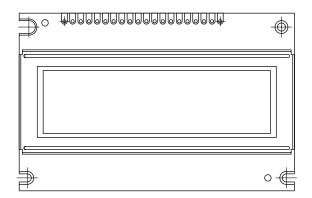




# 160 x 32 Graphic LCD



MECHANICAL DATA				
ITEM	STANDARD VALUE	UNIT		
Module Dimension	85.2 x 55.0			
Viewing Area	74.0 x 22.0			
Dot Size	0.40 x 0.56	mm		
Dot Pitch	0.44 x 0.61	mm		
Mounting Hole	78.2 x 46.7			
Character Size	N/a			

### **FEATURES**

• Type: Graphic

Display format: 160 x 32 dotsBuilt-in controller: ST7920

Duty cycle: 1/32+ 5 V power supply

• Same size with LCD-160H032A

· Chinese version

• Compliant to RoHS directive 2002/95/EC



ABSOLUTE MAXIMUM RATINGS						
ITEM	SYMBOL	STAN	UNIT			
IIEW	STINIBUL	MIN.	TYP.	MAX.	UNIT	
Power Supply	$V_{DD}$ to $V_{SS}$	4.75	5.0	5.25	V	
Input Voltage	VI	0	-	$V_{DD}$	] <b>'</b>	

#### Note

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

ELECTRICAL CHARACTERISTICS							
ITEM	SYMBOL CONDITION	CONDITION	STANDARD VALUE			UNIT	
ITEM		MIN.	TYP.	MAX.	UNIT		
Input Voltage	$V_{DD}$	-	4.5	5.0	5.5	٧	
Supply Current	I <sub>DD</sub>	V <sub>DD</sub> = + 5 V	-	1.0	1.4	mA	
Recommended LC Driving Voltage for Normal Temperature	V <sub>DD</sub> to V <sub>0</sub>	- 20 °C	-	-	6.2		
		25 °C	-	-	-	V	
Version Module		70 °C	4.8	5.5	-		
CCFL Starting Voltage	V <sub>FLS</sub>	25 °C	-	-	-	V <sub>RMS</sub>	
CCFL Driving Voltage	V <sub>FLD</sub>	25 °C	-	-	-	V <sub>RMS</sub>	
CCFL Driving Current	I <sub>FLD</sub>	V <sub>FQ</sub> = 450 V <sub>RMS</sub> , 30 kHz	-	=	-	mA <sub>RMS</sub>	
LED Forward Voltage	V <sub>F</sub>	25 °C	-	4.2	4.6	V	
LED Forward Current	I <sub>F</sub>	25 °C	-	180	360	mA	
EL Power Supply Current	I <sub>EF</sub>	V <sub>EL</sub> = 110 V <sub>AC</sub> , 400 Hz	-	-	5.0	mA	

OPTION	OPTIONS								
	PROCESS COLOR				BACKLIGHT				
TN	STN Gray	STN Yellow	STN Blue	FSTN B&W	STN Color	None	LED	EL	CCFL
	х	x	Х			Х	х	x	

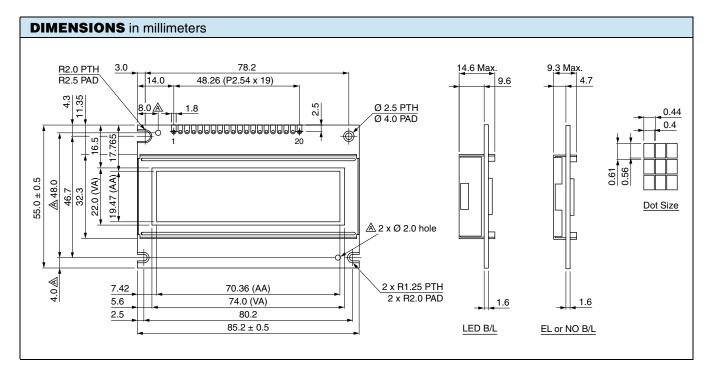
For detailed information, please see the "Product Numbering System" document.

Document Number: 37355 Revision: 25-Mar-09

## 160 x 32 Graphic LCD



INTERFACE PIN FUNCTION					
PIN NO.	SYMBOL	FUNCTION			
1	V <sub>SS</sub>	Ground			
2	V <sub>DD</sub>	NC			
3	V <sub>0</sub>	Operating voltage for LCD			
4	RS	Register select signal			
5	NC	NC			
6	NC	NC			
7	V <sub>OUT</sub>	Positive voltage output			
8	E	Enable signal			
9	R/W	H: Read data/L: Write data			
10	DB0	Data bus line			
11	DB1	Data bus line			
12	DB2	Data bus line			
13	DB3	Data bus line			
14	DB4	Data bus line			
15	DB5	Data bus line			
16	DB6	Data bus line			
17	DB7	Data bus line			
18	RESET	H: MPU 68 type			
19	A	Power supply for LED blacklight (+)			
20	К	Power supply for LED blacklight (-)			





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