



### PIN CONNECTIONS

Pin	Symbol	Level	Function
1/17	V <sub>SS</sub>	0V	GND
2/18	V <sub>DD</sub>	+5V	Power supply for logic
3/19	V <sub>O</sub>	-	No connection
4/22	A0 (CS)	H/L (H)	“H” Data, “L” Instruction code (Chip enable signal for serial mode)
5/21	R/W (SID)	H/L	“H” Read, “L” Write (Data for serial mode)
6/20	E (SCLK)	H/L	Enable signal (Serial clock)
7   14	DB0   DB7	H/L	Data bus line
15/23	LEDA	+5V	Power supply for LED backlight
16/24	LEDK	0V	

### NOTES:

- Built-in ST7920 controller
- Yellow green/blue mode optional
- 5V/3.3V power supply optional
- Parallel mode/serial mode optional

### MECHANICAL DATA

Item	Nominal Dimensions	Unit
Module Size ( W x H x T )	84.0X44.0X13.0	mm
Viewing Area ( W x H )	60.0X18.0	mm
Dot Pitch ( W x H )	0.40X0.45	mm
Dot Size ( W x H )	0.35X0.40	mm

### ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Min.	Max.	Unit
Supply Voltage (Logic)	V <sub>DD</sub> -V <sub>SS</sub>	-0.3	7.0	V
Supply Voltage (LCD)	V <sub>DD</sub> -V <sub>O</sub>	-0.3	13.5	V
Input Voltage	V <sub>I</sub>	-0.3	V <sub>DD</sub> +0.3	V
Operating Temp.	T <sub>OPR</sub>	-20	70	
Storage Temp.	T <sub>STG</sub>	-30	80	

### ELECTRICAL CHARACTERISTICS ( V<sub>DD</sub>=5.0V, Ta=25 )

Item	Symbol	Min.	Typ.	Max.	Unit
Input High Voltage	V <sub>IH</sub>	2.0	-	V <sub>DD</sub>	V
Input Low Voltage	V <sub>IL</sub>	-0.3	-	0.6	V
Output High Voltage	V <sub>OH</sub>	2.4	-	V <sub>DD</sub>	V
Output Low Voltage	V <sub>OL</sub>	0	-	0.4	V
Supply Current	I <sub>DD</sub>	-	0.4	0.8	mA
LCD Driving Voltage	V <sub>DD</sub> -V <sub>O</sub>	-	5.0	-	V

### LED BACKLIGHT SPECIFICATIONS ( Ta=25 )

Item	Forward Voltage	Forward Current
YELLOW-GREEN	4.1V	120mA
White	3.1V	15mA