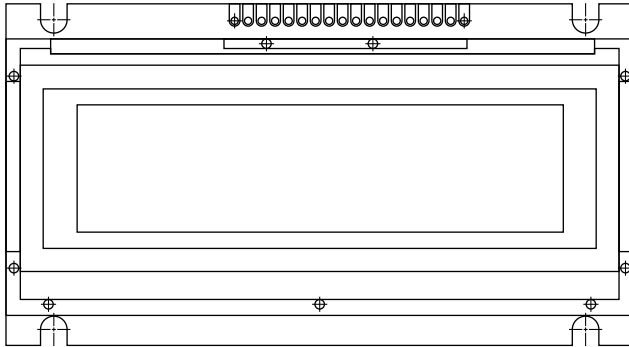


## 122 x 32 Graphic LCD



### FEATURES

- Type: graphic
- Display format: 122 x 32 dots
- Built-in controller: SBN1661G
- Duty cycle: 1/32
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

MECHANICAL DATA		
ITEM	STANDARD VALUE	UNIT
Module dimension	59.0 x 32.1	mm
Viewing area	52.0 x 15.0	
Dot size	0.345 x 0.345	
Dot pitch	0.375 x 0.375	
Mounting hole	50.0 x 29.12	
Character size	n/a	

ABSOLUTE MAXIMUM RATINGS					
ITEM	SYMBOL	STANDARD VALUE			UNIT
		MIN.	TYP.	MAX.	
Power supply	$V_{DD}$ to $V_{SS}$	2.75	5.0	5.25	V
Input voltage	$V_I$	0	-	$V_{DD}$	

**Note**

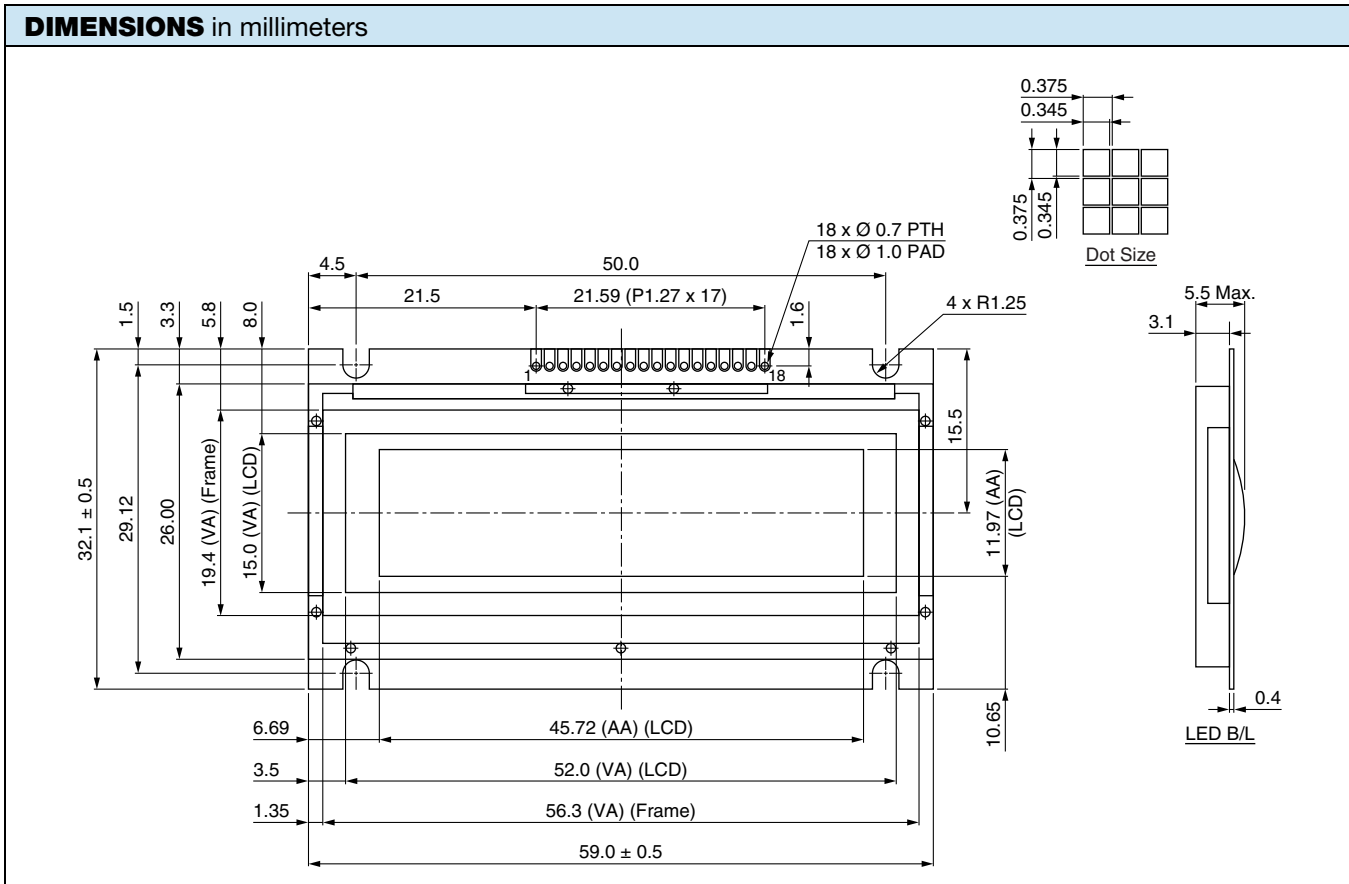
- $V_{SS} = 0$  V,  $V_{DD} = 5.0$  V

ELECTRICAL CHARACTERISTICS						
ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT
			MIN.	TYP.	MAX.	
Input voltage	$V_{DD}$	$V_{DD} = +5$ V	4.5	5.0	5.5	V
Supply current	$I_{DD}$	$V_{DD} = +5$ V	-	1.0	1.4	mA
Recommended LC driving voltage for normal temperature version module	$V_{DD}$ to $V_0$	-20 °C	5.3	5.5	5.7	V
		0 °C	5.1	5.3	5.5	
		25 °C	4.7	4.9	5.1	
		50 °C	4.3	4.6	4.9	
		70 °C	4.1	4.4	4.7	
LED forward voltage	$V_F$	25 °C	-	4.2	4.6	V
LED forward current	$I_F$	25 °C	-	40	-	mA
EL power supply current	$I_{EL}$	$V_{EL} = 110$ V <sub>AC</sub> , 400 Hz	-	-	-	mA

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	-

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

INTERFACE PIN FUNCTION		
PIN NO.	SYMBOL	FUNCTION
1	K	Power supply for backlight
2	V <sub>SS</sub>	Ground
3	V <sub>DD</sub>	Supply voltage for logic
4	V <sub>0</sub>	Operating voltage for LCD
5	A <sub>0</sub>	H: date / L: instruction
6	E1	Enable chip 1
7	E2	Enable chip 2
8	DB0	Data bus line
9	DB1	Data bus line
10	DB2	Data bus line
11	DB3	Data bus line
12	DB4	Data bus line
13	DB5	Data bus line
14	DB6	Data bus line
15	DB7	Data bus line
16	R / $\overline{W}$	H: D0 to D7 are display date / L: D0 to D7 are display control date
17	V <sub>EE</sub>	Negative voltage output (built-in)
18	A	Power supply for backlight





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