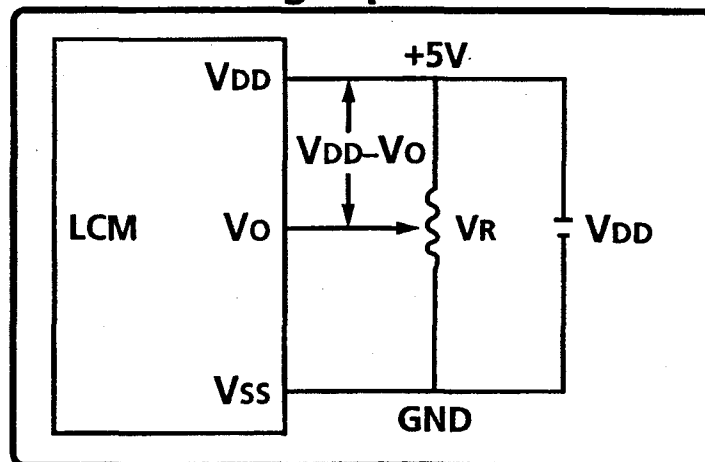


■ Module Interface to Power Supply

Single power



$V_{DD} \sim V_o$: Operating Voltage for LCD
 V_R : 10k ~ 20k

The above schematic applies to all the character modules. A variable (trimpot) or fixed resistor divider must be used on any LCD character module as it appears in the above schematic.

A variable resistor is advisable, especially for stationary equipment. The variable resistor allows the user to adjust the voltage to get the best contrast. This also allows the user to adjust the voltage for any temperature fluctuations.

A fixed resistor network limits the LCD to a specific voltage, and can be limiting on optical performance. Fixed resistors can be used in where the display can be rotated for best optical performance (i.e., hand-held products).

The table below illustrates typical performance of the LCD fluid over temperature. Note the change in typical operating voltage for best optical performance at different temperatures.

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Supply voltage for logic	VDD	---	4.5	5.0	5.5	V
Supply current for logic	IDD	---	---	1.38	4	mA
Operating voltage for LCD	VDD - VO	-20°C	4.9	5.2	5.5	V
		25°C	4.5	4.8	5.1	V
		70°C	4.3	4.6	4.9	V
Supply voltage for side light	VF	---	---	4.2	4.6	V
Supply current for side light	IF	VF=4.2V	---	280	480	mA
Input voltage 'H' level	VIH	---	VDD - 2.2	---	VDD	V
Input voltage 'L' level	VIL	---	0	---	0.8	V