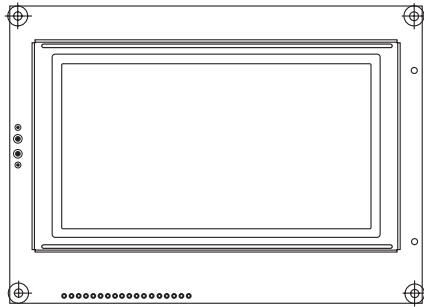


## 240 x 128 Dots LCD



### FEATURES

- Built in controller TOSHIBA-(T6963C or equivalent)
- + 5V power supply
- 1/28 duty cycle
- Built in N.V.

MECHANICAL DATA		
ITEM	STANDARD VALUE	UNIT
Module Dimension	144.0 x 104.0	mm
Viewing Area	114.0 x 64.0	mm
Dot Size	0.43 x 0.43	mm
Dot Pitch	0.45 x 0.45	mm

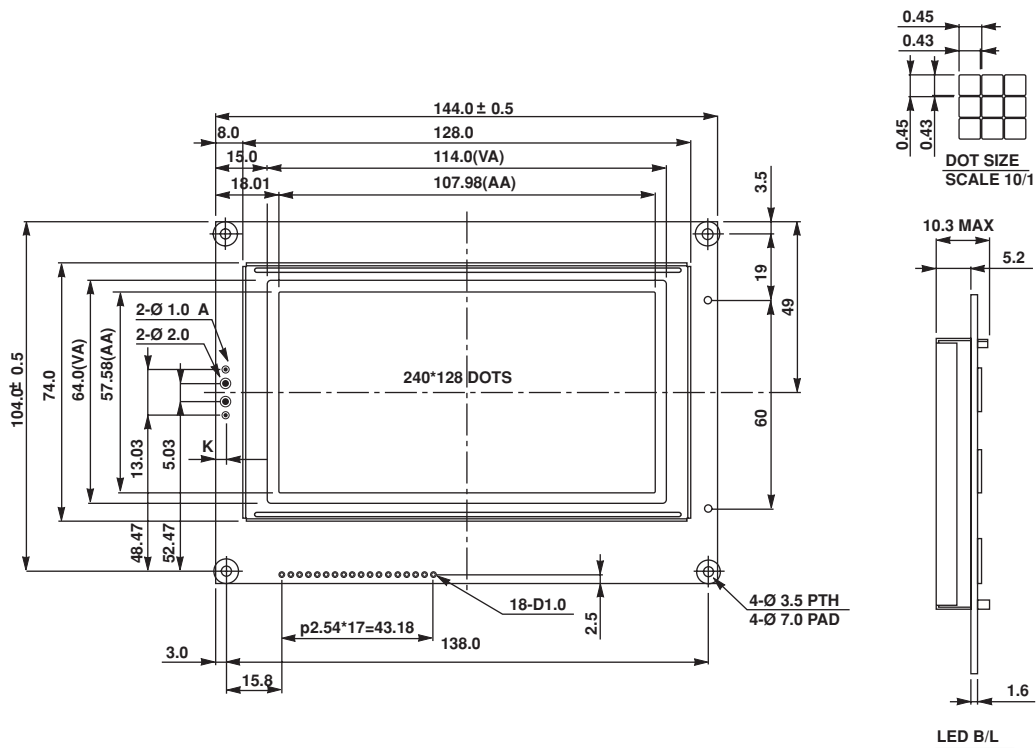
ABSOLUTE MAXIMUM RATING					
ITEM	SYMBOL	STANDARD VALUE			UNIT
		MIN.	TYP.	MAX.	
Power Supply	VDD-VSS	4.75	5.0	5.25	V
Input Voltage	VI	- 0.3	-	VDD	V

**NOTE:** VSS = 0 Volt, VDD = 5.0 Volt

ELECTRICAL SPECIFICATIONS						
ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT
			MIN.	TYP.	MAX.	
Input Voltage	VDD	L level	$0.7V_{DD}$	-	$V_{DD}$	V
	VIO	H level	-	-	$0.3V_{DD}$	V
Supply Current	IDD	VDD = 5V	0	55	60	mA
Recommended LC Driving Voltage for Normal Temp.	VDD - V0	0°C	20.3	21.4	22.5	V
Version Module		25°C	18.0	19.1	20.2	
		50°C	17.8	18.9	20.0	
LED Forward Voltage	VF	25°C	-	4.2	-	V
LED Forward Current	IF	25°C	-	900	1800	mA
CCFL	VF	25°C	-	250	590	Vms
	IF	25°C	-	-	5.5	mA
EL	-	-	-	-	5.0	mA

PIN NUMBER	SYMBOL	FUNCTION
1	FG	Frame GND
2	VSS	GND
3	VDD	+ 5V
4	VO	Scan Start-Up Signal
5	$\overline{WR}$	Frame Reverse Signal (Alternate Signal)
6	$\overline{RD}$	Data Latch Pulse
7	$\overline{CE}$	Display Enable Signal
8	C/D	Data Shift Pulse
9	RST	Display Data Signal
10	DB0	Data Bus Line
11	DB1	Data Bus Line
12	DB2	Data Bus Line
13	DB3	Data Bus Line
14	DB4	Data Bus Line
15	DB5	Data Bus Line
16	DB6	Data Bus Line
17	DB7	Data Bus Line
18	FS	Pins for Selection of Font; H:6*8, L:8*8

## DIMENSIONS in millimeters





## Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.