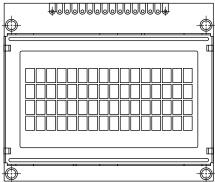




## 16 x 4 Character LCD



#### **FEATURES**

• Type: Character

• Display format: 16 x 4 characters

• Built-in controller: KS 0066 (or equivalent)

• Duty cycle: 1/16

• 5 x 8 dots includes cursor

- + 5 V power supply (also available for + 3 V)
- B/L to be driven by pin 1, pin 2, pin 15, pin 16 or A and K
- N.V. optional for + 3 V power supply
- Compliant to RoHS directive 2002/95/EC

MECHANICAL DATA									
ITEM	STANDARD VALUE	UNIT							
Module Dimension	70.6 x 60.0								
Viewing Area	60.0 x 32.6								
Dot Size	0.55 x 0.55	mm							
Dot Pitch	0.60 x 0.60	mm							
Mounting Hole	65.6 x 50.0								
Character Size	2.95 x 4.75								

ABSOLUTE MAXIMUM RATINGS									
ITEM	EM CVMPOL		STANDARD VALUE						
IIEW	SYMBOL	MIN.	TYP.	MAX.	UNIT				
Power Supply	V <sub>DD</sub> to V <sub>SS</sub>	- 0.3	-	7.0	V				
Input Voltage	VI	- 0.3	-	V <sub>DD</sub>	\ \				

#### Note

•  $V_{SS} = 0 \text{ V}, V_{DD} = 5.0 \text{ V}$ 

ELECTRICAL CHARACTERISTICS									
ITEM	SYMBOL	CONDITION	ST	UNIT					
ITEM	STWIBOL	CONDITION	MIN. TYP. MAX.						
Input Voltage	$V_{\mathrm{DD}}$	V <sub>DD</sub> = + 5 V	4.7	5.0	5.3	V			
input voitage	V DD	V <sub>DD</sub> = + 3 V	2.7	3.0	5.3	]			
Supply Current	I <sub>DD</sub>	V <sub>DD</sub> = + 5 V	-	1.65	-	mA			
		- 20 °C	5.0	5.1	5.7				
Recommended LC Driving	$V_{DD}$ to $V_0$	0 °C	4.6	4.8	5.2				
Voltage for Normal Temperature		25 °C	4.1	4.5	4.7	V			
Version Module		50 °C	3.9	4.2	4.5				
		70 °C	3.7	3.9	4.3				
EL Power Supply Current	I <sub>EL</sub>	V <sub>EL</sub> = 110 V <sub>AC</sub> , 400 Hz	=	=	5.0	mA			

OPTIONS										
		PROCES	BACKLIGHT							
TN	STN Gray	STN Yellow	STN Blue	FSTN B&W	STN Color	None	LED	EL	CCFL	
х	х	х	х			х	х	х		

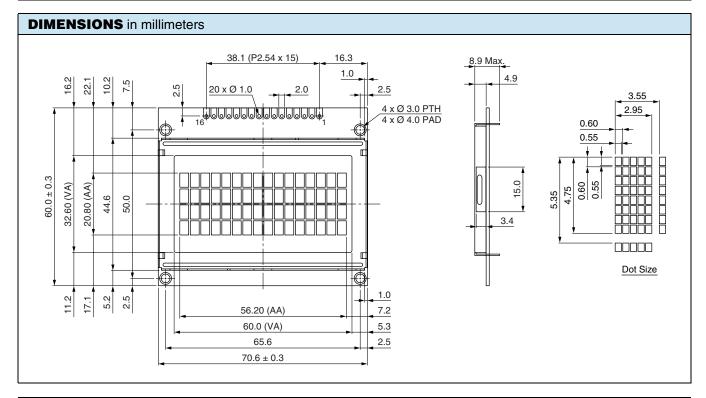
For detailed information, please see the "Product Numbering System" document.

# 16 x 4 Character LCD



DISPLAY CHARACTER ADDRESS CODE																
Display Position																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DD RAM Address	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
DD RAM Address	40	41	42	43	44	45	46	47	48	49	4A	4B	4C	4D	4E	4F
DD RAM Address	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F
DD RAM Address	50	51	52	53	54	55	56	57	58	59	5A	5B	5C	5D	5E	5F
			•	•	•				1		•	•		•	•	

INTERFACE PIN FUNCTION						
PIN NO.	SYMBOL	FUNCTION				
1	V <sub>SS</sub>	Ground				
2	V <sub>DD</sub>	+ 3 V or + 5 V				
3	V <sub>0</sub>	Contrast adjustment				
4	RS	H/L register select signal				
5	R/W	H/L read/write signal				
6	E	$ extsf{H}  ightarrow  extsf{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/V <sub>EE</sub>	+ 4.2 V for LED ( $R_A = 0 \Omega$ )/negative voltage output				
16	К	Power supply for B/L (0 V)				



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