



### Feature

1. 5x8 dots includes cursor
2. Built-in controller (KS0066 or Equivalent)
3. +5V power supply (Also available for +3V)
4. 1/16 duty cycle
5. LED can be driven by pin1, pin2, or pin15, pin16 or A.K
6. N.V. optional for +3V power supply

### Pin Assignment

Pin#	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	Data bus line
7	DB1	Data bus line
8	DB0	Data bus line
9	E1	H→L Enable signal IC1
10	R/W	H/L Read/write signal
11	RS	Register select
12	Vo	Contrast Adjustment
13	Vss	GND
14	Vdd	+5V
15	E2	H→L Enable signal IC2
16	NC/Vee	NC or Negative Voltage output
17	A	+4.2V for LED (RA=0 Ω)
18	K	GND

### Mechanical Data

Item	Standard Value	Unit
Module Dimension	190.0 x 54.0	mm
Viewing Area	147.0 x 29.5	mm
Dot Size	0.5 x 0.55	mm
Character Size	2.78 x 4.89	mm

### Absolute Maximum Rating

Item	Symbol	Standard Value			Unit
		min.	typ.	max.	
Power Supply	VDD-VSS	-0.3	--	7.0	V
Input Voltage	VI	-0.3	--	VDD	V

Note: VSS=0 Volt, VDD=5.0 Volt.

### Electronical Characteristics

Item	Symbol	Condition	Standard Value			Unit
			min.	typ.	max.	
Input Voltage	VDD	VDD=+5V	4.7	5.0	5.3	V
		VDD=+3V	2.7	3.0	3.3	V
Supply Current	IDD	VDD=5V	--	2.4	3.0	mA
Recommended LC Driving Voltage for Normal Temp. Version module	VDD-VO	-20°C	4.9	5.1	5.5	V
		0°C	4.5	4.8	5.1	
		25°C	4.1	4.5	4.7	
		50°C	3.8	4.2	4.4	
		70°C	3.5	3.9	4.1	
LED Forward Voltage	VF	25°C	--	4.2	4.6	V
LED Forward Current	IF	25°C	--	600	1200	mA
EL Power Supply Current	IEL	Vel=110VAC;400Hz	--	--	5.0	mA

### Display Character Address Code

Display position	1	2	3	4	5	6	7	8	9	10	11	12	--	--	40
DD RAM Address	00	01													27
DD RAM Address	40	41													67
DD RAM Address	14	15													27
DD RAM Address	54	55													67