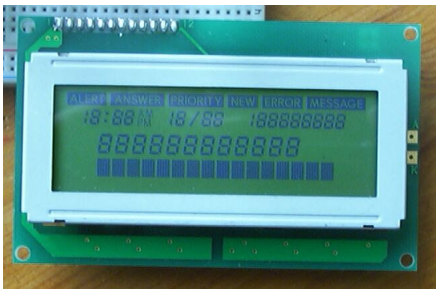
LCD-1 documentation

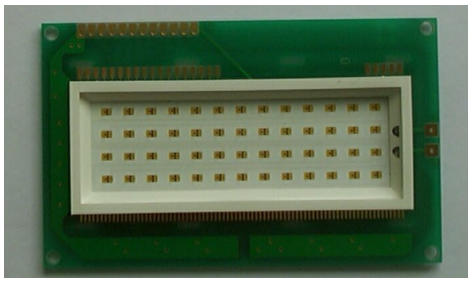
The display is marked at the back as "SAMSUNG K333". The controller chip is in the black glob at the back. The information that can be displayed on the LCD is shown below. The information I have refers only to the bottom line, which behaves as a 1 line * 16 characters standard HD44780-compatible LCD.



The connector (top left side) has 12 connections, numbered from the left. There are two connections at the right side marked A and K. The use is show in the table below.

top connector	right side connector	use
1		ground
2		+ 5 Volt
3		contrast (~ - 3 Volt)
4		RS
5		R/W
6		E
7		D0
8		D1
9		D2
10		D3
11	A	backlight +
12	K	backlight -

The backlight consists of 4 rows of 13 tiny LEDs each. Connected directly to 5 Volt it draws 1 A. Maybe nice for a flashing sign, but the LEDs won't last long. For continuous use include a 22 ohm series resistor, the backlight will draw some 50 mA. In normal light conditions the backlight will not be needed.



The LCD needs a negative contrast voltage of approximately - 3 Volt. The standard hookup is shown below. When you have a MAX232 (RS-232 chip) in your circuit you can obtain a negative voltage of approximately -10 Volt from pin 6.