

# SG12232S ( 122 DOTS X 32 DOTS )

## FEATURES

- BUILT-IN CONTROLLER (SED1520 OR EQUIVALENT)
- +5 V POWER SUPPLY
- 1/32 DUTY CYCLE
- 8-BIT PARALLEL INTERFACE

## MECHANICAL DATA

| ITEM                      | DIMENSIONS        | UNIT |
|---------------------------|-------------------|------|
| Module Size ( W x H x T ) | 66.2 x 27.2 x 8.8 | mm   |
| Viewing Area ( W x H )    | 60.5 x 18.5       | mm   |
| Active Area ( W x H )     | 53.64 x 15.64     | mm   |
| Dot Size ( W x H )        | 0.40 x 0.45       | mm   |
| Dot Pitch ( W x H )       | 0.44 x 0.49       | mm   |

## INTERFACE PIN CONNECTIONS

| NO.  | SYMBOL  | LEVEL | FUNCTION                    |
|------|---------|-------|-----------------------------|
| 1    | Ao      | H/L   | Data Type Select Signal     |
| 2    | E1      | H,H-L | Chip Select Signal For IC1  |
| 3    | E2      | H,H-L | Chip Select Signal For IC2  |
| 4    | NC      | -     | No Connection               |
| 5    | NC      | -     | No Connection               |
| 6    | R/W     | H/L   | H : Read / L : Write        |
| 7    | Vss     | 0V    | Power Supply Ground         |
| 8~15 | DB0~DB7 | H/L   | Data Bus Line               |
| 16   | VDD     | 5V    | Power Supply Voltage        |
| 17   | /RES    | L     | Register Select             |
| 18   | Vo      | -     | Contrast Adjustment Voltage |
| 19   | A       | 4.2V  | LED Power Supply ( + )      |
| 20   | K       | 0V    | LED Power Supply ( - )      |

## 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 |              | V <sub>DD</sub> -V <sub>SS</sub> | -                          | 4.5  | 5    | 5.5             | V    |
| Supply Voltage For LCD   |              | V <sub>DD</sub> -V <sub>o</sub>  | V <sub>DD</sub> =5V Ta=25. | 4.4  | 4.8  | 5.2             | V    |
| Supply Current           |              | I <sub>DD</sub>                  | V <sub>DD</sub> =5V        | -    | 2.5  | 4.5             | mA   |
| Input                    | "HIGH" Level | V <sub>IH</sub>                  | -                          | 2.2  | -    | V <sub>DD</sub> | V    |
| Voltage                  | "LOW" Level  | V <sub>IL</sub>                  | -                          | -    | -    | 0.6             | V    |
| Output                   | "HIGH" Level | V <sub>OH</sub>                  | -                          | 2.4  | -    | -               | V    |
| Voltage                  | "LOW" Level  | V <sub>OL</sub>                  | -                          | -    | -    | 0.4             | V    |

## EXTERNAL DIMENSIONS

