

**MECHANICAL DATA** 

Module Dimension

Viewing Area

Mounting Hole

Character Size

Dot Size

Dot Pitch

**ITEM** 

www.vishay.com

Vishay

# 240 x 64 Graphic LCD



### **FEATURES**

• Type: Graphic

• Display format: 240 x 64 dots

• Built-in controller: RA6963

• Duty cycle: 1/64 • + 5 V power supply

• Built-in N.V.

• Material categorization: For definitions of compliance please see www.vishay.com/doc?99912



STANDARD VALUE

180.0 x 65.0

132.6 x 39.0

 $0.48 \times 0.48$ 

 $0.53 \times 0.53$ 176.0 x 54.0

N/a

ABSOLUTE MAXIMUM RATINGS						
ITEM	SYMBOL	STAN	LINIT			
IIEW	STIVIBUL	MIN.	TYP.	MAX.	UNIT	
Power Supply	V <sub>DD</sub> to V <sub>SS</sub>	4.75	5.0	5.25	٧	
Input Voltage	VI	- 0.3	-	$V_{DD}$		

#### Note

UNIT

mm

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

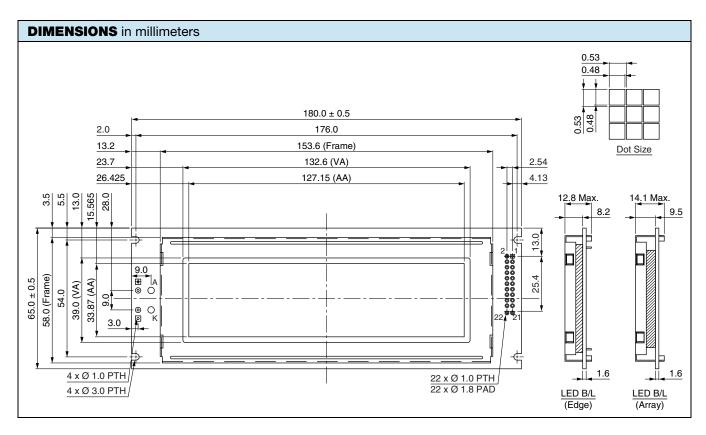
ITEM	SYMBOL	CONDITION	STANDARD VALUE			LINUT	
		CONDITION	MIN.	TYP.	MAX.	UNIT	
Input Voltage	$V_{DD}$	-	-	5.0	-	V	
Supply Current	I <sub>DD</sub>	V <sub>DD</sub> = + 5 V	-	17.3	-	mA	
Recommended LC Driving Voltage for Normal Temperature Version Module		- 20 °C	-	-	-		
	V <sub>DD</sub> to V <sub>0</sub>	25 °C	-	14.6	-	V	
		70 °C	-	-	-		
CCFL Starting Voltage	$V_{FLS}$	25 °C	-	-	-	$V_{RMS}$	
CCFL Driving Voltage	$V_{FLD}$	25 °C	-	-	-	$V_{RMS}$	
CCFL Driving Current	I <sub>FLD</sub>	$V_{FQ} = 450 V_{RMS}$ , 30 kHz	-	-	-	mA <sub>RMS</sub>	
LED Forward Voltage - Array	V <sub>F</sub>	25 °C	-	4.2	-	V	
LED Forward Voltage - Edge	V <sub>F</sub>	25 °C	-	2.1	-	V	
LED Forward Current	I <sub>F</sub>	25 °C	-	660	-	mA	
EL Power Supply Current	I <sub>EL</sub>	V <sub>EL</sub> = 110 V <sub>AC</sub> , 400 Hz	-	-	5.0	mA	

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	х

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



INTERFACE PIN FUNCTION					
PIN NO.	SYMBOL	FUNCTION			
1	FG	Frame ground			
2	V <sub>SS</sub>	Ground			
3	V <sub>DD</sub>	Power supply			
4	V <sub>0</sub>	Contrast adjustment			
5	/WR	L: Data write			
6	/RD	L: Data read			
7	CE	Enable signal			
8	C/D	WR = L, C/D = H: Command write, C/D = L: Data write RD = L, C/D = H: Status read, C/D = L: Data read			
9	NC	No connection			
10	RESET	H: Normal/L: Initialize T6963C			
11	DB0	Data bus line			
12	DB1	Data bus line			
13	DB2	Data bus line			
14	DB3	Data bus line			
15	DB4	Data bus line			
16	DB5	Data bus line			
17	DB6	Data bus line			
18	DB7	Data bus line			
19	FS	Pins for selection of font: H: 6 x 8, L: 8 x 8			
20	V <sub>OUT</sub>	Contrast adjustment			
21	SLA	Power supply for B/L (+)			
22	SLK	Power supply for B/L (-)			





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