

**WINSTAR Display**

# **OLED SPECIFICATION**

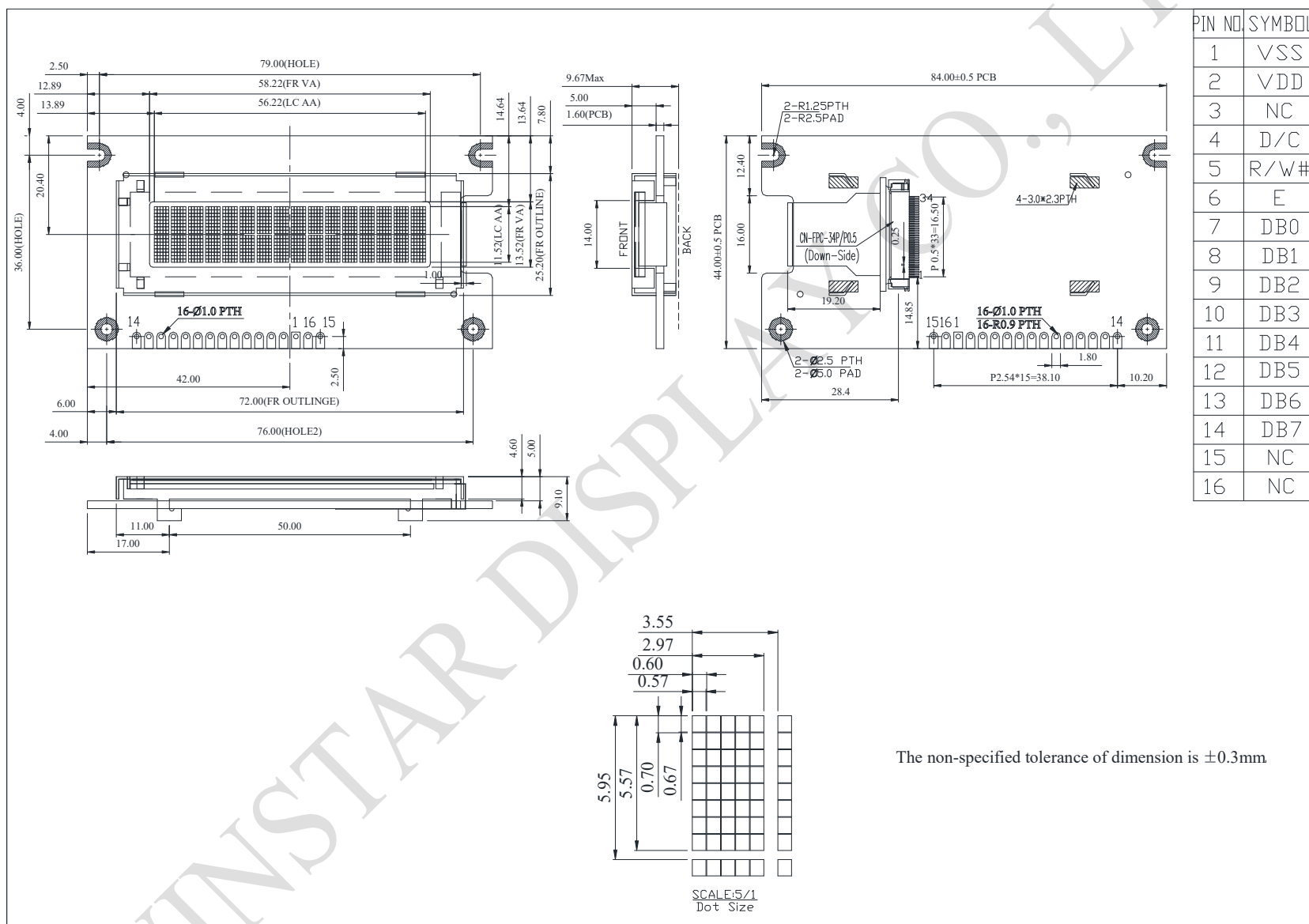
Model No:

***WEO001602G***

## General Specification

| Item                 | Dimension               | Unit |
|----------------------|-------------------------|------|
| Number of Characters | 16 characters x 2 Lines | —    |
| Module dimension     | 84.0 x 44.0 x 9.67      | mm   |
| View area            | 58.22 x 13.52           | mm   |
| Active area          | 56.22 x 11.52           | mm   |
| Dot size             | 0.57 x 0.67             | mm   |
| Dot pitch            | 0.60 x 0.70             | mm   |
| Character size       | 2.97 x 5.57             | mm   |
| Character pitch      | 3.55 x 5.95             | mm   |
| Panel type           | OLED , Monochrome       |      |
| Duty                 | 1/16                    |      |
| IC                   | SSD1311                 |      |
| Interface            | 6800, 8080, SPI, I2C    |      |
| Size                 | 2.26 inch               |      |

# Contour Drawing & Block Diagram



## Interface Pin Function

| Pin No. | Symbol   | Pin Type | Description                                                                                                                                                                                                                                                          |
|---------|----------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | VSS      | P        | Ground pin.                                                                                                                                                                                                                                                          |
| 2       | VDD      | P        | Power supply for core logic operation.<br>A capacitor should be connected between VDD and VSS under all circumstances.                                                                                                                                               |
| 3       | NC       |          | No connection                                                                                                                                                                                                                                                        |
| 4       | D/C#     | I        | This pin is Data/Command control pin connecting to the MCU.<br>When the pin is pulled HIGH, the data at D[7:0] will be interpreted as data.<br>When the pin is pulled LOW, the data at D[7:0] will be transferred to a command register.                             |
| 5       | R/W#     | I        | This pin is read / write control input pin connecting to the MCU interface.<br>When 6800 interface mode is selected, this pin will be used as Read/Write (R/W#) selection input. Read mode will be carried out when this pin is pulled HIGH and write mode when LOW. |
| 6       | E        | I        | This pin is MCU interface input.<br>When 6800 interface mode is selected, this pin will be used as the Enable (E) signal.<br>Read/write operation is initiated when this pin is pulled HIGH and the chip is selected.                                                |
| 7~14    | DB0~ DB7 | I/O      | These pins are bi-directional data bus connecting to the MCU data bus.<br>Unused pins are recommended to tie LOW.                                                                                                                                                    |
| 15      | NC       |          | No connection                                                                                                                                                                                                                                                        |
| 16      | NC       |          | No connection                                                                                                                                                                                                                                                        |

## Absolute Maximum Ratings

| Item                     | Symbol  | Min  | Max | Unit |
|--------------------------|---------|------|-----|------|
| Input Voltage            | $V_I$   | -0.3 | VDD | V    |
| Supply Voltage For Logic | VDD-VSS | -0.3 | 6.0 | V    |
| Operating Temperature    | TOP     | -40  | +80 | °C   |
| Storage Temperature      | TST     | -40  | +85 | °C   |

## Electrical Characteristics

| Item                              | Symbol   | Condition         | Min              | Typ | Max              | Unit |
|-----------------------------------|----------|-------------------|------------------|-----|------------------|------|
| Supply Voltage For Logic          | VDD      | —                 | 4.8              | 5.0 | 5.3              | V    |
| Input High Volt.                  | $V_{IH}$ | —                 | $0.8 \times VDD$ | —   | —                | V    |
| Input Low Volt.                   | $V_{IL}$ | —                 | —                | —   | $0.2 \times VDD$ | V    |
| Output High Volt.                 | $V_{OH}$ | $I_{OH} = -0.5mA$ | $0.9 \times VDD$ | —   | —                | V    |
| Output Low Volt.                  | $V_{OL}$ | $I_{OL} = 0.5mA$  | —                | —   | $0.1 \times VDD$ | V    |
| 50% Check Board Operating Current | IDD      | VDD=5.0V          | 43               | 50  | 52               | mA   |