GENERAL SPECIFICATION

Item	Content
Number of Character	122x32
Module Size	80.0(W)x36.0(H)x10.0/15.0(D)mm Max
Viewing Area	60.5(W)x18.5(H)mm
Dot Size/Dot Pitch	0.42(W)x0.47(H)mm/0.44(W)x0.49(H)mm
Backlight	Without/EL/LED
Options	Gray STN/Yellow STN/Normal/Extended Temperature/Bottom/Top Viewing
Built-in Controller	none

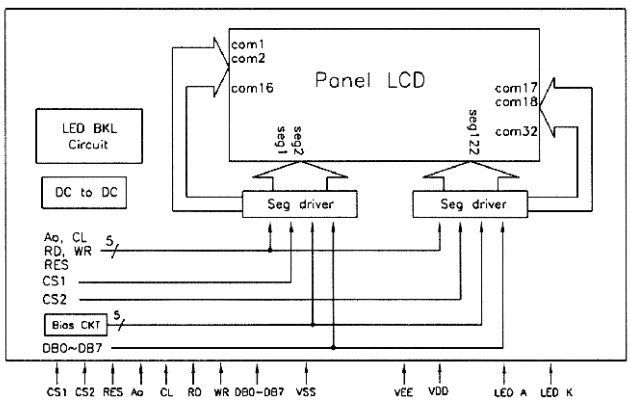
ELECTRICAL CHARACTERISTICS

Item	Symbol	Condition	Min.	Typ	Max.	Unit	note
Power Supply for Logic	V_{DD}-V_{SS}	-	2.4	5.0	7.0	Volt	-
Input Voltage	V_{IL}	L level	V_{SS}	0.2V_{DD}	-	Volt	-
	V_{IH}	H level	0.8V_{DD}	V_{DD}	-	Volt	
LCM Recommend LCD Module Driving Voltage	V_{DD}-V_{EE}	Ta=0°C	5.5	5.68	5.9	Volt	-
		Ta=25°C	5.35	5.54	5.75		
		Ta=50°C	4.8	5.0	5.2		
Power Supply Current for LCM	I_{DD}(LED B/L OFF)	V_{DD}=5.0V V_{DD}-V_{EE}=5.54V FLM=64Hz V_{LED}=4.2V	-	0.6	1.1	mA	-
	I_{EE}(LED B/L ON)		-	120	180		

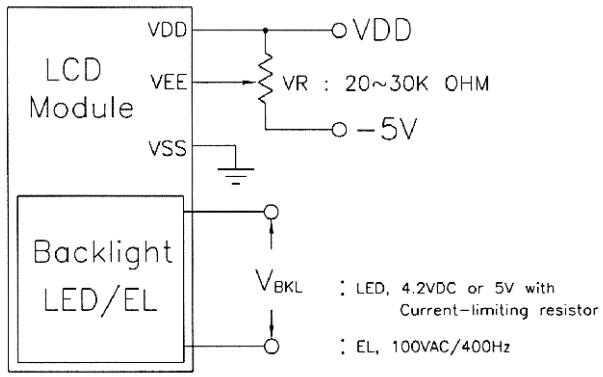
INTERFACE PIN ASSIGNMENT

Pin No.	Pin Out	Function Description
1	V_{SS}	GND
2	V_{DD}	Logic supply voltage
3	V_{EE}	LCD driver supply voltage
4	Ao	Display Data/Display commands switching input. Ao=0: DB0~DB7 are command input and status output, A0=1: DB0~DB7 are Display Data input/output.
5	CS1	Chip select for the left half of the screen. Active Low
6	CS2	Chip select for the right half of the screen. Active Low
7	CL	External clock input (typ. 2KHz)
8	/RD(E)	/RD for 80 series, E for 68 series
9	/WR(R/W)	/WR for 80 series, R/W for 68 series
10~17	DB0~DB7	3 state I/O Data Bus
18	RES	Reset, H for 80 series, L for 68 series
19	BKL1	Power supply for backlight. 100V/400Hz AC for EL, 4.2V or 120~180mA DC for LED backlight. Don't care if no backlight
20	BKL2	

BLOCK DIAGRAM



POWER SUPPLY



MECHANICAL