



### Feature

1. 320x240 dots
2. +5V power supply
3. 1/240 duty cycle
4. No controller
5. Touch panel option (analog type)

### Mechanical Data

Item	Standard Value	Unit
Module Dimension	160.0 x 109.0	mm
Viewing Area	122.0 x 92.0	mm
Dot Size	0.34 x 0.34	mm
Dot Pitch	0.36 x 0.36	mm

### Pin Assignment

Pin	Symbol	Function
1	DB0	Data bus line
2	DB1	Data bus line
3	DB2	Data bus line
4	DB3	Data bus line
5	DISPOFF	H:ON L:OFF
6	FRAME	First Line marker
7	M(NC)	Frame reverse signal (alternate signal)
8	LOAD	Data latch
9	CP	Data shift
10	Vdd	Power supply for LOGIC
11	Vss	GND (0V)
12	Vee	Power supply for LCD
13	Vo	Operating voltage LCD driving
14	FGND	Film ground

### 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.

### 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	--	7.5	--	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	V <sub>FQ</sub> =450Vrms 30KHZ	--	5.0	--	mA <sub>rms</sub>
LED Forward Voltage	VF	25°C	--	4.2	4.6	V
LED Forward Current	IF	25°C	--	180	360	mA
EL Power Supply Current	IEL	Vel=110VAC;400Hz	--	--	5.0	mA