# TFT DISPLAY SPECIFICATION




WINSTAR Display Co.,Ltd.

華凌光電股份有限公司

# SPECIFICATION

## MODULE NO.: WF35XSYACDNT0#

# General Specifications

| Item | Dimension | Unit |
|---|---|---|
| Size | 3.5 | inch |
| Dot Matrix | 320 x RGB x 240(TFT) | dots |
| Module dimension | 76.84(W) x 63.84(H) x 4.37(D) | mm |
| Active area | 70.08 x 52.56 | mm |
| Pixel pitch | 0.219 x 0.219 | mm |
| LCD type | TFT, normally black, Transmissive | |
| View Direction | 80/80/80/80 | |
| Driver IC | ST7272A or equivalent | |
| Interface | 24-bit RGB | |
| Aspect Ratio | 4:3 | |
| Backlight Type | LED, Normally White | |
| Touch Panel | Resistive Touch Panel | |
| Surface | Anti-Glare | |

*Color tone slight changed by temperature and driving voltage.

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# Absolute Maximum Ratings

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

# Electrical Characteristics

**1. Operating conditions:**

| Item | Symbol | Min | Typ | Max | Unit |
|---|---|---|---|---|---|
| Supply Voltage For LCM | VCC | 3.0 | 3.3 | 3.6 | V |
| Supply Current For LCM | ICC | — | 20 | 30 | mA |

**2. LED driving conditions**

| Parameter | Symbol | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|
| LED current | | - | 40 | - | mA |
| Power Consumption | | 540 | 600 | 660 | mW |
| LED voltage | LED+ | 13.5 | 15 | 16.5 | V |
| LED Life Time | | - | 50,000 | - | Hr |

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# Interface

**1. LCM PIN Definition**

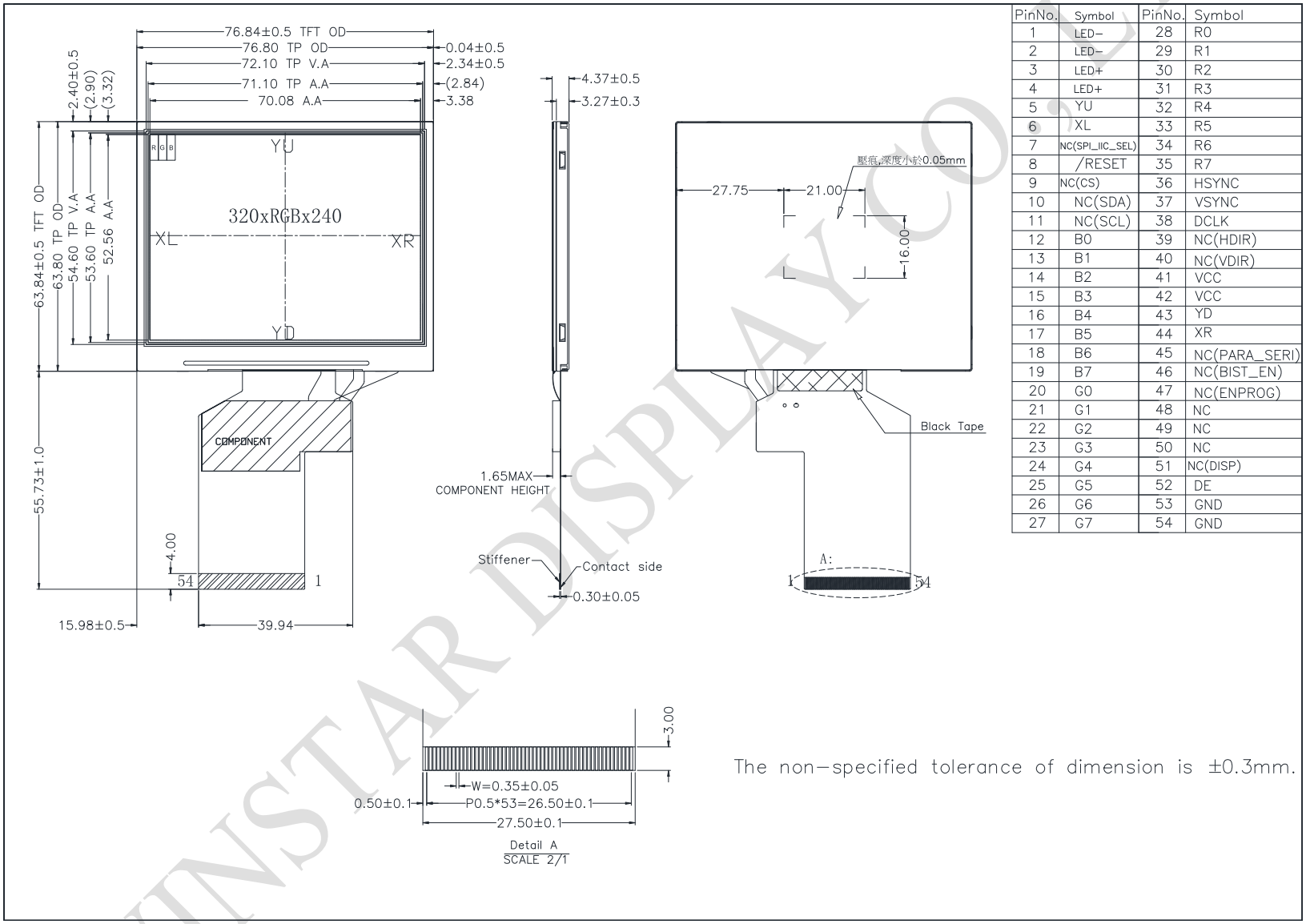
| Pin | Symbol | Function |
|---|---|---|
| 1 | LED- | Power for LED backlight cathode |
| 2 | LED- | Power for LED backlight cathode |
| 3 | LED+ | Power for LED backlight anode |
| 4 | LED+ | Power for LED backlight anode |
| 5 | YU | Top electrode |
| 6 | XL | Left electrode |
| 7 | NC(SPI_IIC_SEL) | No connect |
| 8 | /RESET | Hardware reset |
| 9 | NC(CS) | No connect |
| 10 | NC(SDA) | No connect |
| 11 | NC(SCL) | No connect |
| 12 | B0 | Data bus |
| 13 | B1 | Data bus |
| 14 | B2 | Data bus |
| 15 | B3 | Data bus |
| 16 | B4 | Data bus |
| 17 | B5 | Data bus |
| 18 | B6 | Data bus |
| 19 | B7 | Data bus |
| 20 | G0 | Data bus |
| 21 | G1 | Data bus |
| 22 | G2 | Data bus |
| 23 | G3 | Data bus |
| 24 | G4 | Data bus |
| 25 | G5 | Data bus |
| 26 | G6 | Data bus |
| 27 | G7 | Data bus |
| 28 | R0 | Data bus |
| 29 | R1 | Data bus |
| 30 | R2 | Data bus |

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| | | |
|---|---|---|
| 31 | R3 | Data bus |
| 32 | R4 | Data bus |
| 33 | R5 | Data bus |
| 34 | R6 | Data bus |
| 35 | R7 | Data bus |
| 36 | HSYNC | Horizontal sync signal, default is negative polarity. |
| 37 | VSYNC | Vertical sync signal, default is negative polarity. |
| 38 | DCLK | Dot-clock signal and oscillator source |
| 39 | NC(HDIR) | No connect |
| 40 | NC(VDIR) | No connect |
| 41 | VCC | Power Supply |
| 42 | VCC | Power Supply |
| 43 | YD | Down electrode |
| 44 | XR | Right electrode |
| 45 | NC(PARA_SERI) | No connect |
| 46 | NC(BIST_EN) | No connect |
| 47 | NC(ENPROG) | No connect |
| 48 | NC | No connect |
| 49 | NC | No connect |
| 50 | NC | No connect |
| 51 | NC(DISP) | No connect |
| 52 | DE | Data input enable. Display access is enabled when DE is “H”. |
| 53 | GND | Ground |
| 54 | GND | Ground |

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# Contour Drawing




| PinNo. | Symbol | PinNo. | Symbol |
|---|---|---|---|
| 1 | LED− | 28 | R0 |
| 2 | LED− | 29 | R1 |
| 3 | LED+ | 30 | R2 |
| 4 | LED+ | 31 | R3 |
| 5 | YU | 32 | R4 |
| 6 | XL | 33 | R5 |
| 7 | NC(SPI_IIC_SEL) | 34 | R6 |
| 8 | /RESET | 35 | R7 |
| 9 | NC(CS) | 36 | HSYNC |
| 10 | NC(SDA) | 37 | VSYNC |
| 11 | NC(SCL) | 38 | DCLK |
| 12 | B0 | 39 | NC(HDIR) |
| 13 | B1 | 40 | NC(VDIR) |
| 14 | B2 | 41 | VCC |
| 15 | B3 | 42 | VCC |
| 16 | B4 | 43 | YD |
| 17 | B5 | 44 | XR |
| 18 | B6 | 45 | NC(PARA_SERI) |
| 19 | B7 | 46 | NC(BIST_EN) |
| 20 | G0 | 47 | NC(ENPROG) |
| 21 | G1 | 48 | NC |
| 22 | G2 | 49 | NC |
| 23 | G3 | 50 | NC |
| 24 | G4 | 51 | NC(DISP) |
| 25 | G5 | 52 | DE |
| 26 | G6 | 53 | GND |
| 27 | G7 | 54 | GND |

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

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