



RAYSTAR

曜凌光電股份有限公司

Web: www.raystar-optronics.com E-mail: sales@raystar-optronics.com

RFH700A7-AIH-LNN

SPECIFICATION

General Specifications

- Size: 7 inch
- Dot Matrix: 1024 x RGB x 600(TFT) dots
- Module dimension: 169.9(W) x 103.4(H) x 5.6(D)mm
- Active area: 154.2144 x 85.92 mm
- Dot pitch: 0.1506 x 0.1432 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
- Control IC: --
- Driver IC: EK79001HE + EK73215BCGA
- Touch Panel: Without Touch Panel
- Interface: LVDS
- Surface: Anti-Glare

*Color tone slight changed by temperature and driving voltage.

Interface

1. LCM PIN Definition

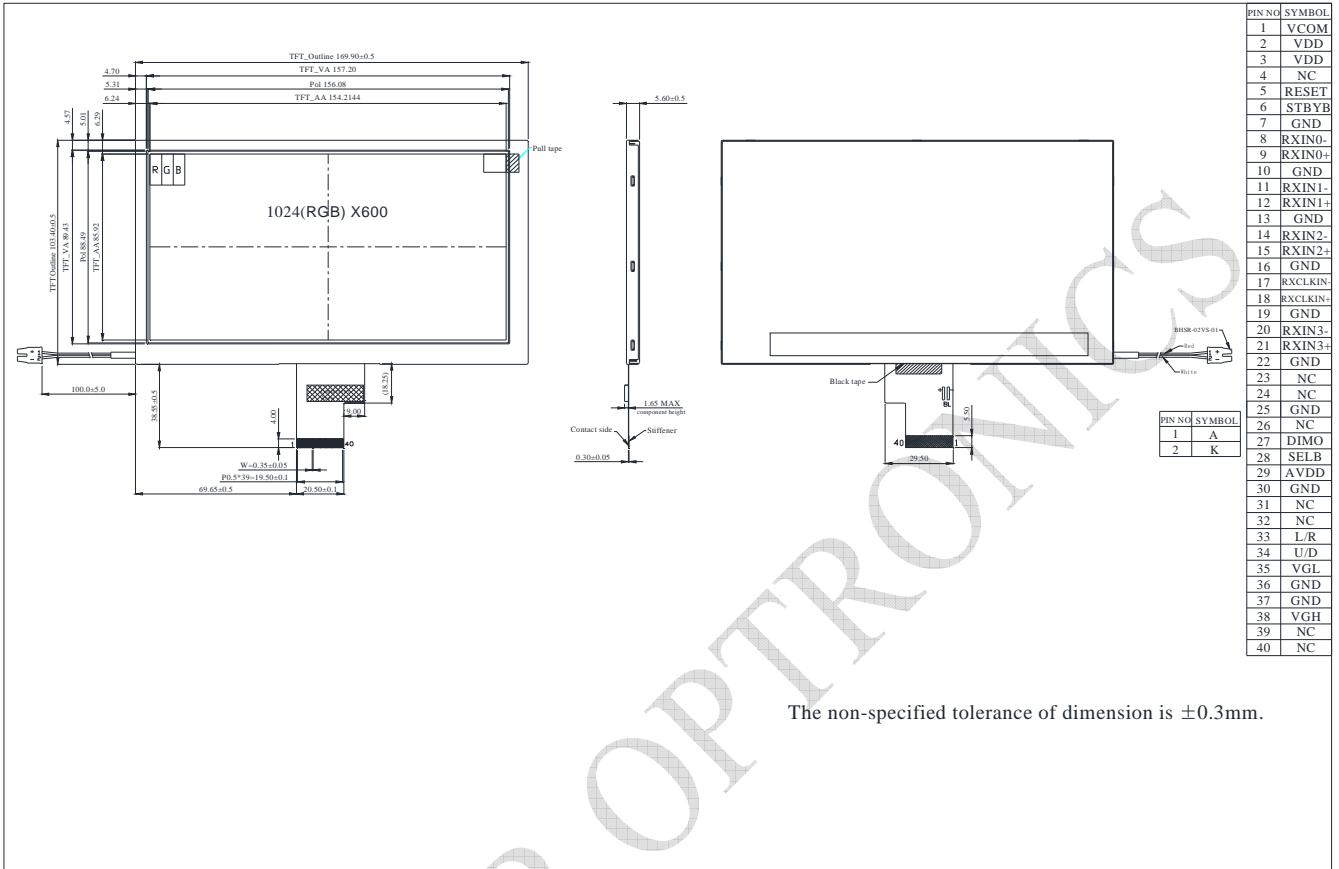
FPC Connector is used for the module electronics interface. The recommended model is FH12A-40S-0.5SH manufactured by Hirose.

| 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 | DIMO | O | Backlight CABC controller signal output |
| 28 | SELB | I | 6bit/8bit mode select H:6bit / L:8bit |
| 29 | AVDD | P | Power for Analog Circuit |
| 30 | GND | P | Ground |
| 31 | NC | --- | No connection |
| 32 | NC | --- | No connection |
| 33 | L/R | I | Horizontal inversion |
| 34 | U/D | I | Vertical inversion |
| 35 | VGL | P | Negative power for TFT |
| 36 | GND | P | Ground |
| 37 | GND | P | Ground |
| 38 | VGH | P | Positive power for TFT |
| 39 | NC | --- | No connection |
| 40 | NC | --- | No connection |

I:input ,O:output,P:power

Contour Drawing



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

Absolute Maximum Ratings

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

Electrical Characteristics

1. Typical Operation Conditions

| Item | Symbol | Values | | | Unit |
|--------------------------|--------|----------|------|----------|------|
| | | Min. | Typ. | Max. | |
| Power voltage | DVDD | 3.0 | 3.3 | 3.6 | V |
| | AVDD | 9.4 | 9.6 | 9.8 | V |
| | VGH | 17 | 18 | 19 | V |
| | VGL | -6.6 | -6.0 | -5.4 | V |
| Input signal voltage | VCOM | 3.1 | 3.3 | 3.6 | V |
| Input logic high voltage | VIH | 0.7 DVDD | - | DVDD | V |
| Input logic low voltage | VIL | 0 | - | 0.3 DVDD | V |

2. Current Consumption

| Item | Symbol | Values | | | Unit |
|--------------------|--------|--------|------|------|------|
| | | Min. | Typ. | Max. | |
| Current for Driver | IGH | - | 0.2 | 1.0 | mA |
| | IGL | - | 0.2 | 1.0 | mA |
| | IDVDD | - | 4.0 | 10 | mA |
| | IAVDD | - | 20 | 50 | mA |

3. 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 | -- | 320 | -- | mA |
| LED life time | - | - | 50,000 | - | Hr |