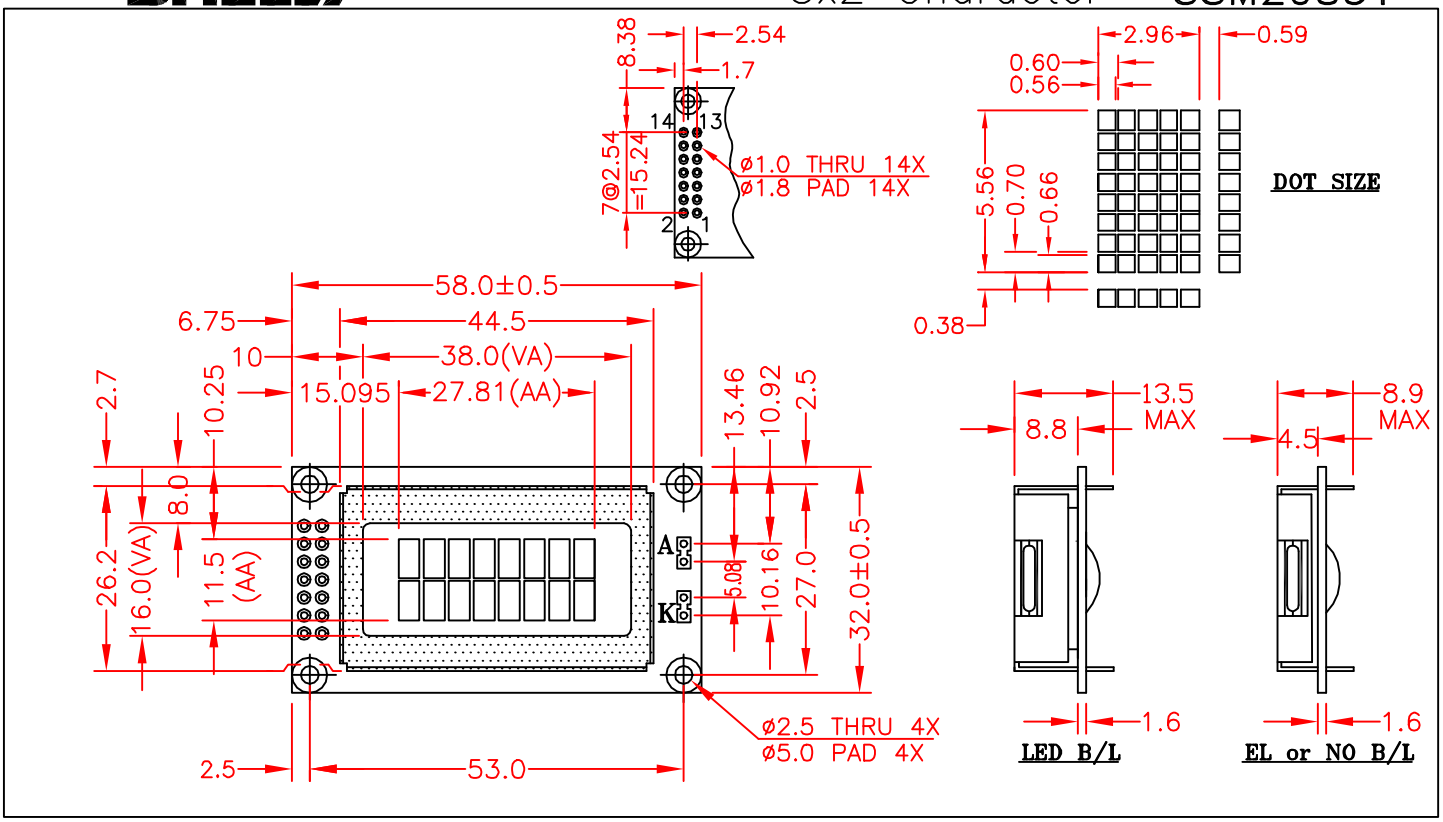
SHELLY

# 8x2 Character SSM20831




## Feature

1. 5x8 dots with cursor
2. Built-in controller (KS0066 or Equivalent)
3. +5V power supply
4. 1/16 duty cycle
5. LED to be driven by pin1, pin2, or A and K

## Pin Assignment

| Pin# | Symbol | Function |
|---|---|---|
| 1 | Vss | GND |
| 2 | Vdd | +5V |
| 3 | Vo | Contrast Adjustment |
| 4 | RS | H/L Register select signal |
| 5 | R/$\overline{W}$ | H/L Read/write signal |
| 6 | E | H→L Enable signal |
| 7 | DB0 | Data bus line |
| 8 | DB1 | Data bus line |
| 9 | DB2 | Data bus line |
| 10 | DB3 | Data bus line |
| 11 | DB4 | Data bus line |
| 12 | DB5 | Data bus line |
| 13 | DB6 | Data bus line |
| 14 | DB7 | Data bus line |

## Display Character Address Code

| Display position | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| DD RAM Address | 00 | 01 | | | | | | 07 |
| DD RAM Address | 40 | 41 | | | | | | 47 |

## Mechanical Data

| Item | Standard Value | Unit |
|---|---|---|
| Module Dimension | 58.0 x 32.0 | mm |
| Viewing Area | 38.0 x 16.0 | mm |
| Dot Size | 0.56 x 0.66 | mm |
| Character Size | 2.96 x 5.56 | mm |

## Absolute Maximum Rating

| Item | Symbol | Standard Value | | | Unit |
|---|---|---|---|---|---|
| | | min. | typ. | max. | |
| Power Supply | VDD-VSS | -0.3 | -- | 7.0 | V |
| Input Voltage | VI | -0.3 | -- | VDD | V |

Note: VSS=0 Volt, VDD=5.0 Volt.

## Electronical Characteristics

| Item | Symbol | Condition | Standard Value | | | Unit |
|---|---|---|---|---|---|---|
| | | | min. | typ. | max. | |
| Input Voltage | VDD | VDD=+5V | 4.7 | 5.0 | 5.3 | V |
| Supply Current | IDD | VDD=+5V | -- | 1.5 | 1.7 | mA |
| Recommended LC Driving Voltage for Normal Temp. Version module | VDD-VO | -20°C | 4.9 | 5.2 | 5.5 | V |
| | | 0°c | 4.5 | 4.8 | 5.1 | |
| | | 25°C | 4.1 | 4.4 | 4.7 | |
| | | 50°C | 3.8 | 4.2 | 4.4 | |
| | | 70°C | 3.5 | 4.0 | 4.1 | |
| LED Forward Voltage | VF | 25°C | -- | 4.2 | 4.6 | V |
| LED Forward Current | IF | 25°C | -- | 70 | 140 | mA |
| EL Power Supply Current | IEL | Vel=110VAC;400Hz | -- | -- | 5.0 | mA |

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