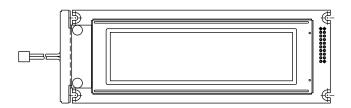


Vishay

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 www.vishay.com/doc?99912



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	mm			
Dot pitch	0.53 x 0.53	111111			
Mounting hole	176.0 x 54.0				
Character size	n/a				

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

Note

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

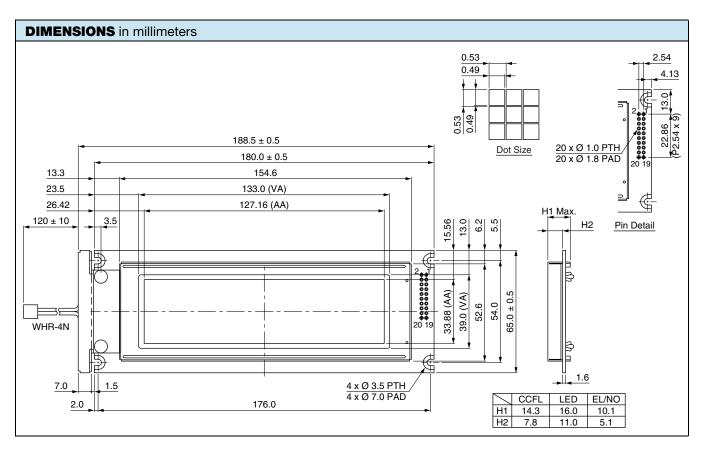
ELECTRICAL CHARACTERISTICS							
ITEM	SYMBOL	CONDITION	ST	STANDARD VALUE			
	STIVIDUL	CONDITION	MIN.	TYP.	MAX.	UNIT	
Input voltage	V_{DD}	L level	0.7 V _{DD}	-	V_{DD}	V	
	V_{IO}	H level	0	-	0.3 V _{DD}	V	
Supply current	I _{DD}	$V_{DD} = +5 \text{ V}$	-	23.0	24.0	mA	
	V _{DD} to V ₀	-20 °C	13.0	13.5	14.1	V	
Recommended LC		0 °C	12.5	13.1	13.7		
driving voltage for normal temperature version module		25 °C	12.1	12.7	13.3		
		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 _F	25 °C	-	450	900	mA	
CCFL forward voltage	V _F	25 °C	-	215	650	V _{RMS}	
CCFL forward current	I _F	25 °C	-	-	5.0	mA	
EL power supply current	I _{EL}	V _{EL} = 110 V _{AC} , 400 Hz	-	-	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	х

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



INTERFACE PIN FUNCTION					
PIN NO.	SYMBOL	FUNCTION			
1	FG	Frame ground			
2	V _{SS}	Power supply (ground)			
3	V _{DD}	Power supply (+5 V)			
4	V ₀	Contrast adjustment			
5	WR	Data write			
6	RD	Data read			
7	CE	Chip enable			
8	C/D	Command / data read / write			
9	V _{EE}	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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