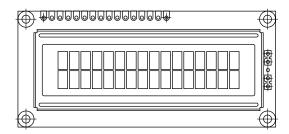


## 16 x 2 Character LCD



MECHANICAL DATA							
ITEM	STANDARD VALUE	UNIT					
Module Dimension	80.0 x 36.0						
Viewing Area	66.0 x 16.0						
Dot Size	0.55 x 0.65	mm					
Dot Pitch	0.60 x 0.70	] ''''''					
Mounting Hole	75.0 x 31.0						
Character Size	2.96 x 5.56						

#### **FEATURES**

• Type: Character

• Display format: 16 x 2 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)
- LED can be driven by pin 1, pin 2, pin 15, pin 16 or A and K
- N.V. optional for + 3 V power supply
- Optional: Smaller character size (2.95 mm x 4.35 mm)
- Compliant to RoHS directive 2002/95/EC

ABSOLUTE MAXIMUM RATINGS								
ITEM	SYMBOL	STAN	UNIT					
IIEW	STWIDOL	MIN.	TYP.	MAX.	UNIT			
Power Supply	$V_{DD}$ to $V_{SS}$	- 0.3	-	7.0	V			
Input Voltage	$V_{I}$	- 0.3	-	$V_{DD}$	V			

#### Note

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

ELECTRICAL CHARACTERISTICS								
ITEM	SYMBOL	CONDITION	ST	UNIT				
	STINIBUL	CONDITION	MIN.	TYP.	MAX.	UNII		
Input Voltage	V <sub>DD</sub>	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 Voltage for Normal Temperature		- 20 °C	-	-	5.2			
	$V_{DD}$ to $V_0$	0 °C	-	-	4.2	1		
		25 °C	-	3.8	-	V		
Version Module		50 °C	3.5	-	-	1		
		70 °C	3.2	-	-	1		
LED Forward Voltage	V <sub>F</sub>	25 °C	-	4.2	4.6	V		
LED Forward Current - Array		05.00	-	100	-			
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	

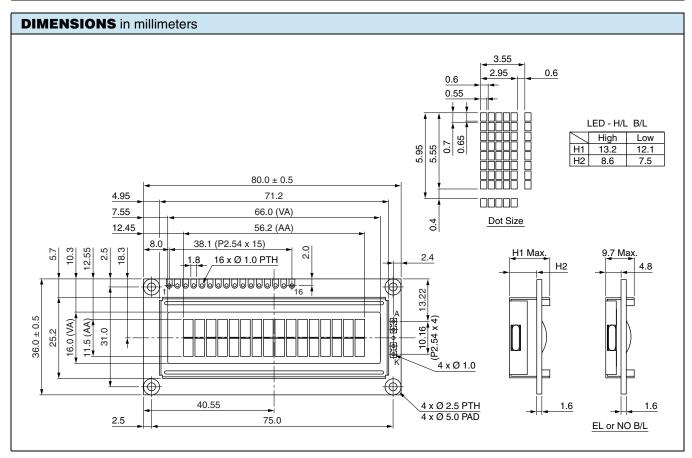
For detailed information, please see the "Product Numbering System" document.

#### 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 <sub>SS</sub>	Ground
2	$V_{DD}$	+ 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	$H \rightarrow L$ 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
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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