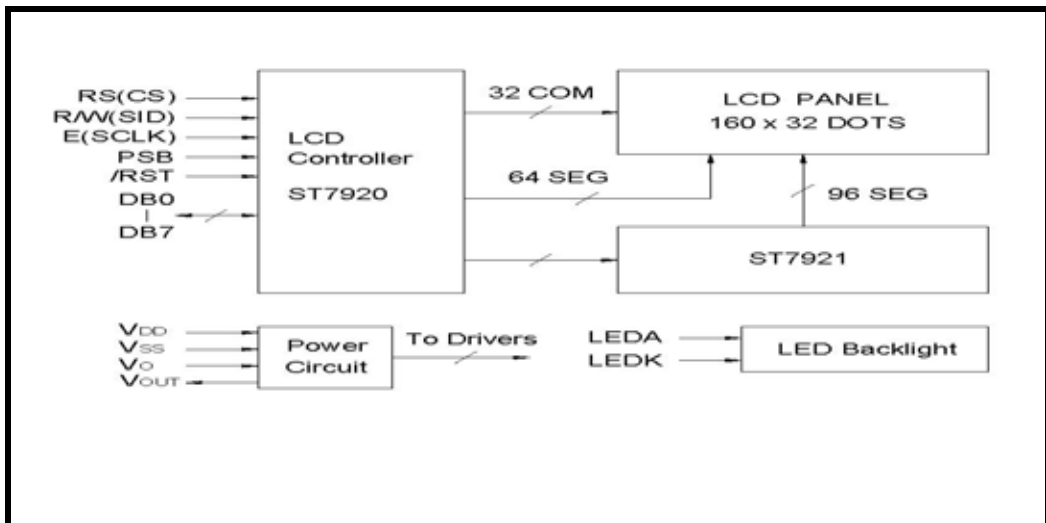


Item	Symbol	Min.	Max.	Unit
Supply Voltage(Logic)	V _{DD} -V _{SS}	-0.3	5.25	V
Supply Voltage(LCD)	V _{DD} -V _{SS}	-0.3	7	V
Input Voltage	V _I	-0.3	V _{DD} + 0.3	V
Operating Temp.	T _{opr}	-10	60	°C
Storage Temp.	T _{stg}	-20	70	°C

Item	Nominal Dimensions	Unit
Module Size (W x H x T)	116.0 x35 .0 x 11.7	mm
Viewing Area (W x H)	83.0 x 18.6	mm
Dot Pitch (W x H)	0.50 x 0.50	mm
Dot Size (W x H)	0.45 x 0.45	mm
Weight	Approx. 55	g

Item	Symbol	Condition Test	Min.	Typ.	Max.	Unit
Input High Voltage	V _{IH}		2.7		5.5	V
Input Low Voltage	V _{IL}		-0.3		0.6	V
Output High Voltage	V _{OH}	= -0.1mA I _{OH}	2.4		V _{DD}	V
Output Low Voltage	V _{OL}	= 0.1mA I _{OL}	0		0.4	V
Supply Current	DDI	V _{DD} = 5.0V		3	5	mA
LCD Driving Voltage	-V _{VDD O}	Ta=25°C		4.8		V

Pin	Symbol	Level	Function
1	V _{SS}	0V	Power supply for ground
2	V _{DD}	+5V	Power supply for logic
3	V _O		Operating voltage for LCD
4	RS (CS)	H/L	H : Data L : Instruction code
5	R/W (SID)	H/L	H : Read L : Write
6	E (SCLK)	H,H >L	Enable signal
7	DB0	H/L	Data bus
8	DB1	H/L	
9	DB2	H/L	
10	DB3	H/L	
11	DB4	H/L	
12	DB5	H/L	
13	DB6	H/L	
14	DB7	H/L	
15	LEDA	L	Power supply for LED backlight
16	NC		



item	Symbol	Typ.	Max.	Unit
Forward Voltage	Vf	3.1	3.3	V
Forward Current	If	60	--	mA
LED Color	White			

```
Reamrk: "JS "marking on bottom pcb for serial port
        "JP" marking on bottom pcb for parallel port
```