



**Features:**

- ◀ Resolution: 240S\*64C Dots
- ◀ Duty ratio:1/64
- ◀ LCD option: STN, FSTN
- ◀ Backlight option(H2/H1mm): None/EL(4.5/8.6), LED(9.2/13.3), CCFL(9.2/13.8)
- ◀ N.V. built-in

Pin Assignment		
Pin no.	Symbol	Function
1	FG	Frame ground
2	VSS	Signal ground(GND)
3	Vdd	Power supply for logic(+5.0V)
4	Vee	Power supply for LCD drive
5	/WR	Data write
6	/RD	Date read
7	/CE	Chip enable for the module
8	C/D	Command/data write
9	NC	No connection
10	/RESET	Controller reset(module reset)
11~18	DO~D7	Data bus
19	FS	Font selection
20	VO	Operation voltage(LCD driver)
21	+VLED	Power supply for LED B/L(+)
22	-VLED	Power supply for LED B/L(-)

Absolute Maximum Rating									
Item	Symbol	Condition	Min.	Max.	Units				
Supply for logic voltage	Vdd-Vss	25°C	-0.3	7.0	V				
LCD driving supply voltage	Vdd-Vee	25°C	-	14.0	V				
Input voltage	Vin	25°C	-0.3	Vdd+0.3	V				
Electrical Charavteristics									
Item	Symbol	Condition	Min.	Typical	Max.	Units			
Power supply voltage	Vdd-Vss	25°C	4.5	-	5.5	V			
		Top	N	W	N	W	N	W	V
LCD operation voltage	Vop	-20°C	-	-	-	-	V		
		0°C	-	-	-	-	V		
		25°C	-	11.73	-	13.0	-	14.4	V
		50°C	-	-	-	-	-	V	
		70°C	-	-	-	-	-	V	
LCM current consumption (No B/L)	Idd	Vdd=5V	10.85	11.1	11.48	mA			
Backlight current consumption	LED/edge	VB/L=5V	-	125	-	mA			