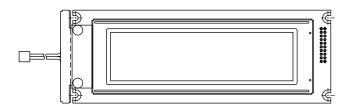




# 240 x 64 Graphic LCD



### **FEATURES**

• Type: Graphic

• Display format: 240 x 64 dots

• Built-in controller: RA6963

• Duty cycle: 1/64

 Material categorization: For definitions of compliance please see <a href="https://www.vishay.com/doc?99912">www.vishay.com/doc?99912</a>



UNIT

•	+ 5 v po	wer supply				
•	Built-in N	1.V.				
•	Material	categorization:	For	definitions	of	compliance

ABSOLUTE MAXIMUM RATINGS								
CVMPOL	STANDARD VALUE							
STIVIBOL	MIN.	TYP.	MAX.					
V <sub>DD</sub> to V <sub>SS</sub>	4.75	5.0	5.25					
VI	- 0.3	-	$V_{DD}$					
	SYMBOL  V <sub>DD</sub> to V <sub>SS</sub>	SYMBOL         STAN           MIN.         4.75	SYMBOL         STANDARD V.           MIN.         TYP.           V <sub>DD</sub> to V <sub>SS</sub> 4.75         5.0					

#### Note

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

MECHANICAL DATA					
ITEM	STANDARD VALUE	UNIT			
Module Dimension	180.0 x 65.0				
Viewing Area	133.0 x 39.0				
Dot Size	0.49 x 0.49				
Dot Pitch	0.53 x 0.53	– mm			
Mounting Hole	176.0 x 54.0				
Character Size	N/a				

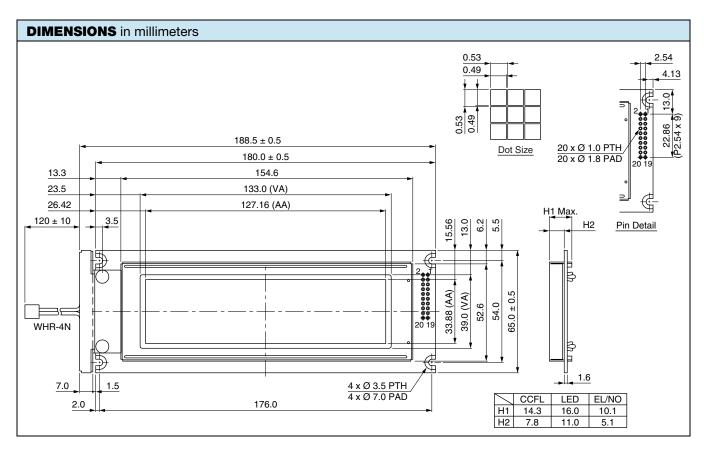
ITEM	CVMPOL	CONDITION	STANDARD VALUE				
ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT	
Input Voltage	$V_{DD}$	L level	0.7 V <sub>DD</sub>	-	$V_{DD}$	V	
input voitage	$V_{IO}$	H level	0	-	0.3 V <sub>DD</sub>	V	
Supply Current	I <sub>DD</sub>	V <sub>DD</sub> = + 5 V	-	18.5	21.0	mA	
		- 20 °C	13.0	13.5	14.1		
Recommended LC Driving	V <sub>DD</sub> to V <sub>0</sub>	0 °C	12.5	13.1	13.7	V	
Voltage for Normal Temperature		25 °C	12.1	12.7	13.3		
Version Module		50 °C	11.1	12.2	13.0		
		70 °C	9.1	11.6	12.8		
LED Forward Voltage	$V_{F}$	25 °C	-	4.2	4.6	V	
LED Forward Current	I <sub>F</sub>	25 °C	-	450	900	mA	
CCFL Forward Voltage	V <sub>F</sub>	25 °C	-	215	650	V <sub>RMS</sub>	
CCFL Forward Current	I <sub>F</sub>	25 °C	-	-	5.0	mA	
EL Power Supply Current	I <sub>EL</sub>	V <sub>EL</sub> = 110 V <sub>AC</sub> , 400 Hz	-	-	5.0	mA	

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

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>	Power supply (Ground)			
3	V <sub>DD</sub>	Power supply (+ 5 V)			
4	V <sub>0</sub>	Contrast adjustment			
5	WR	Data write			
6	RD	Data read			
7	CE	Chip enable			
8	C/D	Command/data read/write			
9	V <sub>EE</sub>	Negative voltage output			
10	RESET	Reset signal			
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	Font selection: FS = "H", 6 x 8 character font, FS = "L", 8 x 8 character font			
20	NC	No connection			





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