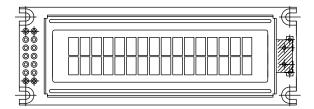


## 16 x 2 Character LCD



#### **FEATURES**

• Type: Character

• Display format: 16 x 2 characters

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

RoHS

• Duty cycle: 1/16

• 5 x 8 dots includes cursor

• + 5 V power supply

• LED can be driven by pin 1, pin 2, or A and K

• Optional: Smaller character size (2.95 mm x 4.35 mm)

• Compliant to RoHS directive 2002/95/EC

MECHANICAL DATA							
ITEM	STANDARD VALUE	UNIT					
Module Dimension	85.0 x 30.0						
Viewing Area	66.0 x 16.0						
Dot Size	0.55 x 0.65	mm					
Dot Pitch	0.60 x 0.70	mm					
Mounting Hole	81.0 x 24.0						
Character Size	2.96 x 5.56						

ABSOLUTE MAXIMUM RATINGS								
ITEM	EM SYMBOL		STANDARD VALUE					
ITEM	STIVIBUL	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>	V			

#### Note

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

ELECTRICAL CHARACTERISTICS									
ITEM	SYMBOL	CONDITION	ST	UNIT					
I I EIVI	STWBOL	CONDITION	MIN.	TYP.	MAX.	UNIT			
Input Voltage	$V_{DD}$	V <sub>DD</sub> = + 5 V	4.7	5.0	5.3	V			
Supply Current	I <sub>DD</sub>	V <sub>DD</sub> = + 5 V	-	1.2	1.5	mA			
Recommended LC Driving		- 20 °C	-	-	5.2				
		0 °C	-	-	4.2				
Voltage for Normal Temperature	$V_{DD}$ to $V_{0}$	25 °C	-	3.8	-	٧			
Version Module		50 °C	3.5	-	-				
		70 °C	3.2	-	-				
LED Forward Voltage	V <sub>F</sub>	25 °C	-	4.2	4.6	V			
LED Forward Current - Array	,	0E °C	-	100	-	m A			
LED Forward Current - Edge	- I <sub>F</sub>	25 °C	-	20	40	mA			
EL Power Supply Current	I <sub>EL</sub>	V <sub>EL</sub> = 110 V <sub>AC</sub> , 400 Hz	-	-	5.0	mA			

OPTION	OPTIONS								
		PROCES	S COLOR			BACK	LIGHT		
TN	STN Gray	STN Yellow	STN Blue	FSTN B&W	STN Color	None	LED	EL	CCFL
х	х	Х	Х			Х	х	х	

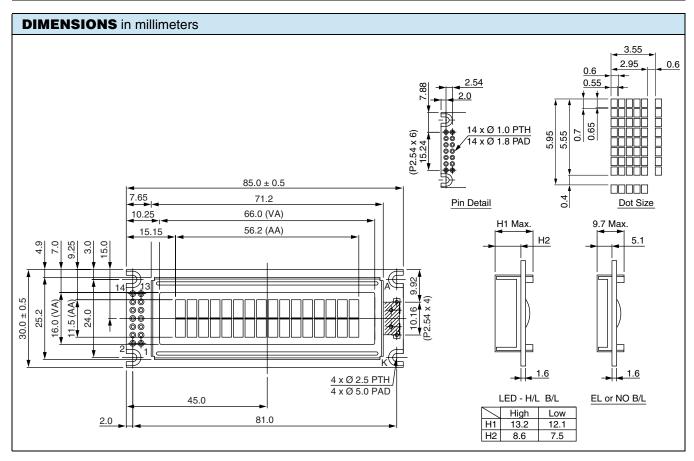
For detailed information, please see the "Product Numbering System" document.

### 16 x 2 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
					1											

INTERFACE PIN FUNCTION							
PIN NO.	SYMBOL	FUNCTION					
1	$V_{DD}$	Power supply (+ 5 V)					
2	V <sub>SS</sub>	Ground					
3	V <sub>0</sub>	Contrast adjustment					
4	RS	H/L register select signal					
5	R/W	H/L read/write signal					
6	E	$H \rightarrow L$ 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					





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