# TFT DISPLAY SPECIFICATION




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# SPECIFICATION

## MODULE NO.: WF70-1024600A8D#0SP0-FC

# General Specifications

| Item | Dimension | Unit |
|---|---|---|
| Size | 7.0 | inch |
| Dot Matrix | 1024 x RGBx600(TFT) | dots |
| Module dimension | 169.9(W) x 103.4(H) x 5.6(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 | |
| Aspect Ratio | 16:9 | |
| Driver IC | EK79001HK-S + EK73215BCGA or equivalent | |
| Interface | 24bit RGB | |
| Backlight Type | LED, Normally White | |
| Touch Panel | Without 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.Typical Operation Conditions**

| Item | Symbol | Values | | | Unit |
|---|---|---|---|---|---|
| | | Min. | Typ. | Max. | |
| Power voltage | VCC | 3.0 | 3.3 | 3.6 | V |
| 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 | Vcom | 3.0 | 3.15 | 3.3 | V |
| Current for Driver | IDD | - | 85 | 130 | mA |
| Power Current | IAVDD | - | 20 | - | mA |
| TFT Gate ON Current | IVGH | - | 1 | - | mA |
| TFT Gate OFF Current | IVGL | - | 1 | - | mA |
| TFT Common Current | IVCOM | - | 1 | - | mA |

**2. Backlight Driving Conditions**

| Item | Symbol | Values | | | Unit |
|---|---|---|---|---|---|
| | | Min. | Typ. | Max. | |
| Voltage for LED backlight | VL | 16.8 | 19.2 | 21.0 | V |
| Current for LED backlight | IL | -- | 290 | -- | mA |
| LED life time | - | - | 50,000 | - | Hr |

# Interface

**1. LCM PIN Definition**

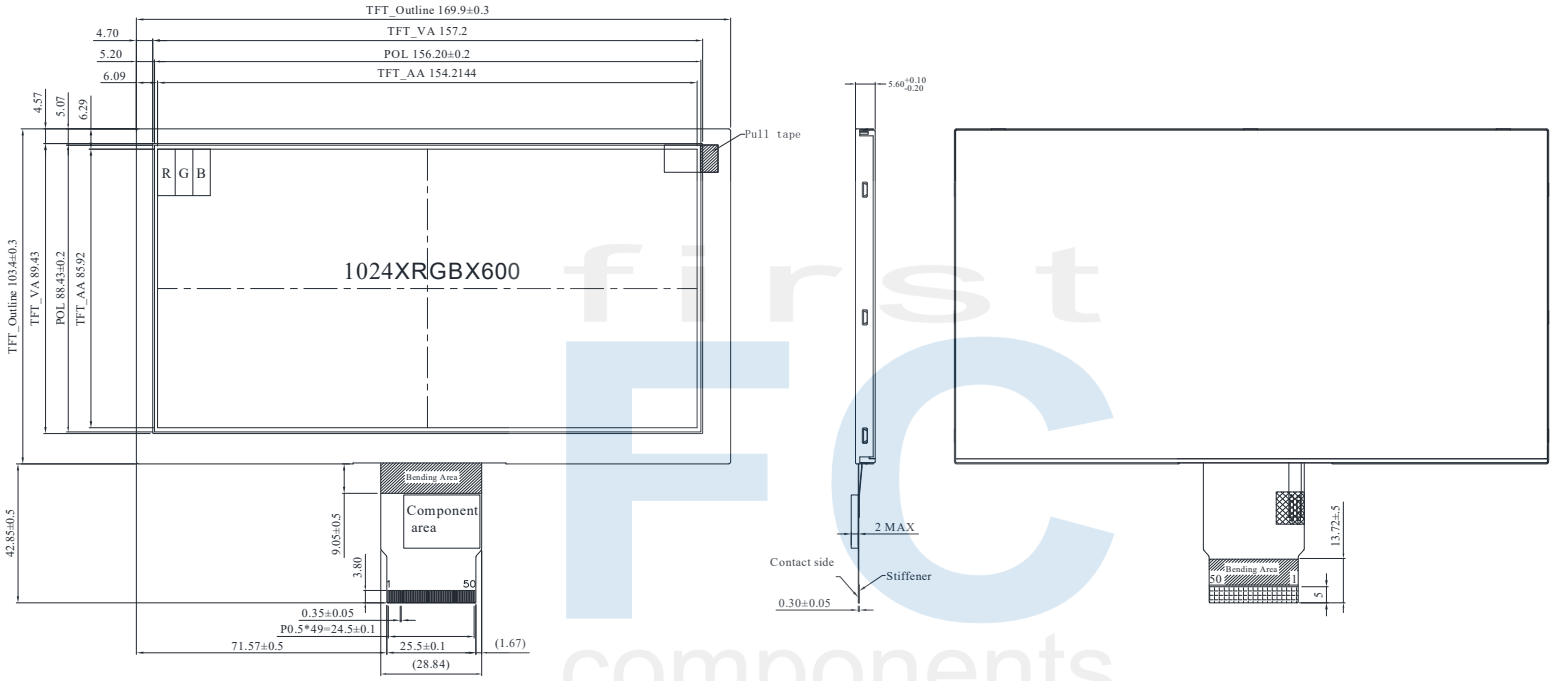
| Pin No. | Symbol | Function |
|---|---|---|
| 1 | VLED+ | LED Anode |
| 2 | VLED+ | LED Anode |
| 3 | VLED- | LED Cathode |
| 4 | VLED- | LED Cathode |
| 5 | GND | Ground |
| 6 | VCOM | Common voltage |
| 7 | VCC | Power for Digital Circuit |
| 8 | MODE | DE/SYNC mode select |
| 9 | DE | Data Input Enable (DEN) |
| 10 | VS | Vertical Sync Input (VSD) |
| 11 | HS | Horizontal Sync Input (HSD) |
| 12 | B7 | Blue data(MSB) |
| 13 | B6 | Blue data |
| 14 | B5 | Blue data |
| 15 | B4 | Blue data |
| 16 | B3 | Blue data |
| 17 | B2 | Blue data |
| 18 | B1 | Blue data |
| 19 | B0 | Blue data(LSB) |
| 20 | G7 | Green data(MSB) |
| 21 | G6 | Green data |
| 22 | G5 | Green data |
| 23 | G4 | Green data |
| 24 | G3 | Green data |
| 25 | G2 | Green data |
| 26 | G1 | Green data |
| 27 | G0 | Green data(LSB) |
| 28 | R7 | Red data(MSB) |
| 29 | R6 | Red data |
| 30 | R5 | Red data |
| 31 | R4 | Red data |

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| | | |
|---|---|---|
| 32 | R3 | Red data |
| 33 | R2 | Red data |
| 34 | R1 | Red data |
| 35 | R0 | Red data(LSB) |
| 36 | GND | Power Ground |
| 37 | DCLK | Sample clock (CLK) |
| 38 | GND | Power Ground |
| 39 | L/R | Left / right selection |
| 40 | U/D | Up/down selection |
| 41 | VGH | Gate ON Voltage |
| 42 | VGL | Gate OFF Voltage |
| 43 | AVDD | Power for Analog Circuit |
| 44 | RESET | Global reset pin. |
| 45 | NC | No connection |
| 46 | VCOM | Common Voltage |
| 47 | DITHB | Dithering function |
| 48 | GND | Power Ground |
| 49 | NC | No connection |
| 50 | NC | No connection |

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# Contour Drawing




| PIN | | PIN | | PIN | | PIN | | PIN | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | VLED+ | 11 | HS | 21 | G6 | 31 | R4 | 41 | VGH |
| 2 | VLED+ | 12 | B7 | 22 | G5 | 32 | R3 | 42 | VGL |
| 3 | VLED− | 13 | B6 | 23 | G4 | 33 | R2 | 43 | AVDD |
| 4 | VLED− | 14 | B5 | 24 | G3 | 34 | R1 | 44 | RESET |
| 5 | GND | 15 | B4 | 25 | G2 | 35 | R0 | 45 | NC |
| 6 | VCOM | 16 | B3 | 26 | G1 | 36 | GND | 46 | VCOM |
| 7 | VCC | 17 | B2 | 27 | G0 | 37 | DCLK | 47 | DITHB |
| 8 | MODE | 18 | B1 | 28 | R7 | 38 | GND | 48 | GND |
| 9 | DE | 19 | B0 | 29 | R6 | 39 | L/R | 49 | NC |
| 10 | VS | 20 | G7 | 30 | R5 | 40 | U/D | 50 | NC |

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

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