



## FEATURES

- ◆ BUILT-IN CONTROLLER (RA8835)
- ◆ +5.0V POWER SUPPLY
- ◆ 1/160 DUTY CYCLE
- ◆ 8-BIT PARALLEL INTERFACE

## MECHANICAL DATA

ITEM	DIMENSIONS	UNIT
Module Size (W x H x T)	80.0 x 65.0 x 6.5(LED9.0)	mm
Viewing Area (W x H)	61.6 x 42.5	mm
Active Area (W x H)	57.59 x 38.39	mm
Dot Size (W x H)	0.23 x 0.23	mm
Dot Pitch (W x H)	0.24 x 0.24	mm

## INTERFACE PIN CONNECTIONS

NO.	SYMBOL	LEVEL	FUNCTION
1	V <sub>EE</sub>	-	Power Supply Voltage For LCD
2	V <sub>SS</sub>	0V	Power Supply Ground
3	V <sub>DD</sub>	5V	Power Supply Voltage
4	V <sub>o</sub>	-	Contrast Adjustment Voltage
5	/WR	L	Write Signal
6	/RD	L	Read Signal
7	/CS	L	Chip Signal
8	A <sub>o</sub>	H/L	Data Type Select
9	/RES	H/L	Reset Signal
10-17	DB0-DB7	H/L	Data Bus Line
18	NC	-	No Control
19	NC	-	No Control
20	B/L_ON	H	B/L Control Signal

## ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT
Supply Voltage For Logic	V <sub>DD</sub> -V <sub>SS</sub>	0	-	7	V
Supply Voltage For LCD Drive	V <sub>DD</sub> -V <sub>o</sub>	0	-	30	V
Input Voltage	V <sub>i</sub>	V <sub>SS</sub>	-	V <sub>DD</sub>	V

## ELECTRICAL CHARACTERISTICS

ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Voltage For Logic	V <sub>DD</sub> -V <sub>SS</sub>	-	4.5	5	5.5	V
LCD Supply Voltage	V <sub>DD</sub> -V <sub>o</sub>	V <sub>DD</sub> =5V Ta=25°C	17.8	18.5	19.2	V
Supply Current	I <sub>DD</sub>	V <sub>DD</sub> =5V	-	58	65	mA
Input Voltage	"HIGH" Level	V <sub>IH</sub>	-	2.2	-	V <sub>DD</sub>
	"LOW" Level	V <sub>IL</sub>	-	-	-	0.6
Output Voltage	"HIGH" Level	V <sub>OH</sub>	-	2.4	-	V
	"LOW" Level	V <sub>OL</sub>	-	-	-	0.4