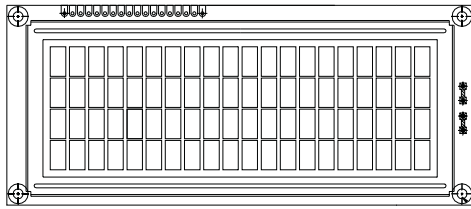


20 x 4 Character LCD



FEATURES

- 5 x 8 dots with cursor
- Built-in controller (KS 0066 or Equivalent)
- + 5V power supply (Also available for + 3V)
- 1/16 duty cycle
- B/L to be driven by pin 1, pin 2 or pin 15, pin 16 or A and K (LED)
- N.V. optional for + 3V power supply

MECHANICAL DATA

ITEM	STANDARD VALUE	UNIT
Module Dimension	146 x 62.5	mm
Viewing Area	123.5 x 43.0	mm
Dot Size	0.92 x 1.10	mm
Character Size	4.84 x 9.22	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

ELECTRICAL SPECIFICATIONS

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	5.3	V
Supply Current	IDD	VDD = + 5V	—	8.0	10.0	mA
Recommended LC Driving Voltage for Normal Temp. Version Module	VDD - V0	- 20°C	5.0	5.1	5.7	V
		0°C	4.6	4.8	5.2	
		25°C	4.1	4.5	4.7	
		50°C	3.9	4.2	4.5	
		70°C	3.7	3.9	4.3	
LED Forward Voltage	VF	25°C	—	4.2	4.6	V
LED Forward Current	IF	25°C	—	540	1080	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	13	—	—	20
DD RAM Address	00	01														13
DD RAM Address	40	41														53
DD RAM Address	14	15														27
DD RAM Address	54	55														67

PIN NUMBER	SYMBOL	FUNCTION
1	V _{ss}	GND
2	V _{dd}	+ 3V or + 5V
3	V _o	Contrast Adjustment
4	RS	H/L Register Select Signal
5	R/ $\overline{W}$	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	Power Supply for LED 4.2V
16	K	Power Supply for B/L (0V)
17	NC/V _{ee}	NC or Negative Voltage Output
18	NC	No Connection

DIMENSIONS in millimeters