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# 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 <a href="https://www.vishay.com/doc?99912">www.vishay.com/doc?99912</a>



RoHS

MECHANICAL DATA					
ITEM	STANDARD VALUE	UNIT			
Module Dimension	180.0 x 65.0				
Viewing Area	132.6 x 39.0				
Dot Size	0.48 x 0.48	mm			
Dot Pitch	0.53 x 0.53	mm			
Mounting Hole	176.0 x 54.0				
Character Size	N/a				

ABSOLUTE MAXIMUM RATINGS						
ITEM	SYMBOL	STAN				
IIEWI	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

• V<sub>SS</sub> = 0 V, V<sub>DD</sub> = 5.0 V

ELECTRICAL CHARACTERISTICS							
ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT	
I I E WI		CONDITION	MIN.	TYP.	MAX.		
Input Voltage	$V_{DD}$	-	-	5.0	-	V	
Supply Current	I <sub>DD</sub>	$V_{DD} = + 5 V$	-	17.3	-	mA	
Recommended LC Driving Voltage for Normal Temperature		- 20 °C	-	-	-	V	
	V <sub>DD</sub> to V <sub>0</sub>	25 °C	-	14.6	-		
Version Module		70 °C	-	-	-		
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>	$V_{FQ} = 450 V_{RMS}$ , 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	

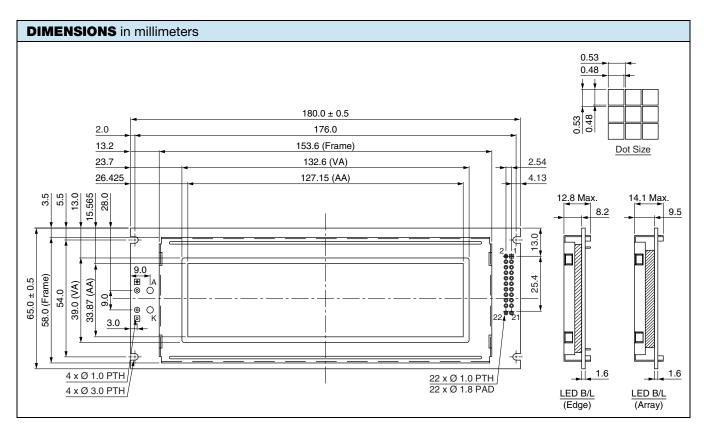
OPTIONS									
	PROCESS COLOR					BACKLIGHT			
TN	STN GRAY	STN YELLOW	STN BLUE	FSTN B&W	STN COLOR	NONE	LED	EL	CCFL
	Х	х	Х	Х		Х	Х	Х	х

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



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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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