# SPECIFICATION

**CUSTOMER :** _____

**MODULE NO.:** WF70-800480A2816D#003-FC

## General Specifications

| Item | Dimension | Unit |
|---|---|---|
| Size | 7.0 | inch |
| Dot Matrix | 800 x RGB x 480 (TFT) | dots |
| Module dimension | 165 x 100.0x 13.67 | mm |
| Active area | 154.08 x 85.92 | mm |
| Pixel Pitch | 0.1926 X 0.179 | mm |
| LCD type | TFT, Normally White, Transmissive | |
| Controller IC | SSD1963 | |
| Interface | Digital 8080 family MPU 8bit/16bit | |
| View Direction | 12 o'clock | |
| Gray Scale Inversion Direction | 6 o'clock | |
| Aspect Ratio | 16:9 | |
| Backlight Type | LED ,Normally White | |
| Color arrangement | RGB-STRIPE | |
| CTP IC | FT5426 or Equivalent | |
| CTP Interface | I2C | |
| CTP FW Version: | V03 | |
| With /Without TP | With CTP | |
| Surface | Glare | |

# Absolute Maximum Ratings

| Item | Symbol | Min | Typ | Max | Unit |
|---|---|---|---|---|---|
| Operating Temperature | TOP | -20 | — | +70 | ℃ |
| Storage Temperature | TST | -30 | — | +80 | ℃ |

Note: Device is subject to be damaged permanently if stresses beyond those absolute maximum ratings listed above

1. Temp. ≦60℃, 90% RH MAX. Temp.＞60℃, Absolute humidity shall be less than 90% RH at 60℃

# Electrical Characteristics

**1. Operating conditions: (CON2.Pin1=GND, Pin2=VDD)**

| Item | Symbol | Condition | Min | Typ | Max | Unit | Remark |
|---|---|---|---|---|---|---|---|
| Supply Voltage For LCM | VDD | — | 3.0 | 3.1 | 3.3 | V | — |
| Supply Current For LCM | IDD | — | — | 150 | 225 | mA | Note1 |

Note 1 : This value is test for VDD=3.3V , Ta=25℃ only

**2. Backlight driving conditions (CON2.Pin33,34=VLED-, Pin35,36=VLED+)**

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Remark |
|---|---|---|---|---|---|---|
| Operation Current For LED Driver | VLED=5V | 400 | — | 600 | mA | Note 1,2 |
| Power Consumption | VLED=5V | 2000 | — | 3000 | mW | Note 1,2 |
| Supply Voltage For LED Driver | VLED+ | — | 5 | — | V | — |
| LED Life Time | — | — | 50,000 | — | Hr | Note 2,3,4 |

Note 1 : Base on VLED= 5V for the back light driver IC specification
Note 2 : Ta = 25 ℃
Note 3 : Brightness to be decreased to 50% of the initial value
Note 4 : The single LED lamp case

# Interface

## 1. LCM PIN Definition (CON2)

| Pin | Symbol | Function | Remark |
|---|---|---|---|
| 1 | GND | System ground pin of the IC .Connect to system ground. | |
| 2 | VDD | Power Supply : +3.3V | |
| 3 | BLE | Backlight control signal , H: On \ L: Off | |
| 4 | D/C | Data/Command select | |
| 5 | WR | Write strobe signal | |
| 6 | RD | Read strobe signal | |
| 7 | DB0 | Data bus | |
| 8 | DB1 | Data bus | |
| 9 | DB2 | Data bus | |
| 10 | DB3 | Data bus | |
| 11 | DB4 | Data bus | |
| 12 | DB5 | Data bus | |
| 13 | DB6 | Data bus | |
| 14 | DB7 | Data bus | |
| 15 | DB8 | Data bus (When select 8bits Mode, this pin is NC) | Note1 |
| 16 | DB9 | Data bus (When select 8bits Mode, this pin is NC) | Note1 |
| 17 | DB10 | Data bus (When select 8bits Mode, this pin is NC) | Note1 |
| 18 | DB11 | Data bus (When select 8bits Mode, this pin is NC) | Note1 |
| 19 | DB12 | Data bus (When select 8bits Mode, this pin is NC) | Note1 |
| 20 | DB13 | Data bus (When select 8bits Mode, this pin is NC) | Note1 |
| 21 | DB14 | Data bus (When select 8bits Mode, this pin is NC) | Note1 |
| 22 | DB15 | Data bus (When select 8bits Mode, this pin is NC) | Note1 |
| 23 | NC | No connect | |
| 24 | CTP_INT | CTP_ External interrupt to the host | |
| 25 | CS | Chip select | |
| 26 | RST | Hardware reset | |
| 27 | L/R | Left / right selection; Default L/R=H | Note 2,3 |
| 28 | U/D | Up/down selection; ; Default U/D=L | Note 2,3 |
| 29 | CTP_SCL | CTP_SPI Slave mode, chip select, active low / I2C clock input | |
| 30 | CTP_SDA | CTP_ SPI Slave mode, data input / I2C data input and output | |

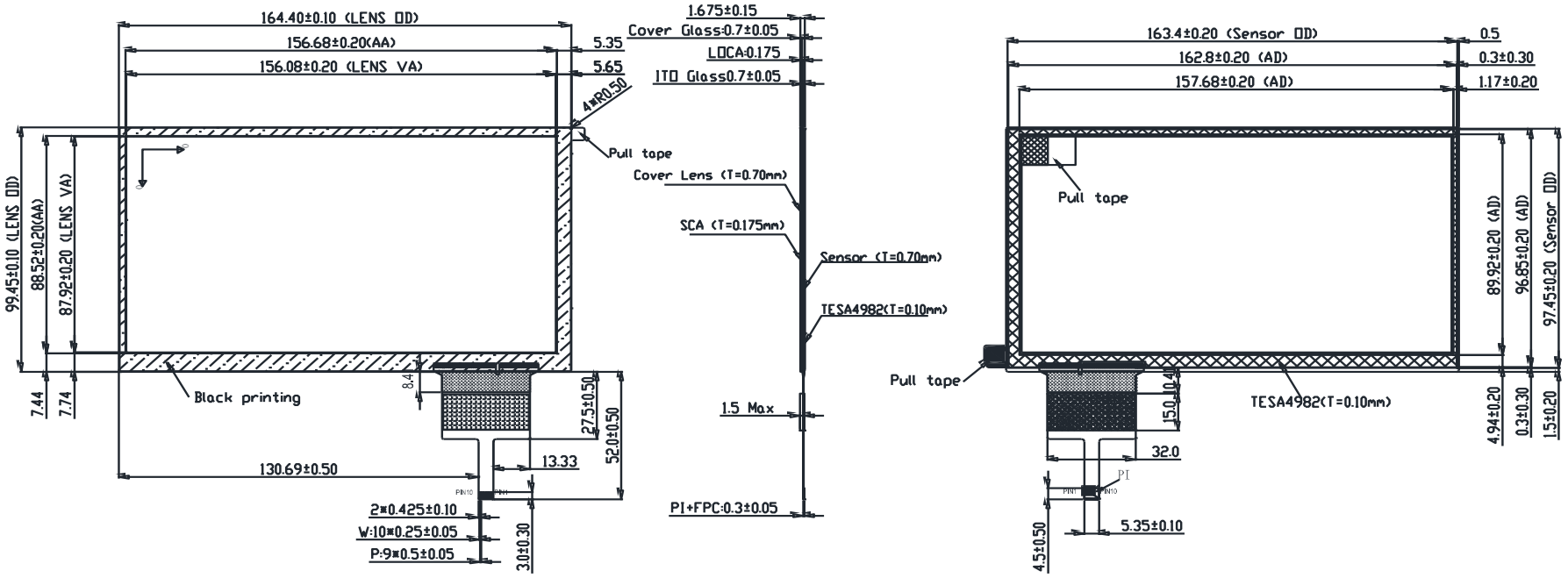
| | | | |
|---|---|---|---|
| 31 | CTP_RST | CTP_ External Reset, Low is active | |
| 32 | NC | No connect | |
| 33 | VLED- | Power for LED Driver IC(GND) | |
| 34 | VLED- | Power for LED Driver IC(GND) | |
| 35 | VLED+ | Power for LED Driver IC(+5V) | |
| 36 | VLED+ | Power for LED Driver IC(+5V) | |

Note1: When select 8bit mode, DB0~DB7 be used, DB8~DB15 no connect
When select 16bit mode, DB0~DB15 be used

Note 2: Selection of scanning mode

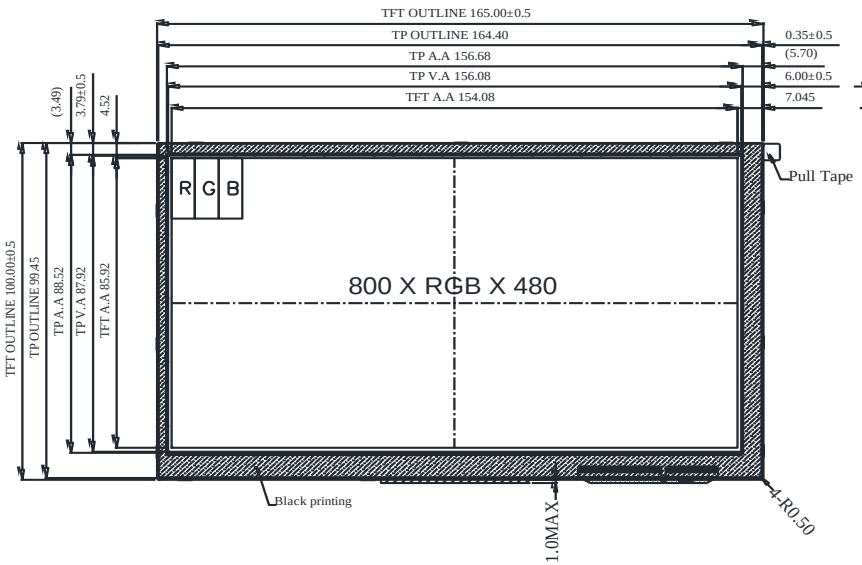
| Setting of scan control input | | Scanning direction |
|---|---|---|
| U/D | L/R | |
| GND | VDD | Up to down, left to right |
| VDD | GND | Down to up, right to left |
| GND | GND | Up to down, right to left |
| VDD | VDD | Down to up, left to right |

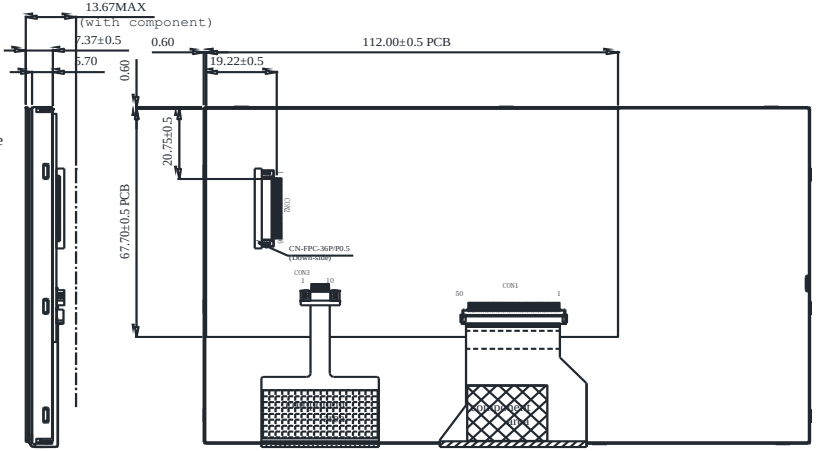
# Touch Panel Information




| PIN | Logic | PIN | Logic |
|---|---|---|---|
| 1 | VSS | 6 | NC |
| 2 | VDDT | 7 | RST |
| 3 | SCL | 8 | NC |
| 4 | NC | 9 | INT |
| 5 | SDA | 10 | VSS |

# Contour Drawing




| Pin | Symbol |
|---|---|
| 1 | GND |
| 2 | VDD |
| 3 | BLE |
| 4 | D/C |
| 5 | WR |
| 6 | RD |
| 7 | DB0 |
| 8 | DB1 |
| 9 | DB2 |
| 10 | DB3 |
| 11 | DB4 |
| 12 | DB5 |
| 13 | DB6 |
| 14 | DB7 |
| 15 | DB8 |
| 16 | DB9 |
| 17 | DB10 |
| 18 | DB11 |
| 19 | DB12 |
| 20 | DB13 |
| 21 | DB14 |
| 22 | DB15 |
| 23 | NC |
| 24 | CTP_INT |
| 25 | CS |
| 26 | RST |
| 27 | L/R |
| 28 | U/D |
| 29 | CTP_SCL |
| 30 | CTP_SDA |
| 31 | CTP_RST |
| 32 | NC |
| 33 | VLED- |
| 34 | VLED- |
| 35 | VLED+ |
| 36 | VLED+ |

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