



RAYSTAR

曜凌光電股份有限公司

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RFF80AB-AIW-DNS

SPECIFICATION

General Specifications

- Size: 8.0 inch
- Dot Matrix: 800 x RGB x 480(TFT) dots
- Module dimension: 192.80 x 116.90 x 8.1 mm
- Active area: 176.64 x 99.36 mm
- Dot pitch: 0.0736 x 0.2070 mm
- LCD type: TFT, Normally White, Transmissive
- View Direction: 12 o'clock
- Gray Scale Inversion Direction: 6 o'clock
- Backlight Type: LED, Normally White
- With /Without TP: With RTP
- Surface: Anti-Glare

*Color tone slight changed by temperature and driving voltage.

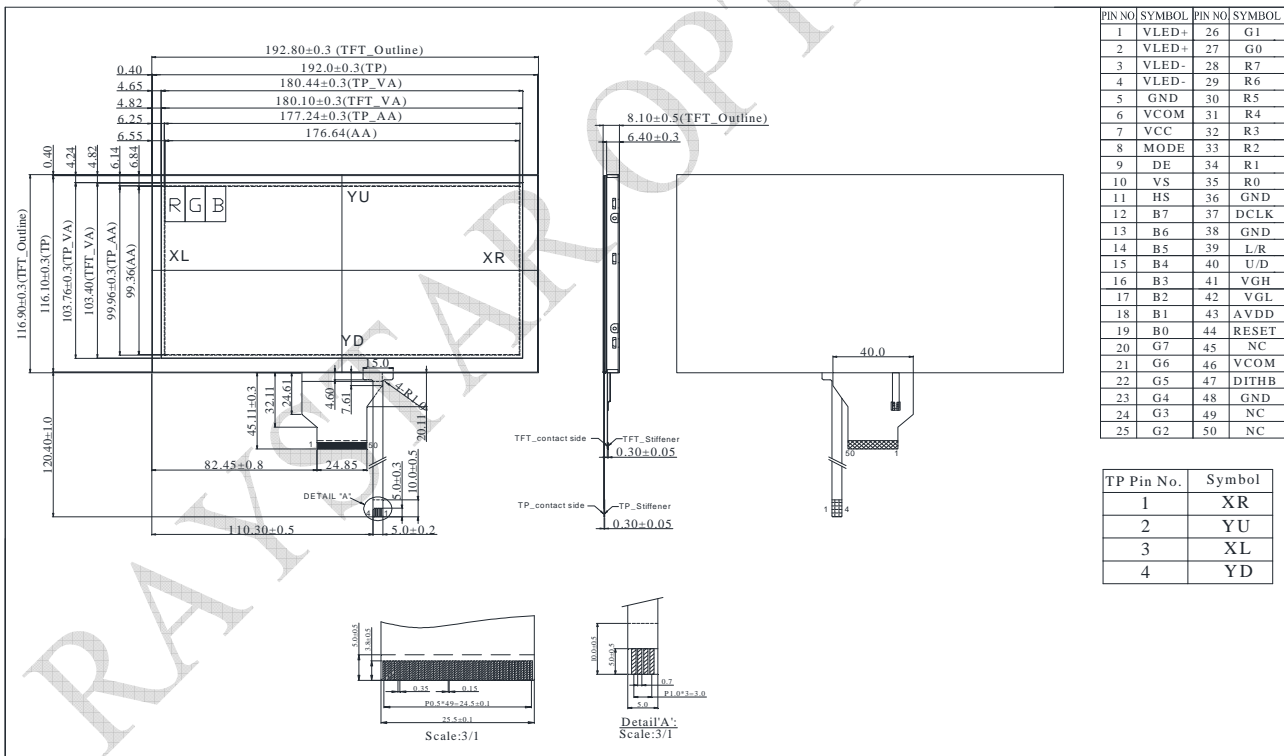
Interface

LCM PIN Definition

| Pin | Symbol | I/O | Function |
|-----|--------|-----|----------------------------------|
| 1 | VLED+ | P | Power for LED backlight(Anode) |
| 2 | VLED+ | P | Power for LED backlight(Anode) |
| 3 | VLED- | P | Power for LED backlight(Cathode) |
| 4 | VLED- | P | Power for LED backlight(Cathode) |
| 5 | GND | P | Power ground |
| 6 | VCOM | I | Common voltage |
| 7 | DVDD | P | Power for Digital Circuit |
| 8 | MODE | I | DE/SYNC mode select |
| 9 | DE | I | Data Input Enable |
| 10 | VS | I | Vertical Sync Input |
| 11 | HS | I | Horizontal Sync Input |
| 12 | B7 | I | Blue data(MSB) |
| 13 | B6 | I | Blue data |
| 14 | B5 | I | Blue data |
| 15 | B4 | I | Blue data |
| 16 | B3 | I | Blue data |
| 17 | B2 | I | Blue data |
| 18 | B1 | I | Blue data |
| 19 | B0 | I | Blue data(LSB) |
| 20 | G7 | I | Green data(MSB) |
| 21 | G6 | I | Green data |
| 22 | G5 | I | Green data |
| 23 | G4 | I | Green data |
| 24 | G3 | I | Green data |
| 25 | G2 | I | Green data |
| 26 | G1 | I | Green data |
| 27 | G0 | I | Green data(LSB) |
| 28 | R7 | I | Red data(MSB) |
| 29 | R6 | I | Red data |
| 30 | R5 | I | Red data |
| 31 | R4 | I | Red data |
| 32 | R3 | I | Red data |
| 33 | R2 | I | Red data |
| 34 | R1 | I | Red data |
| 35 | R0 | I | Red data(LSB) |
| 36 | GND | P | Power Ground |

| | | | |
|----|-------|---|--------------------------|
| 37 | DCLK | I | Sample clock |
| 38 | GND | P | Power Ground |
| 39 | L/R | I | Left / right selection |
| 40 | U/D | I | Up/down selection |
| 41 | VGH | P | Gate ON Voltage |
| 42 | VGL | P | Gate OFF Voltage |
| 43 | AVDD | P | Power for Analog Circuit |
| 44 | RESET | I | Global reset pin. |
| 45 | NC | - | No connection |
| 46 | VCOM | I | Common Voltage |
| 47 | DITHB | I | Dithering function |
| 48 | GND | P | Power Ground |
| 49 | NC | - | No connection |
| 50 | NC | - | No connection |

Contour Drawing



Absolute Maximum Ratings

| Item | Symbol | Min | Typ | Max | Unit |
|-----------------------|-----------------|-------|-----|------|------|
| Operating Temperature | T _{OP} | -30 | — | +85 | °C |
| Storage Temperature | T _{ST} | -30 | — | +85 | °C |
| Power voltage | DVDD | -0.3 | — | 5.0 | V |
| | AVDD | 6.5 | — | 13.5 | V |
| | VGH | -0.3 | — | 40.0 | V |
| | VGL | -20.0 | — | 0.3 | V |
| | VGH-VGL | - | — | 40.0 | V |

Electrical Characteristics

Operating conditions

| Item | Symbol | Min | Typ | Max | Unit |
|--------------------------|--------|----------|------|----------|------|
| Power voltage | DVDD | 3.0 | 3.3 | 3.6 | V |
| | AVDD | 10.2 | 10.4 | 10.6 | V |
| | VGH | 15.3 | 16.0 | 16.7 | V |
| | VGL | -7.7 | -7.0 | -6.3 | V |
| Input signal voltage | VCOM | 3.4 | 4.4 | 5.4 | V |
| Input logic high voltage | VIH | 0.7 DVDD | | DVDD | V |
| Input logic low voltage | VIL | 0 | | 0.3 DVDD | V |

LED driving conditions

| Parameter | Symbol | Min | Typ | Max | Unit |
|-------------------|--------|--------|------|--------|------|
| LED current | IL | 216 | 240 | 264 | mA |
| Power Consumption | — | 1814.4 | 2232 | 2692.8 | mW |
| LED voltage | VBL+ | 8.4 | 9.3 | 10.2 | V |
| LED Life Time | — | 20,000 | — | — | Hr |