

**WINSTAR Display**

# **OLED SPECIFICATION**

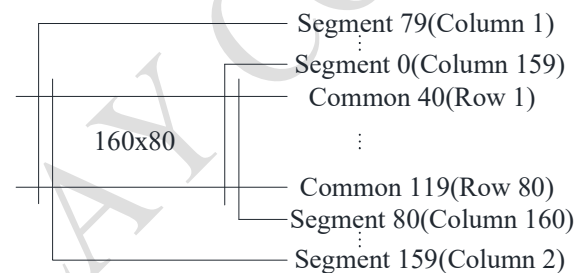
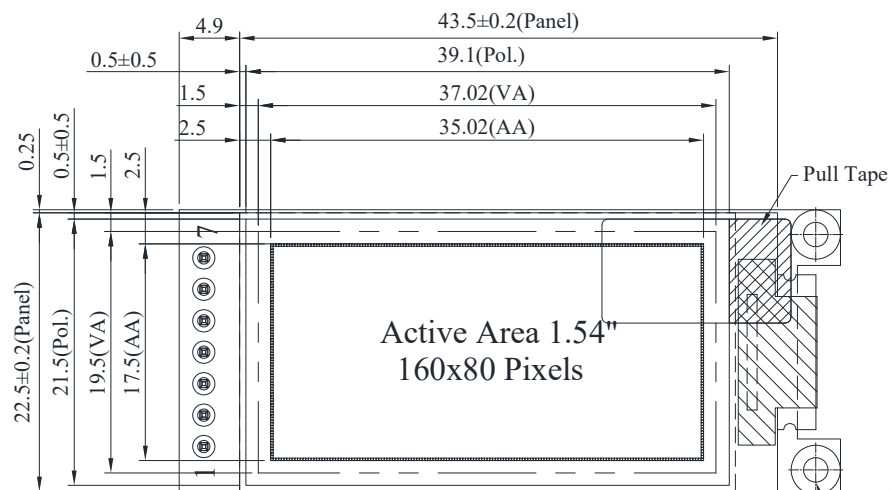
Model No:

**WEA016080A**

## General Specification

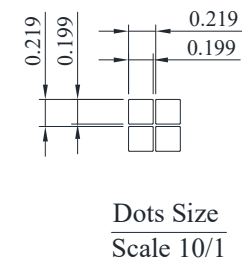
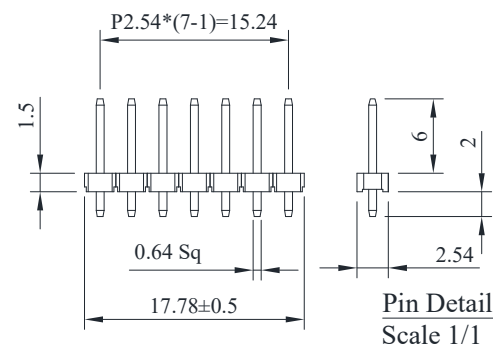
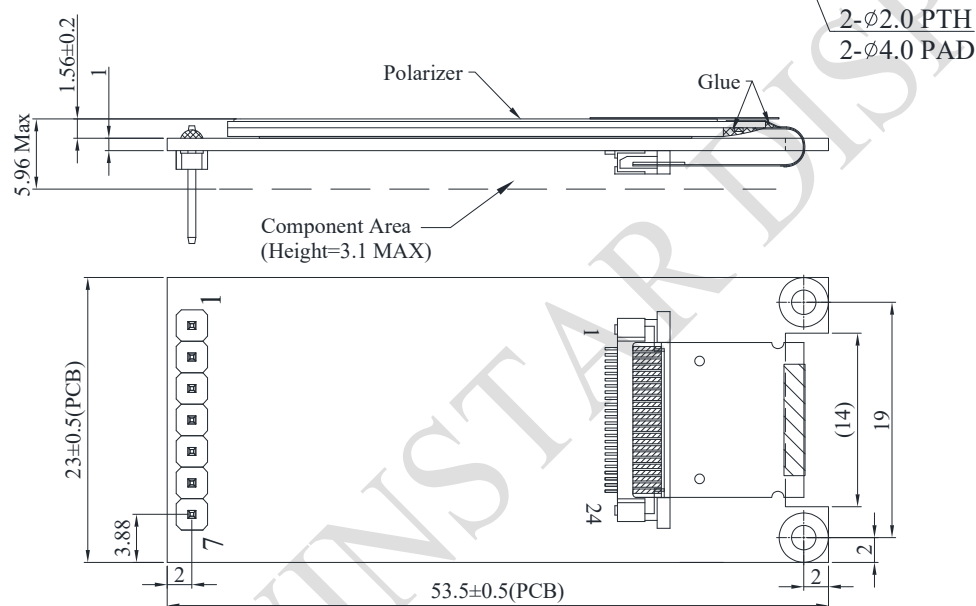
| Item             | Dimension               | Unit |
|------------------|-------------------------|------|
| Dot Matrix       | 160 x 80 Dots           | —    |
| Module dimension | 43.5 x 22.5 x 5.96 Max. | mm   |
| Active Area      | 35.02 x 17.50           | mm   |
| Pixel Size       | 0.199 x 0.199           | mm   |
| Pixel Pitch      | 0.219 x 0.219           | mm   |
| Display Mode     | Passive Matrix          |      |
| Display Color    | Monochrome              |      |
| Drive Duty       | 1/80 Duty               |      |
| Gray Scale       | 4 bits                  |      |
| IC               | SSD1320                 |      |
| Interface        | 4-Wire SPI              |      |
| Size             | 1.54 inch               |      |

# Contour Drawing & Block Diagram



| PIN | SYMBOL |
|-----|--------|
| 1   | GND    |
| 2   | VCC    |
| 3   | D0     |
| 4   | D1     |
| 5   | RES#   |
| 6   | D/C#   |
| 7   | CS#    |

Com & Seg layout



The non-specified tolerance of dimension is ±0.3mm.

## Interface Pin Function

| No. | Symbol | Function                                                                                                                                                                                      |
|-----|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | GND    | Ground pin.                                                                                                                                                                                   |
| 2   | VCC    | <b>Power Supply for OEL Panel</b><br>This is the most positive voltage supply pin of the chip. It must be connected to external source.                                                       |
| 3   | D0     | The serial clock input                                                                                                                                                                        |
| 4   | D1     | The serial data input                                                                                                                                                                         |
| 5   | RES#   | <b>Power Reset for Controller and Driver</b><br>This pin is reset signal input. When the pin is low, initialization of the chip is executed. Keep this pin pull high during normal operation. |
| 6   | D/C#   | <b>Data/Command Control</b><br>This pin is Data/Command control pin.                                                                                                                          |
| 7   | CS#    | <b>Chip Select</b><br>This pin is the chip select input. The chip is enabled for MCU communication only when CS# is pulled low.                                                               |

## Absolute Maximum Ratings

| Parameter                  | Symbol | Min  | Typ. | Max | Unit |
|----------------------------|--------|------|------|-----|------|
| Supply Voltage for Display | VCC    | -0.3 | —    | 5.5 | V    |
| Operating Temperature      | TOP    | -40  | —    | +80 | °C   |
| Storage Temperature        | TSTG   | -40  | —    | +85 | °C   |

## Electrical Characteristics

### DC Electrical Characteristics

| Item                     | Symbol | Condition | Min     | Typ | Max     | Unit |
|--------------------------|--------|-----------|---------|-----|---------|------|
| Supply Voltage for Logic | VCC    | —         | 2.8     | 3.0 | 5.2     | V    |
| High Level Input         | VIH    | —         | 0.8×VCC | —   | VCC     | V    |
| Low Level Input          | VIL    | —         | 0       | —   | 0.2×VCC | V    |
| High Level Output        | VOH    | —         | 0.9×VCC | —   | VCC     | V    |
| Low Level Output         | VOL    | —         | 0       | —   | 0.1×VCC | V    |
| Display 50% Pixel on     | ICC    | VCC =3V   | —       | 110 | 220     | mA   |