



# SG12232C ( 122 DOTS X 32 DOTS )

## FEATURES

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

## MECHANICAL DATA

| ITEM                      | DIMENSIONS                     | UNIT |
|---------------------------|--------------------------------|------|
| Module Size ( W x H x T ) | 85.0 x 40.0 x 8.8 ( 12.7 LED ) | 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     | Vss     | 0V    | Power Supply Ground         |
| 2     | VDD     | 5V    | Power Supply Voltage        |
| 3     | Vo      | -     | Contrast Adjustment Voltage |
| 4     | Ao      | H/L   | Data Type Select Signal     |
| 5     | CS1     | H     | Chip Select Signal For IC1  |
| 6     | CS2     | H     | Chip Select Signal For IC2  |
| 7     | CL      | H/L   | Clock Input (2 KHz)         |
| 8     | E       | H→L   | Enable Signal               |
| 9     | R/W     | H/L   | H : Read / L : Wrtie        |
| 10~17 | DB0~DB7 | H/L   | Data Bus Line               |
| 18    | /RES    | L     | Reset Signal                |
| 19    | A       | 4.2V  | LED Power (+)               |
| 20    | 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℃ | 4.4  | 4.8  | 5.2  | V    |
| Supply Current           |              | IDD     | VDD=5V        | -    | 2.5  | 4.5  | mA   |
| Input                    | "HIGH" Level | VIH     | -             | 2.2  | -    | VDD  | V    |
| Voltage                  | "LOW" Level  | VIL     | -             | -    | -    | 0.6  | V    |
| Output                   | "HIGH" Level | VOH     | -             | 2.4  | -    | -    | V    |
| Voltage                  | "LOW" Level  | VOL     | -             | -    | -    | 0.4  | V    |

## EXTERNAL DIMENSIONS

