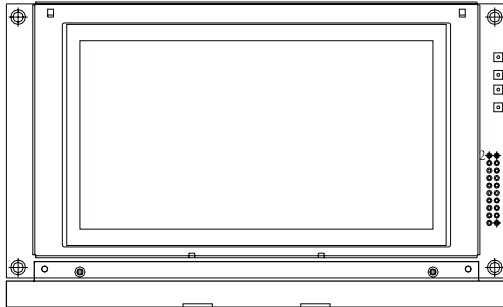


240 x 128 Dots Graphic LCD



FEATURES

- Built-in controller (T6963C)
- 1/240 duty cycle
- Built-in N/V (option)

MECHANICAL DATA		
ITEM	STANDARD VALUE	UNIT
Module Dimension	170.0 x 103.5	mm
Viewing Area	132.0 x 76.0	mm
Dot Size	0.47 x 0.47	mm
Dot Pitch	0.5 x 0.5	mm

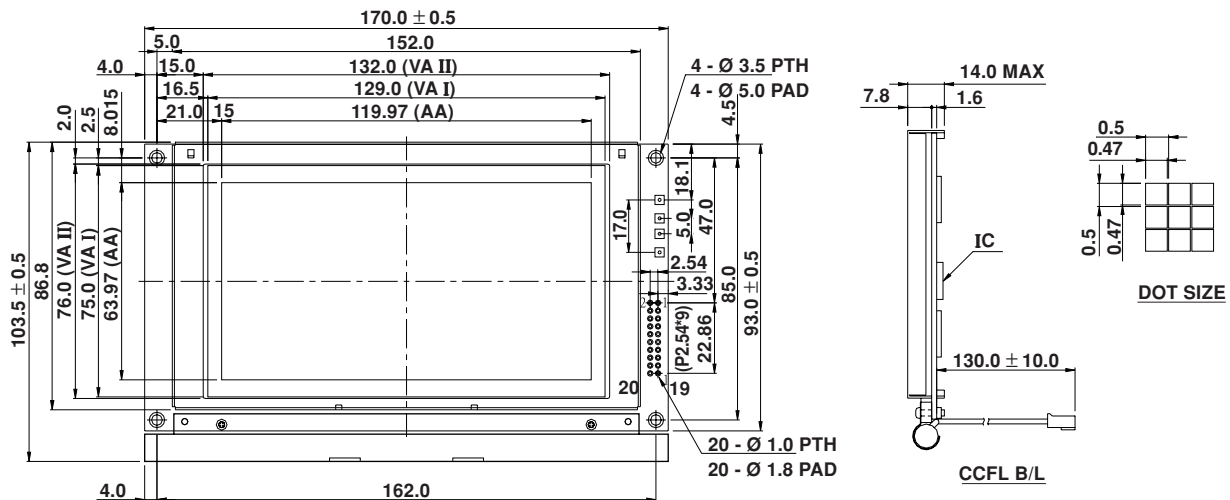
ABSOLUTE MAXIMUM RATING					
ITEM	SYMBOL	STANDARD VALUE			UNIT
		MIN.	TYP.	MAX.	
Power Supply	VDD-VSS	4.75	5.0	5.25	V
Input Voltage	VI	- 0.3	-	VDD	V

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	-	-	$0.3V_{DD}$	V
Supply Current	IDD	VDD = + 5V	-	23.0	-	mA
Recommended LC Driving Voltage for Normal Temp. Version Module	VDD - V0	0°C	19.1	19.5	20.1	V
		25°C	18.1	18.5	19.1	
		50°C	17.1	17.5	18.1	
LED Forward Voltage	VF	25°C	-	-	-	V
LED Forward Current	IF	25°C	-	-	-	mA
CCFL	VF	25°C	-	325	580	Vms
	IF	25°C	-	-	5.0	mA
EL	IEL	Vel = 110VAC; 400Hz	-	-	5.0	mA

PIN NUMBER	SYMBOL	FUNCTION
1	FGND	Frame GEN (Connected to Bezel)
2	Vss	GND
3	Vdd	Power Supply for Logic Circuit
4	Vee	Power Supply for LCD Driving
5	\overline{WR}	Data Write
6	\overline{RD}	Data Read
7	\overline{CE}	Chip Enable
8	C/D	Code/Data
9	NC	No Connection/Negative Voltage Output
10	\overline{RST}	Controller Reset
11	DB0	Data Bus Line
12	DB1	Data Bus Line
13	DB2	Data Bus Line
14	DB3	Data Bus Line
15	DB4	Data Bus Line
16	DB5	Data Bus Line
17	DB6	Data Bus Line
18	DB7	Data Bus Line
19	FS	Font Selection FS = "H", 6 x 8 Character Font FS = "H" 8 x 8 Character Font
20	RV	Reverse

DIMENSIONS in millimeters



VA I IE EFFECTIVE AREA OF LCD
VA II IS WINDOW OF BEZEL



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