

### ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Min.	Max.	Unit
Supply Voltage(Logic)	V <sub>DD</sub> - V <sub>SS</sub>	-0.3	7.0	V
Supply Voltage(LCD)	V <sub>DD</sub> - V <sub>O</sub>	-0.3	30.0	V
Input Voltage	V <sub>I</sub>	-0.3	V <sub>DD</sub> + 0.3	V
Operating Temp.	T <sub>opr</sub>	-20	70	°C
Storage Temp.	T <sub>stg</sub>	-30	80	°C

### MECHANICAL DATA

Item	Nominal Dimensions	Unit
Module Size ( W x H x T )	139.0 x 115.0 x 13.0	mm
Viewing Area ( W x H )	103.0 x 79.0	mm
Dot Pitch ( W x H )	0.3 x 0.3	mm
Dot Size ( W x H )	0.27 x 0.27	mm
Weight	Approx. 190	g

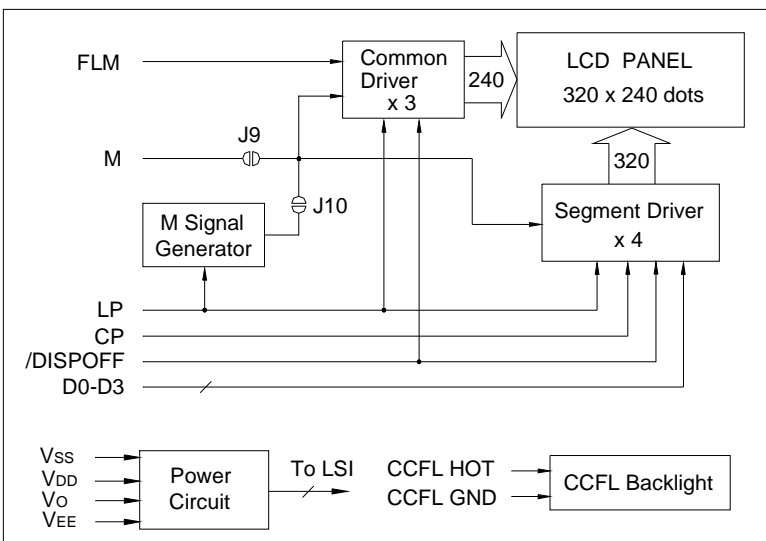
### ELECTRICAL CHARACTERISTICS ( V<sub>DD</sub>=5V±0.25V )

Item	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input High Voltage	V <sub>IH</sub>	--	0.8V <sub>DD</sub>	--	V <sub>DD</sub>	V
Input Low Voltage	V <sub>IL</sub>	--	0	--	0.2V <sub>DD</sub>	V
Supply Current	I <sub>DD</sub>	V <sub>DD</sub> = 5.0V	--	30.0	50.0	mA
	I <sub>EE</sub>	V <sub>EE</sub> = -24.0V	--	5.0	10.0	mA
LCD Driving Voltage	V <sub>DD</sub> - V <sub>O</sub>	T <sub>a</sub> =25°C	--	26.0	--	V

### PIN CONNECTIONS

Pin	Symbol	Level	Function
1	FLM	H	Scan start-up pulse
2	LP	H>L	Display data latch pulse
3	CP	H>L	Display data shifting pulse
4	NC (M)	--	No connection or M signal for AC driving
5	V <sub>O</sub>	--	Operating voltage for LCD
6	V <sub>DD</sub>	+5V	Power supply for logic
7	V <sub>SS</sub>	0V	GND
8	V <sub>EE</sub>	-24V	Input voltage for LCD driving
9	D0	H/L	Data bus line
10	D1	H/L	
11	D2	H/L	
12	D3	H/L	
13	/DISPOFF	H/L	H: display on L: display off
14	NC	--	No connection

### BLOCK DIAGRAM



### CCFL BACKLIGHT SPECIFICATIONS (T<sub>a</sub>=25°C)

Item	Symbol	Typ.	Max.	Unit
Tube voltage	V	300	--	V
Tube Current	I	5	--	mA
Emission Wave Length	λ <sub>p</sub>	--	--	nm