



**Feature**

- 1. 1.40x4 characters includes cursor
- 2. Built-in controller (KS 0066 or Equivalent)
- 3. +5V power supply (Also available for +3V)
- 4. 1/16 duty cycle
- 5. LED can be driven by pin 1, pin 2, or A and K

**Terminal Function**

Pin No.	Symbol	Function
1	DB7	Data bus line
2	DB6	Data bus line
3	DB5	Data bus line
4	DB4	Data bus line
5	DB3	Data bus line
6	DB2	Enable signal
7	DB1	Data bus line
8	DB0	Data bus line
9	E1	Enable signal IC1
10	R/W	Read/write
11	RS	Register select
12	V0	Contrast Adjustment
13	Vss	GND
14	VDD	Supply voltage for logic
15	E2	H-L Enable signal IC2
16	NC/Vee	NC or Negative Voltage output
17	A	Backlight LED+
18	K	Backlight LED-

**Mechanical Data**

Item	Value	Unit
Outline	190.0 x 54.0	mm
Viewing Area	147.0 x 29.5	mm
Active Area	140.45 x 23.16	mm
Dot Size	0.5 x 0.55	mm
Dot Pitch	0.57 x 0.62	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>	-	4.5	-
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>	-	2.4	3.0

**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)	36	48	60	mA
Forward Voltage	V <sub>f</sub> (array)	-	4.2	4.4	V
Forward Current	I <sub>f</sub> (array)	-	600	-	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