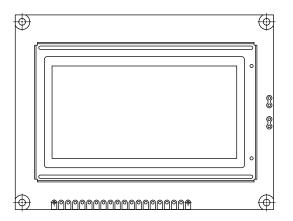
**RoHS** 

COMPLIANT



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# 128 x 64 Graphic LCD



MECHANICAL DATA						
ITEM	STANDARD VALUE	UNIT				
Module dimension	93.0 x 70.0					
Viewing area	72.0 x 40.0					
Dot size	0.48 x 0.48	mm				
Dot pitch	0.52 x 0.52	mm				
Mounting hole	88.0 x 65.0					
Character size	n/a					

#### **FEATURES**

• Type: graphic

• Display format: 128 x 64 dots

• Built-in controller: NT7107, NT7108

Duty cycle: 1/64+5 V power supply

• N.V. built-in

LCD-128H064AB: N.V. option for +3.3 V
LCD-128H064A1: double row interface

Material categorization: for definitions of compliance

please see www.vishay.com/doc?99912

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	-	$V_{DD}$	]	

#### Note

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

ELECTRICAL CHARACTERISTICS							
ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT	
	STWIDOL	CONDITION	MIN.	TYP.	MAX.	CIVII	
Input voltage	$V_{DD}$	L level	0.7 V <sub>DD</sub>	-	$V_{DD}$	V	
	$V_{IO}$	H level	0	-	0.3 V <sub>DD</sub>		
Supply current	I <sub>DD</sub>	$V_{DD} = +5 \text{ V}$	-	2.5	7.5	mA	
	V <sub>DD</sub> to V <sub>0</sub>	-20 °C	9.9	10.4	10.9		
		0 °C	9.7	10.2	10.7	V	
Recommended LC driving voltage for normal temperature version module		25 °C	8.9	9.4	9.9		
		50 °C	8.6	9.1	9.6		
		70 °C	8.4	8.9	9.4		
LED forward voltage	V <sub>F</sub>	25 °C	-	4.2	4.6	V	
LED forward current - array		0E °C	-	330	660	mA	
LED forward current - edge	- I <sub>F</sub>	25 °C	-	120	240		
EL power supply current	I <sub>EL</sub>	I <sub>EL</sub> V <sub>EL</sub> = 110 V <sub>AC</sub> , 400 Hz 5.0		5.0	mA		

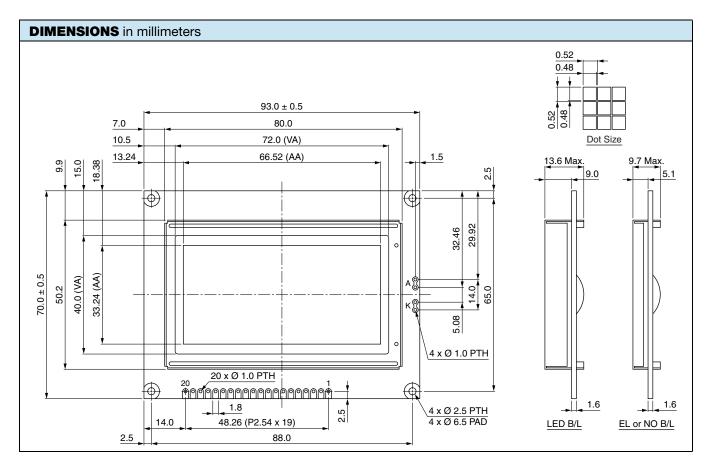
OPTIONS									
PROCESS COLOR							BACK	LIGHT	
TN	STN GRAY	STN YELLOW	STN BLUE	FSTN B&W	STN COLOR	NONE	LED	EL	CCFL
-	х	х	х	х	-	х	х	х	-

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



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INTERFACE PIN FUNCTION					
PIN NO.	SYMBOL	FUNCTION			
1	V <sub>SS</sub>	Ground			
2	$V_{DD}$	Power supply (+5 V)			
3	V <sub>0</sub>	Contrast adjustment			
4	D/I	Data / instruction			
5	R/W	Data read / write			
6	E	H  o L enable signal			
7	DB0	Data bus line			
8	DB1	Data bus line			
9	DB2	Data bus line			
10	DB3	Data bus line			
11	DB4	Data bus line			
12	DB5	Data bus line			
13	DB6	Data bus line			
14	DB7	Data bus line			
15	CS1	Chip select for IC1			
16	CS2	Chip select for IC1			
17	RST	Reset			
18	V <sub>EE</sub>	Negative voltage output			
19	A	Power supply for LED (+4.2 V), $R_A = 0 \Omega$			
20	К	Power supply for LED (0 V)			





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