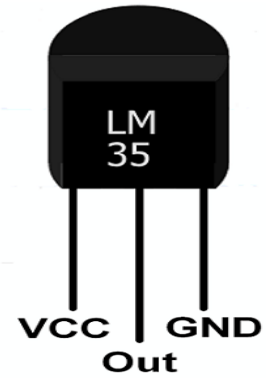
LM35 TEMPERATURE SENSOR



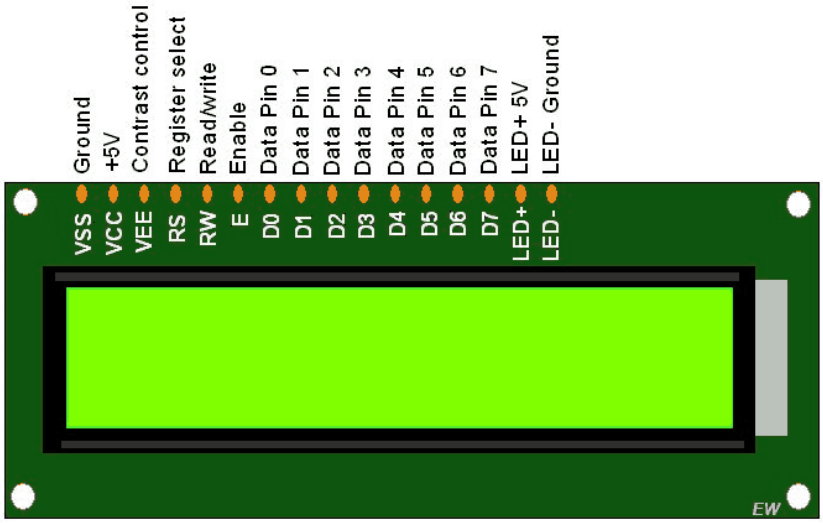
INTRODUCTION

- ✓ LM35 is a temperature measuring device having an analog output voltage proportional to the temperature.
- ✓ It provides output voltage in Centigrade (Celsius). It does not require any external calibration circuitry.
- ✓ The sensitivity of LM35 is 10 mV/degree Celsius. As temperature increases, output voltage also increases.
- ✓ E.g. 250 mV means 25°C.
- ✓ It is a 3-terminal sensor used to measure surrounding temperature ranging from -55 °C to 150 °C.
- ✓ LM35 gives temperature output which is more precise than thermistor output.
- ✓ **VCC:** Supply Voltage (4V – 30V)
- ✓ **Out:** It gives analog output voltage which is proportional to the temperature (in degree Celsius).
- ✓ **GND:** Ground

Specification of LM35 Temperature Sensor

- Operating Voltage: 4 V to 30 V
- Output Voltage: 10mV/°C
- Sensitivity: 10mV/°C
- Linearity Error: ±1°C (for 0°C to +100°C)
- Operating Temperature: -55°C to +150°C
- Output Impedance: 100 Ω
- Power Consumption: 60 µA (typical)
- Package Type: TO-92, TO-220, SOIC
- Output Type: Analog
- Accuracy: ±1°C (typical)

LCD16x2



INTRODUCTION

- LCDs (Liquid Crystal Displays) are used in embedded system applications for displaying various parameters and status of the system.
- LCD 16x2 is a 16-pin device that has 2 rows that can accommodate 16 characters each.
- LCD 16x2 can be used in 4-bit mode or 8-bit mode.
- It is also possible to create custom characters.

- It has 8 data lines and 3 control lines that can be used for control purposes.
- For more information about LCD 16x2 and how to use it, refer the topic **LCD 16x2** module in the sensors and modules section.