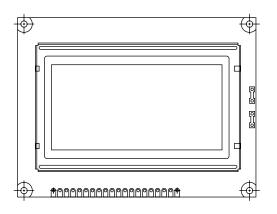


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RoHS

COMPLIANT

160 x 80 Graphic LCD



MECHANICAL DATA

ITEM	STANDARD VALUE	UNIT			
Module Dimension	93.0 x 70.0				
Viewing Area	72.0 x 40.0				
Dot Size	0.48 x 0.48				
Dot Pitch	0.52 x 0.52	mm			
Mounting Hole	88.0 x 65.0				
Character Size	N/a				

FEATURES

- Type: Graphic
- Display format: 160 x 80 dots
- Built-in controller: Sanyo LC7981 (or equivalent)
- Duty cycle: 1/80
- + 5 V power supply
- Built-in N.V.
- Compliant to RoHS directive 2002/95/EC

ABSOLUTE MAXIMUM RATINGS						
ITEM	SYMBOL	STAN				
	STINDUL	MIN.	TYP.	MAX.	UNIT	
Power Supply	V_{DD} to V_{SS}	4.75	5.0	5.25	V	
Input Voltage	VI	0	-	V_{DD}	V	

Note

• $V_{SS} = 0 V, V_{DD} = 5.0 V$

ELECTRICAL CHARACTERISTICS							
ITEM	SYMBOL	CONDITION	STANDARD VALUE				
	STWDOL	CONDITION	MIN.	TYP.	MAX.	UNIT	
Input Voltage	V _{DD}	V _{DD} = + 5 V	4.5	5.0	5.5	V	
Supply Current	I _{DD}	V _{DD} = + 5 V	-	0.6	0.8	mA	
Recommended LC Driving Voltage for Normal Temperature Version Module	V_{DD} to V_0	- 20 °C	-	-	14.5	V	
		0 °C	-	-	14.0		
		25 °C	-	13.5	-		
		50 °C	13.0	-	-		
		70 °C	12.5	-	-		
LED Forward Voltage	V _F	25 °C	-	4.2	4.6	V	
LED Forward Current	۱ _F	25 °C	-	330	660	mA	
EL Power Supply Current	I _{EL}	V _{EL} = 110 V _{AC} , 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	х	х	х		х	х	х	

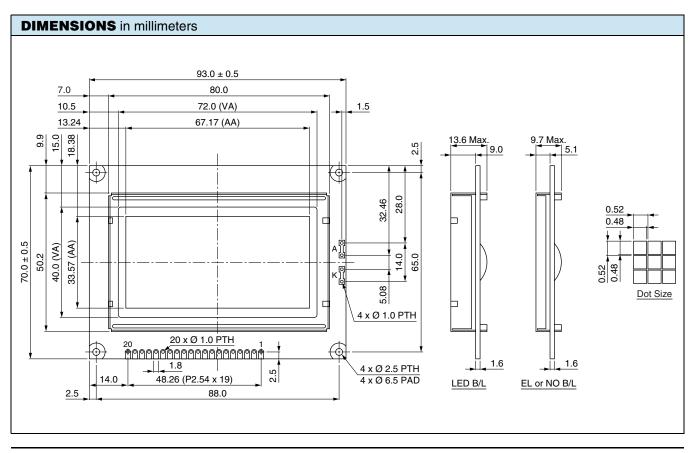
For detailed information, please see the "Product Numbering System" document.

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INTERFACE PIN FUNCTION				
PIN NO.	SYMBOL	FUNCTION		
1	V _{SS}	Ground		
2	V _{DD}	Power supply (+ 5 V)		
3	Vo	Contrast adjustment		
4	D/I	H/L register select signal		
5	R/W	H/L read/write signal		
6	E	$H \rightarrow L$ enable signal		
7	DB0	DB0 data bus line		
8	DB1	DB1 data bus line		
9	DB2	DB2 data bus line		
10	DB3	DB3 data bus line		
11	DB4	DB4 data bus line		
12	DB5	DB5 data bus line		
13	DB6	DB6 data bus line		
14	DB7	DB7 data bus line		
15	CS	L: Chip enable		
16	DISOFF	L: Display off signal		
17	RST	Reset signal		
18	V _{EE}	Negative voltage output		
19	Α	+ 4.2 V for LED		
20	К	0 V for LED		



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