



**FEATURES**

- ◆ BUILT-IN CONTROLLER (ST7920 OR EQUIVALENT)
- ◆ +5 V POWER SUPPLY
- ◆ 1/16 DUTY CYCLE
- ◆ 8-BIT PARALLEL INTERFACE

**MECHANICAL DATA**

ITEM	DIMENSIONS	UNIT
Module Size (W x H x T)	66.0 x 26.0 x 8.5 ( 12.0 LED )	mm
Viewing Area ( W x H )	51.0 x 14.8	mm
Active Area ( W x H )	47.32 x 12.12	mm
Dot Size ( W x H )	0.33 x 0.34	mm
Dot Pitch ( W x H )	0.37 x 0.38	mm

**INTERFACE PIN CONNECTIONS**

NO.	SYMBOL	LEVEL	FUNCTION
1	Vss	0V	Supply Ground
2	VDD	5V	Supply Voltage
3	Vo	-	Contrast Adj.
4	RS	H/L	Register Select
5	R/W	H	Read/Write
6	E	H	Enable Signal
7-14	DB0-DB7	H/L	Data Bus Line
15	A	4.2V	LED Power (+)
16	K	0V	LED Power (-)

**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	-	12	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	4.4	4.8	5.2	V	
Supply Current	IDD	VDD=5V	-	2.5	4.5	mA	
Input Voltage	"HIGH" Level	V <sub>IH</sub>	-	2.2	-	VDD	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