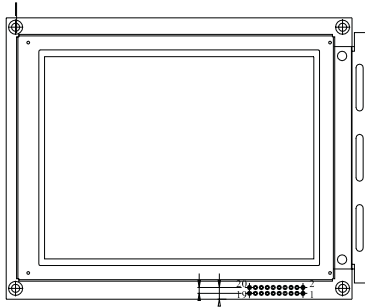


320 x 24 Dots Graphic LCD



FEATURES

- Built-in SED 1335 controller and SRAM
- Built-in negative voltage generator
- 1/240 duty cycle
- Touch screen option (analog type)
- Temperature compensation option

MECHANICAL DATA		
ITEM	STANDARD VALUE	UNIT
Module Dimension	148.0 x 120.24	mm
Viewing Area	120.14 x 92.14	mm
Dot Size	0.34 x 0.34	mm
Dot Pitch	0.36 x 0.36	mm

ABSOLUTE MAXIMUM RATING					
ITEM	SYMBOL	STANDARD VALUE			UNIT
		MIN.	TYP.	MAX.	
Power Supply	VDD-VSS	4.75	5.0	5.25	V
Input Voltage	VI	- 0.3	-	VDD	V

NOTE: VSS = 0 Volt, VDD = 5.0 Volt

ELECTRICAL SPECIFICATIONS						
ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT
			MIN.	TYP.	MAX.	
Input Voltage	VDD	L level	$0.7V_{DD}$	-	V_{DD}	V
	VIO	H level	0	-	$0.3V_{DD}$	V
Supply Current	IDD	VDD = 5V	-	100	105	mA
Recommended LC Driving Voltage for Normal Temp. Version Module	VDD - V0	0°C	22.0	23.0	24.0	V
		25°C	21.3	22.2	23.0	
		50°C	19.5	20.8	22.1	
CCFL Starting Voltage	VFLS	25°C	-	600	-	Vrms
CCFL Driving Voltage	VFLD	25°C	-	268	-	Vrms
CCFL Driving Current	IFLD	VFQ = 450Vrms 30KHz	-	5.0	-	mArms
LED Forward Voltage	VF	25°C	-	4.2	4.6	V
LED Forward Current	IF	25°C	-	180	360	mA
EL	IEL	Vel = 110VAC; 400Hz	-	-	5.0	mA

PIN NUMBER	SYMBOL	FUNCTION
1	Vss	Ground
2	Vdd	Power Supply for Logic
3	Vo	Driving Voltage for LCD
4	RD	8080 Family: Read Signal, 6800 Family: Enable Clock
5	WR	8080 Family: Write Signal, 6800 Family: R/W Signal
6	Ao	Data Select Type RD = L WR = H, A0 = L: Data Read AO = H: Status Read RD = H WR = L, A0 = L: Data Read AO = H: Command Write For 80 Family R/W = L A0 = H: Command Write A0 = L: Data Write R/W = H A0 = H: Status Read AO = L: Data Read For 68 Family
7	DB0	Data Bus Line
8	DB1	Data Bus Line
9	DB2	Data Bus Line
10	DB3	Data Bus Line
11	DB4	Data Bus Line
12	DB5	Data Bus Line
13	DB6	Data Bus Line
14	DB7	Data Bus Line
15	CS	Chip Select, Active L
16	RES	Controller Rest Signal Active L
17	Vee	Negative Voltage Output (Optional)
18	FGND	Frame Ground
19	NC	No Connection
20	NC	No Connection

DIMENSIONS in millimeters

