Fax: 410-510-1821, E-mail: info@signallc.com

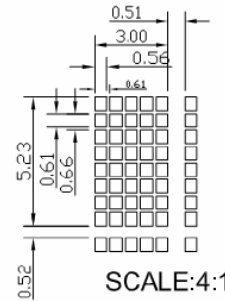
Si14LCD2L16CH, 2-Line by 16-Character LCD Display Module with 5V RS232 Protocol



Mechanical Drawing



Display Pattern



PIN ASSIGNMENT

| | |
|---|-----|
| 1 | RX |
| 2 | VSS |
| 3 | VDD |

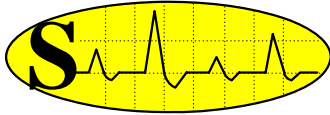
| | |
|---|---------|
| 1 | SPISS |
| 2 | SDO |
| 3 | SCK/SCL |
| 4 | SD/SDA |
| 5 | VSS |
| 6 | VDD |

| | |
|---|---------|
| 1 | K |
| 2 | A-RED |
| 3 | A-GREEN |
| 4 | A-BLUE |

Notes:

- 1). Drive Method: 1/16duty, 1/5bias, VDD5.0V VLCD4.5V
- 2). Display Type: FSTN/Positive/Transflective/6:00 Angle
- 3). Operating Temp: -20°C~70°C/Storage Temp: -30°C~80°C
- 4). Backlight Type: Edge/R,G,B
- 5). Driver: SPLC780D And PIC16F690 MPU
- 6). RoHS Compliant

NHD-0216K3Z-FS(RGB)-FBW



Signal Consulting, LLC

www.signalllc.com

16 Wilelinor Drive, Edgewater, MD 21037-1003 USA

Phone: 410-224-8429, Fax: 410-510-1821, E-mail: info@signalllc.com

Pin Description

| Pin No. | Symbol | External Connection | Function Description |
|---------|---------|---------------------|--|
| 1 | RX | MPU | RS232 Serial input port |
| 2 | VSS | Power Supply | Ground |
| 3 | VDD | Power Supply | Power supply for logic (+5.0V) |
| | | | |
| 1 | SPISS | MPU | SPI Slave Select (NC in I2C mode) |
| 2 | SDO | NC | No Connect |
| 3 | SCK/SCL | MPU | Serial Clock |
| 4 | SDI/SDA | MPU | Serial Data In (SPI) / Serial Data (I2C) |
| 5 | VSS | Power Supply | Ground |
| 6 | VDD | Power Supply | Power Supply for logic (+5.0V) |
| | | | |
| 1 | K | Power Supply | Ground for LED backlights |
| 2 | A-RED | Power Supply | Power supply for Red LED (2.2V) |
| 3 | A-GREEN | Power Supply | Power supply for Green LED (3.3V) |
| 4 | A-BLUE | Power Supply | Power supply for Blue LED (3.3V) |

Recommended LCD connector: 2.54mm pitch pins on J1 or J2

Backlight connector: 2.54mm pitch pins on J3

Communication Information

This display uses a built-in PIC 16F690 for serial communication.

RS232 protocol:

To enter the RS232 mode, both R1 and R2 should be open.

The RS232 signal must be 5V TTL compatible. Communication format is 8-bit data, 1 Stop bit, no parity, no handshaking. Default BAUD rate is 9600, and is changeable with a command function. Once the BAUD rate has been changed, it will be saved in the system memory, and it will revert back to the default address if either I2C or SPI protocol is selected.