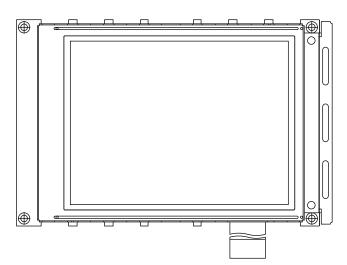


# 320 x 240 Graphic LCD



#### **FEATURES**

• Type: graphic

• Display format: 320 x 240 dots

• Built-in controller: none

Duty cycle: 1/240+5 V power supply

• Touch screen option (analog type)

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





MECHANICAL DATA					
ITEM	STANDARD VALUE	UNIT			
Module dimension	160.0 x 109.0				
Viewing area	122.0 x 92.0				
Dot size	0.34 x 0.34	mm			
Dot pitch	0.36 x 0.36	mm			
Mounting hole	152.0 x 101.0				
Character size	n/a				

ABSOLUTE MAXIMUM RATINGS						
ITEM	SYMBOL	STAN	UNIT			
I I EIVI	STIVIBUL	MIN.	TYP.	MAX.	UNII	
Power supply	$V_{DD}$ to $V_{SS}$	4.75	5.0	5.25	V	
Input voltage	VI	-0.3	-	$V_{DD}$	] V	

#### Note

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

ELECTRICAL CHARACTERISTICS							
ITEM	CVMPOL	CONDITION	ST	STANDARD VALUE			
	SYMBOL CO	CONDITION	MIN.	TYP.	MAX.	UNIT	
Input voltage	$V_{DD}$	-	2.7	-	5.5	V	
Supply current	I <sub>DD</sub>	V <sub>DD</sub> = +5.0 V	-	7.5	-	mA	
Recommended LC driving voltage for normal temperature version module		-20 °C	-	-	26.1		
	V <sub>0</sub> to V <sub>SS</sub>	25 °C	-	23.8	-	V	
		70 °C	20.9	-	-		
CCFL starting voltage	V <sub>FLS</sub>	25 °C	-	600	-	V <sub>RMS</sub>	
CCFL driving voltage	V <sub>FLD</sub>	25 °C	-	268	-	$V_{RMS}$	
CCFL driving current	I <sub>FLD</sub>	$V_{FQ} = 450 V_{RMS}, 30 \text{ kHz}$	-	5.0	-	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>	$V_{EL} = 110 V_{AC}, 400 Hz$	-	-	5.0	mA	

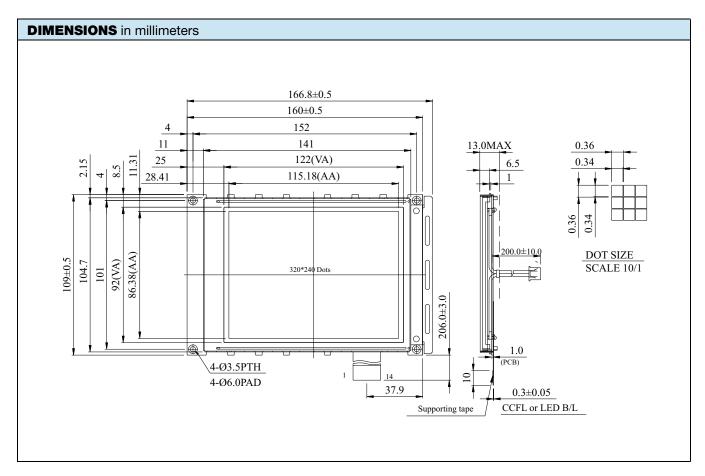
OPTIONS									
PROCESS COLOR						BACKLIGHT			
TN	STN GRAY	STN YELLOW	STN BLUE	FSTN B&W	STN COLOR	NONE	LED	EL	CCFL
-	х	х	x	х	-	x	х	х	х

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



www.vishay.com

INTERFACE PIN FUNCTION					
PIN NO.	SYMBOL	FUNCTION			
1	DB0	Date bus line			
2	DB1	Date bus line			
3	DB2	Date bus line			
4	DB3	Date bus line			
5	DISPOFF	H: on / L: off			
6	FRAME	First line marker			
7	M (NC)	Frame reverse signal (alternate signal)			
8	LP	Data latch			
9	CP	Data shift			
10	$V_{DD}$	Power supply for logic			
11	V <sub>SS</sub>	Ground			
12	V <sub>EE</sub>	Power supply for LCD			
13	V <sub>0</sub>	Operating voltage LCD driving			
14	F <sub>GND</sub>	Frame ground			





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