



**Feature**

1. 144x32 dots includes cursor
2. Built-in controller ST7920
3. +5V power supply(Also available for +3V)
4. 1/16 duty cycle
5. LED can be driven by pin1, pin2, or A and K

**Terminal Function**

Pin No.	Symbol	Function
1	V <sub>SS</sub>	GND
2	V <sub>DD</sub>	Supply voltage for logic
3	V <sub>0</sub>	Contrast Adjustment
4	RS	H/L Register select signal
5	R/W	H/L Read / write signal
6	E	H-L Enable signal
7	DB0	H/L Data bus line
8	DB1	H/L Data bus line
9	DB2	H/L Data bus line
10	DB3	H/L Data bus line
11	DB4	H/L Data bus line
12	DB5	H/L Data bus line
13	DB6	H/L Data bus line
14	DB7	H/L Data bus line
15	A	Backlight LED+
16	K	Backlight LED-

**Mechanical Data**

Item	Value	Unit
Outline	80.0 x 36.0	mm
Viewing Area	66.0 x 16.0	mm
Active Area	60.44x 13.4	mm
Dot Size	0.38 x 0.38	mm
Dot Pitch	0.42 x 0.42	mm

**Electrical Characteristics**

Item	Symbol	Min	Typ	Max
Operating Voltage(V)	V <sub>DD</sub>	4.7	5.0	5.3
Supply Voltage For LCD	V <sub>DD</sub> -V <sub>0</sub>	-	4.3	-
Input High Voltage(V)	V <sub>IH</sub>	0.7	-	V <sub>DD</sub>
Input Low Voltage(V)	V <sub>IL</sub>	V <sub>SS</sub>	-	0.6
Operating Current(mA)	I <sub>DD</sub>	-	1.2	1.5

**Backlight Characteristics**

Item	Symbol	Min	Typ	Max	Unit
Forward Voltage	V <sub>f</sub> (edge)	3.4	3.5	3.6	V
Forward Current	I <sub>f</sub> (edge)	28	32	38	mA
Forward Voltage	V <sub>f</sub> (array)	-	4.2	4.4	V
Forward Current	I <sub>f</sub> (array)	-	100	-	mA

**Absolute Maximum**

Item	Symbo	Min	Max
Operating Voltage(V)	V <sub>dd</sub>	-0.3	5.5
Operating Temperature(°C)	Top	-20	+70
Storage Temperature(°C)	T <sub>st</sub>	-30	+80