



## FEATURES

- ◆ BUILT-IN CONTROLLER T6963C OR EQUIVALENT)
- ◆ +5 V POWER SUPPLY
- ◆ 1/128 DUTY CYCLE
- ◆ 8-BIT PARALLEL INTERFACE

## MECHANICAL DATA

ITEM	DIMENSIONS	UNIT
Module Size (W x H x T)	92.0 x 106.0 x 12.0(LED14.5)	mm
Viewing Area (W x H)	69.0 x 69.0	mm
Active Area (W x H)	63.96 x 63.96	mm
Dot Size (W x H)	0.46 x 0.46	mm
Dot Pitch (W x H)	0.50 x 0.50	mm

## INTERFACE PIN CONNECTIONS

NO.	SYMBOL	LEVEL	FUNCTION
1	FGND	0V	Frame Ground
2	Vss	0V	Power Supply Ground
3	VDD	5V	Power Supply Voltage
4	Vo	-	Contrast Adjustment Voltage
5	/WR	L	Write Singal
6	/RD	L	Read Signal
7	/CE	L	Enable Signal
8	C/D	H/L	H : Instruction Code, L : Data Code
9	/RST	L	Reset Signal
10-17	DB0-DB7	H/L	Data Bus Line
18	FS	H/L	H : 6*8 , L : 8*8 Select Of Columns
19	A	4.2V	LED Power (+)
20	/HALT	L	Stop The Oscillation Of Clock

## ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT
Supply Voltage For Logic	VDD-VSS	0	-	7	V
Supply Voltage For LCD Drive	VDD-Vo	0	-	28	V
Input Voltage	Vi	Vss	-	VDD	V

## ELECTRICAL CHARACTERISTICS

ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT	
Supply Voltage For Logic	VDD-VSS	-	4.5	5	5.5	V	
Supply Voltage For LCD	VDD-Vo	VDD=5V Ta=25°C	17.2	18.5	19.6	V	
Supply Current	IDD	VDD=5V	-	16	25	mA	
Input Voltage	"HIGH" Level	V <sub>IH</sub>	-	2.2	-	V <sub>DD</sub>	V
	"LOW" Level	V <sub>IL</sub>	-	-	-	0.6	V
Output Voltage	"HIGH" Level	V <sub>OH</sub>	-	2.4	-	-	V
	"LOW" Level	V <sub>OL</sub>	-	-	-	0.4	V