



### Feature

1. Built in controller RA8820 or equivalent.
2. +5V power supply 2.7–5.0(selectall)
3. 1/128 duty cycle
4. Built-in N.V.

### Pin Assignment

Pin	Symbol	Function
1	Vss	GND
2	Vdd	Power supply for logic
3	Vo	Operating voltage LCD driving
4	C/D	Command/data read/write
5	$\overline{RD}$	8080family: Read signal, 6800 family: Enable signal
6	$\overline{WR}$	8080family: Write signal, 6800 family: R/W signal
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	$\overline{CS}$	Chip select
16	RES	Reset
17	VEE	Negative Voltage output
18	Busy	RA8802 start
19	INT	programable interupt for 8802
20	A	Power supply for B/L

### Mechanical Data

Item	Standard Value	Unit
Module Dimension	140.0 x 82.0	mm
Viewing Area	114.0 x 64.0	mm
Dot Size	0.43 x 0.43	mm
Dot Pitch	0.45 x 0.45	mm
Mounting hole	137.0 x 74.5	mm

### Absolute Maximum Rating

Item	Symbol	Standard Value			Unit
		min.	typ.	max.	
Power Supply	VDD-VSS	4.5	5.0	5.25	V
Input Voltage	VI	-0.3	---	VDD	V

Note: VSS=0 Volt, VDD=5.0 Volt.

### Electronical Characteristics

Item	Symbol	Condition	Standard Value			Unit
			min.	typ.	max.	
Input Voltage	VDD	L level	0.7V <sub>DD</sub>	---	V <sub>DD</sub>	V
	VIO	H level	0	---	0.3V <sub>DD</sub>	V
Supply Current	IDD	VDD=+5V	---	45	50	mA
Recommended LC Driving Voltage for Normal Temp. Version module	VDD-V0	-20°C	---	---	---	V
		0°C	20.3	21.4	22.5	
		25°C	18.0	19.2	20.2	
		50°C	17.8	18.9	20.0	
		70°C	---	---	---	
LED Forward Voltage	vF	25°C	---	4.2	---	V
LED Foward Current	IF	25°C	---	920	590	mA
CCFL	VF	25°C	---	250	590	Vm
	IF	25°C	---	---	5.5	mA
EL	IEL	Vel=110VAC;400Hz	---	---	5.0	mA