GENERAL SPECIFICATION

Item	Content
Number of Character	20x4
Module Size	146.0(W)x62.5(H)x10.1/13.6(D)mm Max
Viewing Area	123.5(W)x43.0(H)mm
Character Size	4.84(W)x9.22(H)mm
Dot Size/Dot Pitch	0.92(W)x1.1(H)mm/0.98(W)x1.16(H)mm
Backlight	Without/EL/LED
Options	Gray STN/Yellow STN/Normal/Extended Temperature/Bottom/Top Viewing/RS232 port

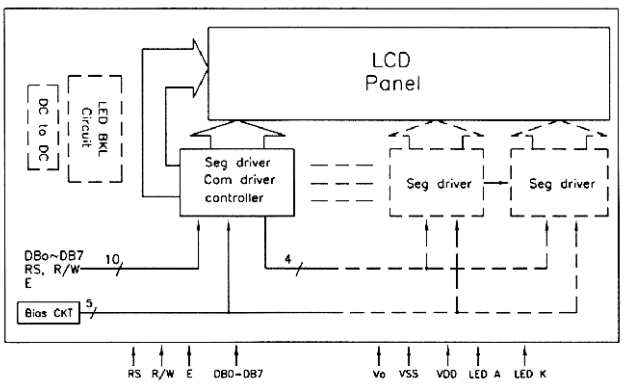
ELECTRICAL CHARACTERISTICS

Item	Symbol	Condition	Min.	Typ.	Max.	Unit	Note
Power Supply for Logic	V_{DD}-V_{SS}	-	2.7	4.5	5.5	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}=5V	Ta=0°C	4.4	4.6	4.8	Volt	-
		Ta=25°C	4.2	4.4	4.6		
		Ta=50°C	3.9	4.0	4.2		
Power Supply Current for LCM	I_{DD}(B/L OFF)	V_{DD}=5.0V	-	14.0	20.0	mA	Includ-ing RS232 circuit
	I_{EE}	V_{DD}-V_O=4.4V Ta=25°C	-	1.25	2.0		
	I_{LED}	V_{LED}=4.2V	-	170	200		

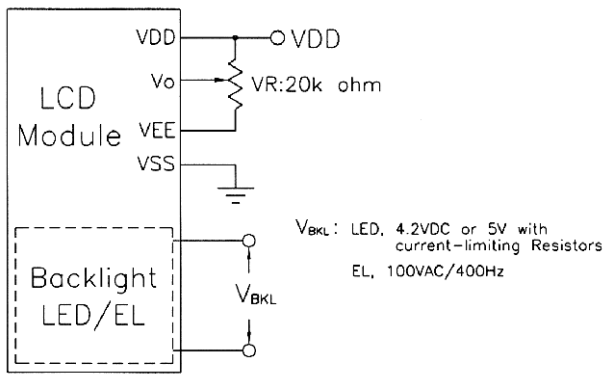
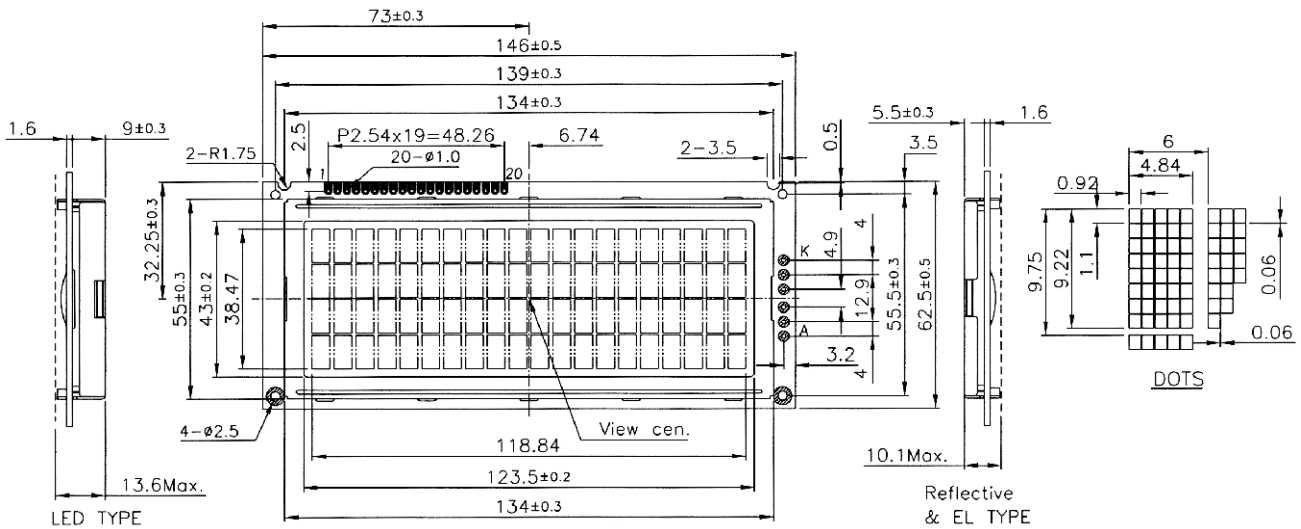
INTERFACE PIN ASSIGNMENT

Pin No.	Pin Out	Function Description
1	V_{SS}	Ground
2	V_{DD}	Logic Circuit Power Supply
3	V_O	Power Supply for LCD Panel
4	RS	Data/Instruction Register Select
5	R/W	Read/Write Select
6	E	Enable Signal
7~14	DB0~DB7	3-State I/O Data Bus
15	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
16	BKL2	
17	NC/V_{EE}	Bias voltage for LCD panel, NC for normal temperature range LCM. For extended temperature range LCM, V_{EE} is output for built in DC to DC circuit, and input for external input voltage.
18	V_{SS}	Ground
19	V_{DD}	Logic Circuit Power Supply
20	RXD	Serial data input

BLOCK DIAGRAM



POWER SUPPLY



MECHANICAL