**Winstar Display Co., LTD**
**華凌光電股份有限公司**
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# SPECIFICATION

**CUSTOMER :** _____

**MODULE NO.:** WF70-800480B2D#0S0-FC

| **APPROVED BY:**<br>**( FOR CUSTOMER USE ONLY )** | **PCB VERSION:** **DATA:** |
|---|---|

| **SALES BY** | **APPROVED BY** | **CHECKED BY** | **PREPARED BY** |
|---|---|---|---|
| first FC components | | | 葉虹蘭 |
| **ISSUED DATE:** **2020/09/22** | | | |

TFT Display Inspection Specification: https://www.winstar.com.tw/technology/download.html
Precaution in use of TFT module: https://www.winstar.com.tw/technology/download/declaration.html

# 3.General Specifications

| Item | Dimension | Unit |
|---|---|---|
| Size | 7.0 | inch |
| Dot Matrix | 800 x RGB x 480 (TFT) | dots |
| Module dimension | 165 x 100.0x 5.75 | mm |
| Active area | 154.08 x 85.92 | mm |
| Pixel Pitch | 0.1926 X 0.179 | mm |
| LCD type | TFT, Normally White, Transmissive | |
| View Direction | 12 o'clock | |
| Gray Scale Inversion Direction | 6 o'clock | |
| Aspect Ratio | 16:9 | |
| Backlight Type | LED ,Normally White | |
| TFT Interface | 24 bit RGB | |
| Color arrangement | RGB-STRIPE | |
| Driver IC | HX8264-E&HX8664-B or Equivalent | |
| With /Without TP | Without TP | |
| Surface | Anti-Glare | |

*Color tone slight changed by temperature and driving voltage.

# 4.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℃

# 9.Interface

### 9.1. LCM PIN Definition

| Pin | Symbol | Function | Remark |
|---|---|---|---|
| 1 | VLED- | Backlight ground | |
| 2 | VLED+ | Power supply for backlight | |
| 3 | GND | Power ground | |
| 4 | VCC | Power for Digital Circuit | |
| 5 | R0 | Red data(LSB) | Note 2 |
| 6 | R1 | Red data | Note 2 |
| 7 | R2 | Red data | |
| 8 | R3 | Red data | |
| 9 | R4 | Red data | |
| 10 | R5 | Red data | |
| 11 | R6 | Red data | |
| 12 | R7 | Red data(MSB) | |
| 13 | G0 | Green data(LSB) | Note 2 |
| 14 | G1 | Green data | Note 2 |
| 15 | G2 | Green data | |
| 16 | G3 | Green data | |
| 17 | G4 | Green data | |
| 18 | G5 | Green data | |
| 19 | G6 | Green data | |
| 20 | G7 | Green data(MSB) | |
| 21 | B0 | Blue data(LSB) | Note 2 |
| 22 | B1 | Blue data | Note 2 |
| 23 | B2 | Blue data | |
| 24 | B3 | Blue data | |
| 25 | B4 | Blue data | |
| 26 | B5 | Blue data | |
| 27 | B6 | Blue data | |
| 28 | B7 | Blue data(MSB) | |
| 29 | GND | Power Ground | |
| 30 | CLK | Sample clock | Note 3 |
| 31 | R/L | Right / Left selection | Note 4 |
| 32 | Hsync | Horizontal Sync Input | |

| | | | |
|---|---|---|---|
| 33 | Vsync | Vertical Sync Input | |
| 34 | NC | No connection | |
| 35 | U/D | Up/down selection | |
| 36 | RESET | Global reset pin. | Note 6 |
| 37-40 | NC | No connection | |

I: input, O: output, P: Power

Note 1: When select DE mode, MODE=”1”, VS and HS must pull high.
When select SYNC mode, MODE= ”0”, DE must be grounded.

Note 2: When input 18 bits RGB data, the two low bits of R,G and B data must be grounded.

Note 3: Data shall be latched at the falling edge of DCLK.

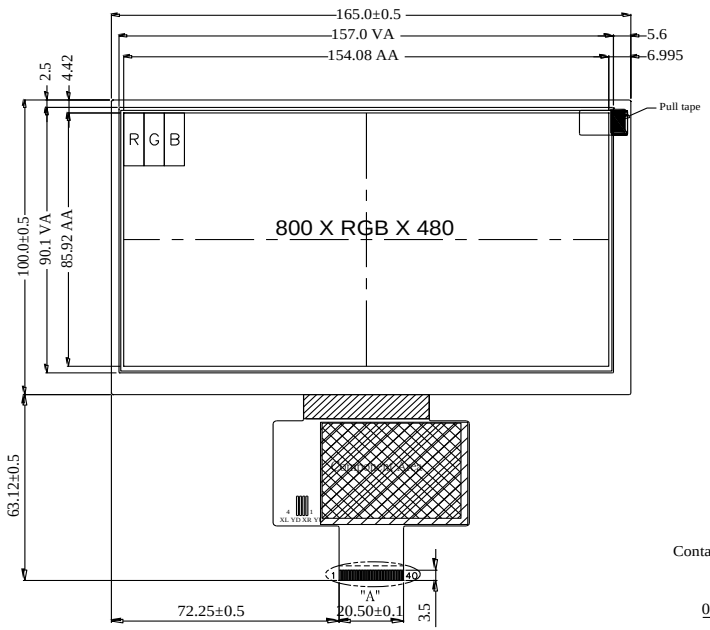
Note 4: Source Right or Left sequence control
R/L =”L”, shift left: last data=S1←S2←S3…←S1200=first data
R/L =”H”, shift left: last data=S1←S2←S3…←S1200=last data

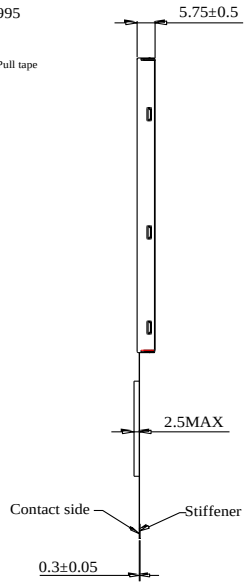
Note 5: Gate Up or Down scan control
U/D=”L”, STV2 output vertical start pulse and UD pin output logical “0” to gate driver
U/D=”H”, STV1 output vertical start pulse and UD pin output logical “1” to gate driver

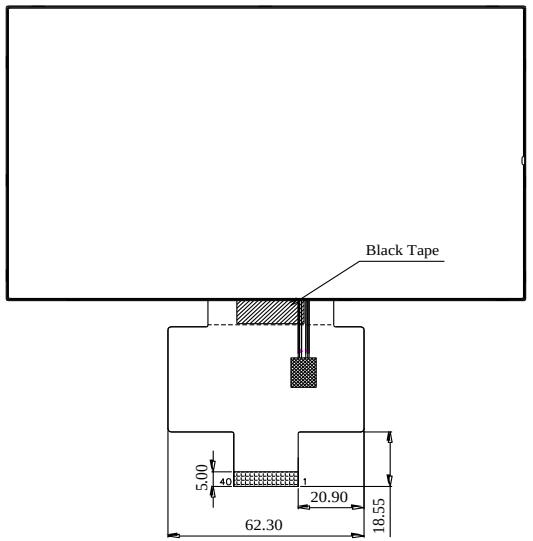
Note 6: Global reset pin. Active low to enter reset state . Suggest to connect with an RC reset circuit for stability. Normally pull high.

Note 7: Dithering function enable control, normally pull high.
When DITHB=”1”, Disable internal dithering function,
When DITHB=”0”, Enable internal dithering function,

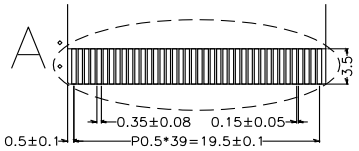
# 12.Contour Drawing




| PIN NO. | SYMBOL |
|---|---|
| 1 | VLED- |
| 2 | VLED+ |
| 3 | GND |
| 4 | VCC |
| 5 | R0 |
| 6 | R1 |
| 7 | R2 |
| 8 | R3 |
| 9 | R4 |
| 10 | R5 |
| 11 | R6 |
| 12 | R7 |
| 13 | G0 |
| 14 | G1 |
| 15 | G2 |
| 16 | G3 |
| 17 | G4 |
| 18 | G5 |
| 19 | G6 |
| 20 | G7 |
| 21 | B0 |
| 22 | B1 |
| 23 | B2 |
| 24 | B3 |
| 25 | B4 |
| 26 | B5 |
| 27 | B6 |
| 28 | B7 |
| 29 | GND |
| 30 | CLK |
| 31 | R/L |
| 32 | Hsync |
| 33 | Vsync |
| 34 | NC |
| 35 | U/D |
| 36 | RESET |
| 37 | NC |
| 38 | NC |
| 39 | NC |
| 40 | NC |




DETAIL A
SCALE 4/1

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