



WINSTAR Display Co.,Ltd.
華凌光電股份有限公司



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SPECIFICATION

MODULE NO.: WF70A8TYAHLNGB#

General Specifications

| Item | Dimension | Unit |
|------------------|--|------|
| Size | 7.0 | inch |
| Dot Matrix | 1024 x RGB x 600(TFT) | dots |
| Module dimension | 169.9(W) x 103.4(H) x 7.3(D) | mm |
| Active area | 154.2144 x 85.92 | mm |
| Pixel pitch | 0.1506 x 0.1432 | mm |
| LCD type | TFT, Normally Black, Transmissive | |
| Viewing Angle | 85/85/85/85 | |
| TFT Interface | LVDS | |
| Aspect Ratio | 16:9 | |
| Driver IC | ST5021 + ST5651 or equivalent | |
| Backlight Type | LED, Normally White | |
| PCAP IC | ILI2130 or Equivalent | |
| PCAP Interface | I2C | |
| PCAP FW Version | 0x07.0x00.0x00.0x00.0x65.0x90.0x00.0x01 | |
| Touch Panel | Projected capacitive touch screen (PCAP) | |
| Surface | Glare | |

*Color tone slight changed by temperature and driving voltage.

Absolute Maximum Ratings

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

Electrical Characteristics

Typical Operation Conditions

| Item | Symbol | Values | | | Unit |
|----------------------|------------------|--------|------|------|------|
| | | Min. | Typ. | Max. | |
| Power voltage | VDD | 3.0 | 3.3 | 3.6 | V |
| Supply PCAP | VDDT | 3.0 | 3.3 | 3.6 | V |
| | I _{CTP} | — | 65 | 98 | mA |
| Analog Power | AVDD | 8.9 | 9.0 | 9.1 | V |
| TFT Gate ON Voltage | VGH | 17 | 18 | 19 | V |
| TFT Gate OFF Voltage | VGL | -6.5 | -6.0 | -5.5 | V |
| TFT Common Voltage | V _{com} | 3.0 | 3.15 | 3.3 | V |
| Current for Driver | IDD | - | 14 | 21 | mA |
| Power Current | IAVDD | - | 25 | - | mA |
| TFT Gate ON Current | IVGH | - | 1 | - | mA |
| TFT Gate OFF Current | IVGL | - | 1 | - | mA |
| TFT Common Current | IVCOM | - | 1 | - | mA |

Interface

1. LCM PIN Definition

| Pin No. | Symbol | I/O | Function |
|---------|----------|-----|---|
| 1 | VCOM | P | Common Voltage |
| 2 | VDD | P | Digital circuit |
| 3 | VDD | P | Digital circuit |
| 4 | NC | --- | No connection |
| 5 | RESET | I | Global reset pin |
| 6 | STBYB | I | Standby mode, Normally pulled high STBYB = "1", normal operation STBYB = "0", timing controller, source driver will turn off, all output are High-Z |
| 7 | GND | P | Ground |
| 8 | RXIN0- | I | Negative LVDS differential data input |
| 9 | RXIN0+ | I | Positive LVDS differential data input |
| 10 | GND | P | Ground |
| 11 | RXIN1- | I | Negative LVDS differential data input |
| 12 | RXIN1+ | I | Positive LVDS differential data input |
| 13 | GND | P | Ground |
| 14 | RXIN2- | I | Negative LVDS differential data input |
| 15 | RXIN2+ | I | Positive LVDS differential data input |
| 16 | GND | P | Ground |
| 17 | RXCLKIN- | I | Negative LVDS differential clock input |
| 18 | RXCLKIN+ | I | Positive LVDS differential clock input |
| 19 | GND | P | Ground |
| 20 | RXIN3- | I | Negative LVDS differential data input |
| 21 | RXIN3+ | I | Positive LVDS differential data input |
| 22 | GND | P | Ground |
| 23 | NC | --- | No connection |
| 24 | NC | --- | No connection |
| 25 | GND | P | Ground |
| 26 | NC | --- | No connection |
| 27 | NC | --- | No connection |
| 28 | SELB | I | 6bit/8bit mode select H:6bit / L:8bit |

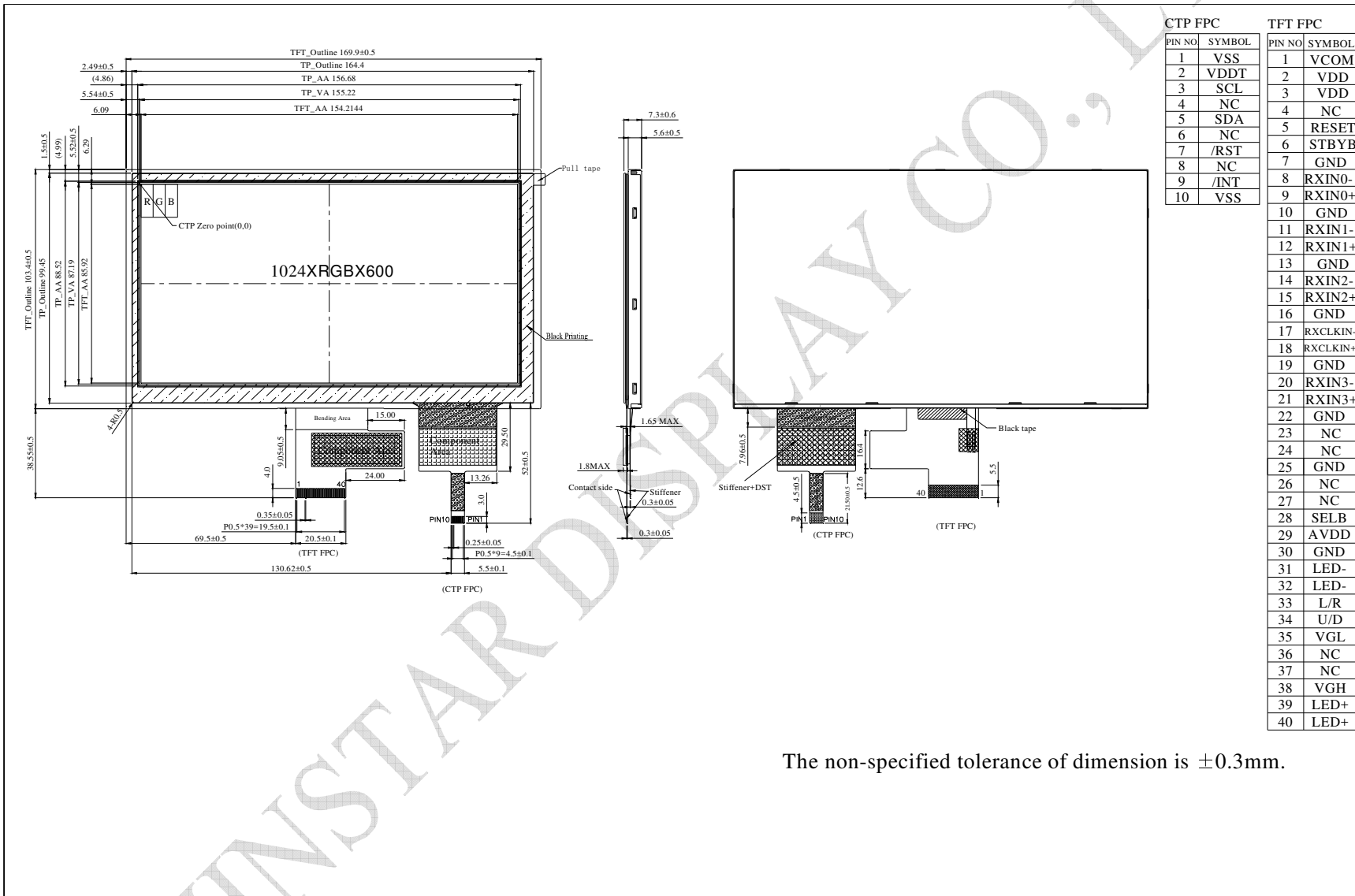
| | | | |
|----|------|-----|--------------------------|
| 29 | AVDD | P | Power for Analog Circuit |
| 30 | GND | P | Ground |
| 31 | LED- | P | LED Cathode |
| 32 | LED- | P | LED Cathode |
| 33 | L/R | I | Horizontal inversion |
| 34 | U/D | I | Vertical inversion |
| 35 | VGL | P | Negative power for TFT |
| 36 | NC | --- | No connection |
| 37 | NC | --- | No connection |
| 38 | VGH | P | Positive power for TFT |
| 39 | LED+ | P | LED Anode |
| 40 | LED+ | P | LED Anode |

I:input ,O:output,P:power

2. PCAP PIN Definition

| Pin | Symbol | Function |
|-----|--------|--------------------------------|
| 1 | VSS | Ground for analog circuit |
| 2 | VDDT | Power Supply : +3.3V |
| 3 | SCL | I2C clock input |
| 4 | NC | No connect |
| 5 | SDA | I2C data input and output |
| 6 | NC | No connect |
| 7 | /RST | External Reset, Low is active |
| 8 | NC | No connect |
| 9 | /INT | External interrupt to the host |
| 10 | VSS | Ground for analog circuit |

Contour Drawing



The non-specified tolerance of dimension is $\pm 0.3\text{mm}$.