

# TFT DISPLAY SPECIFICATION



RAYSTAR

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## RFS390D-1LW-DHG

### General Specifications

- Size: 3.9 inch
- Dot Matrix: 480x128 x RGB dots
- Module dimension: 125.0 x 66.5 x 13.95 (Max) mm
- Active area: 95.04 x 25.34 mm
- Pixel pitch: 0.198(H) x 0.198(V) mm
- LCD type: TFT, Normally White, Transmissive
- View Direction: 6 o'clock
- Gray Scale Inversion Direction: 12 o'clock
- Aspect Ratio: Bar Type
- Backlight Type: LED, Normally White
- Controller IC: TFP401
- Interface: HDMI(only for DVI)
- PCAP IC: GT911
- PCAP FW Version: 0X99
- PCAP Interface: USB
- PCAP Resolution: 480\*128
- Touch Panel: Projected Capacitive Touch Panel, PCAP
- Surface: Glare

## Interface

### LCM PIN Definition

#### DVI

| Pin No. | Symbol | I/O | Function                                                                        |
|---------|--------|-----|---------------------------------------------------------------------------------|
| 1       | Rx2+   | I   | Channel-2 positive receiver input; low-voltage signal differential- input pair. |
| 2       | GND    | P   | Ground                                                                          |
| 3       | Rx2-   | I   | Channel-2 negative receiver input; low-voltage signal differential- input pair. |
| 4       | Rx1+   | I   | Channel-1 positive receiver input; low-voltage signal differential- input pair. |
| 5       | GND    | P   | Ground                                                                          |
| 6       | Rx1-   | I   | Channel-1 negative receiver input; low-voltage signal differential- input pair. |
| 7       | Rx0+   | I   | Channel-0 positive receiver input; low-voltage signal differential- input pair. |
| 8       | GND    | P   | Ground                                                                          |
| 9       | Rx0-   | I   | Channel-0 negative receiver input; low-voltage signal differential- input pair. |
| 10      | RxC+   | I   | Clock positive receiver input; low-voltage signal differential- input pair.     |
| 11      | GND    | P   | Ground                                                                          |
| 12      | RxC-   | I   | Clock negative receiver input; low-voltage signal differential- input pair.     |
| 13-16   | NC     | -   | No connection                                                                   |
| 17      | GND    | P   | Ground                                                                          |
| 18      | 5V     | -   | Power Supply                                                                    |
| 19      | Detect | -   | Hot plug detect                                                                 |

I: input, O: output, P: Power

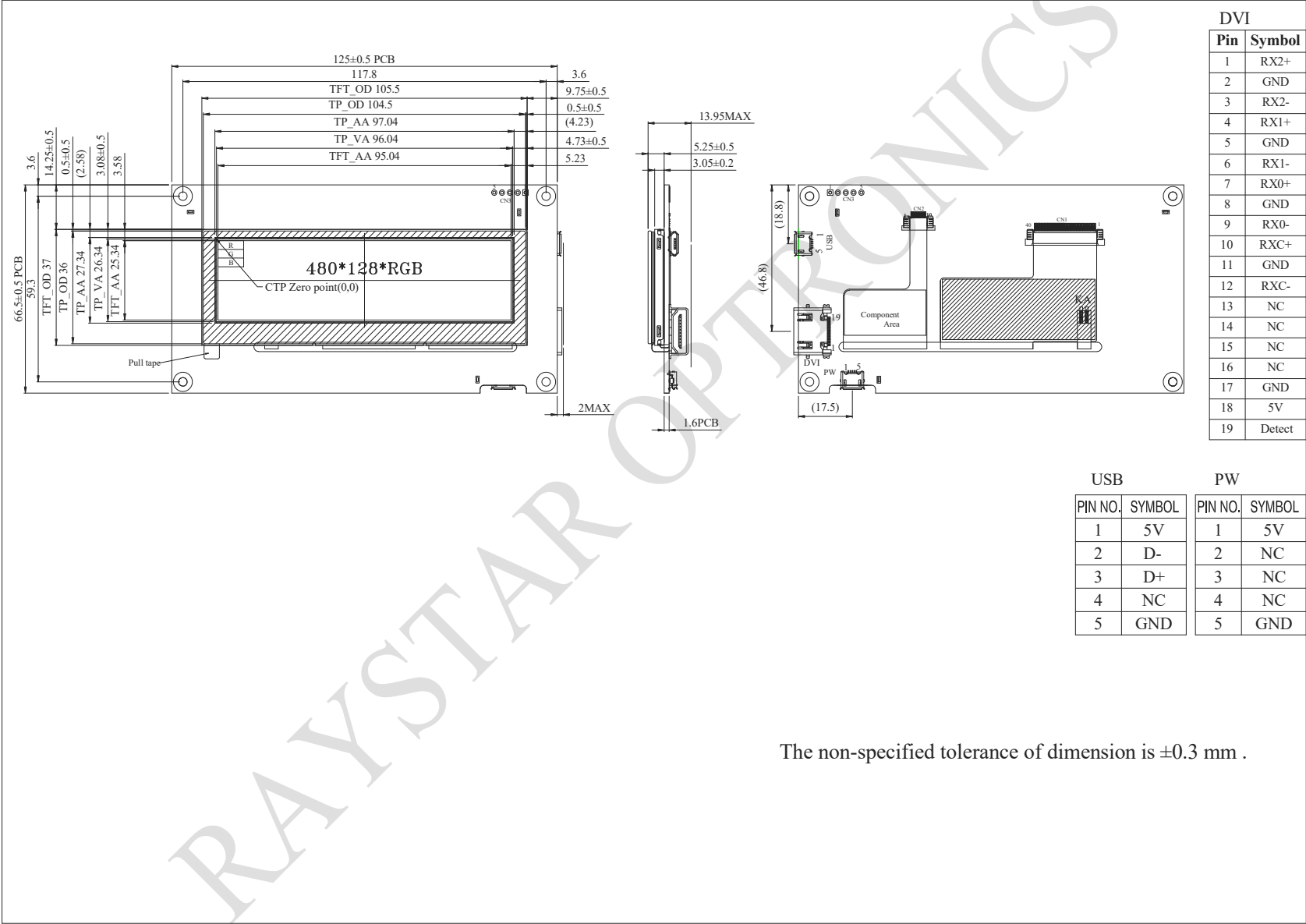
**PW (Micro USB type B)**

| Pin No. | Symbol | I/O | Function      |
|---------|--------|-----|---------------|
| 1       | 5V     | P   | Power Supply  |
| 2       | NC     | -   | No connection |
| 3       | NC     | -   | No connection |
| 4       | NC     | -   | No connection |
| 5       | GND    | P   | Ground        |

**PCAP USB (Micro USB type B)**

| Pin No. | Symbol | I/O | Function      |
|---------|--------|-----|---------------|
| 1       | 5V     | P   | Power Supply  |
| 2       | D-     | -   | Data line -   |
| 3       | D+     | -   | Data line +   |
| 4       | NC     | -   | No connection |
| 5       | GND    | P   | Ground        |

Contour Drawing



## Absolute Maximum Ratings

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

## Electrical Characteristics

Operating conditions:

| Item                   | Symbol | Condition | Min | Typ    | Max | Unit |
|------------------------|--------|-----------|-----|--------|-----|------|
| Supply Voltage For LCM | VDD    | —         | —   | 5      | —   | V    |
| Supply Current For LCM | IDD    | —         | —   | 300    | 450 | mA   |
| LED life time          | —      | —         | —   | 50,000 | —   | Hr   |