

# Reachlight Optoelectronic Limited

## 1. General Specifications

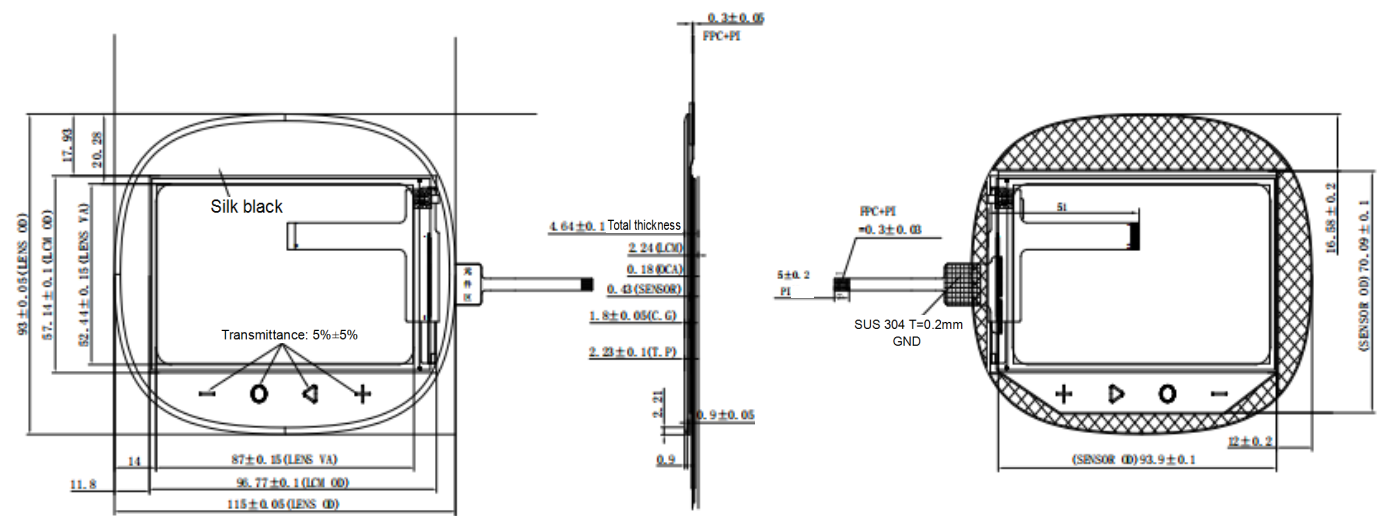
*RL400WV04HST0 is a module with CTP. It is composed of a TFT-LCD panel, driver IC, FPC, a back light unit and CTP. The 3.97 display area contains 480x800 pixels and can display up to 16.7M colors. This product accords with RoHS environmental criterion.*

| Item                  | Contents                 | Unit    | Note |
|-----------------------|--------------------------|---------|------|
| LCD Type              | TFT                      | -       |      |
| Display color         | 16.7M                    |         |      |
| Viewing Direction     | ALL                      | O'Clock |      |
| Operating temperature | -10~+60                  | °C      |      |
| Storage temperature   | -20~+70                  | °C      |      |
| Module size           | Refer to outline drawing | mm      |      |
| Active Area(W×H)      | 51.84X86.4               | mm      |      |
| Number of Dots        | 480×800                  | dots    |      |
| Controller            | ST7701S(LCM)+GT5688(CTP) | -       |      |
| Power Supply Voltage  | 2.8                      | V       |      |
| Outline Dimensions    | Refer to outline drawing | -       |      |
| Backlight             | 4×2_LEDs (white)         | pcs     |      |
| Weight                | ---                      | g       |      |
| Interface             | MIPI 2-Lane              | -       |      |

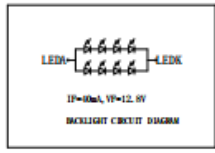
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## 2. Outline Drawing

| REV | NATURE OF MODIFICATION | CHANGED BY | DATE       |
|-----|------------------------|------------|------------|
| △   | NEW                    |            | 2017-2-9   |
| △   | Change the silk effect |            | 2018-10-16 |



| Pad No. | Pad Name |
|---------|----------|
| 1       | LED-     |
| 2       | LED+     |
| 3       | NC       |
| 4       | GND      |
| 5       | NC       |
| 6       | NC       |
| 7       | GND      |
| 8       | DIP      |
| 9       | DIP      |
| 10      | GND      |
| 11      | LOOP     |
| 12      | LCOM     |
| 13      | GND      |
| 14      | DOP      |
| 15      | DON      |
| 16      | GND      |
| 17      | NC       |
| 18      | NC       |
| 19      | GND      |
| 20      | TE       |
| 21      | GND      |
| 22      | RESET    |
| 23      | NC       |
| 24      | LOWCC    |
| 25      | VCC      |



| Pin | Name       |
|-----|------------|
| 1   | INT(CL 3V) |
| 2   | VDD(CL 3V) |
| 3   | GND        |
| 4   | INT(CL 3V) |
| 5   | SEN(CL 3V) |
| 6   | SEL(G 3V)  |

- LCM requirements:
1. LCM display mode: 3.97" TFT;
  2. Driver IC: ST7701S;
  3. Operation temperature: -10~60°C;
  4. Storage temperature: -20~70°C;
  5. LED arrangement: 4 pcs white in parallel;
  6. Tolerance unsigned: ±0.2mm.

- CTP Notes:
1. Structure: G+F+F;
  2. Tolerance unsigned: ±0.1mm, Chamfer around the LENS: C=0.15\*0.15;
  3. Thickness of the LENS: 1.8mm, 6H after the strengthen of the surface;
  4. Driver IC: GT5688;
  5. RoHS COMPLIANT;
  6. Transmittance: >85%;
  7. Operation temperature: -20~60°C, Storage temperature: -40~80°C.

| Reachlight Optoelectronic Limited |     |           |               |
|-----------------------------------|-----|-----------|---------------|
| Part No.                          |     | Model No. | RL400WV04HST0 |
| Drawing Title                     |     | Design    | Rev V00       |
| Scale                             | 1:1 | Check     | Unit mm       |
| Projection type                   |     | Approve   | Page 1/1      |

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## 3. Optical Characteristics

| Item                    | Symbol                         | Condition                          | Min.                               | Typ.  | Max. | Unit              | Note |
|-------------------------|--------------------------------|------------------------------------|------------------------------------|-------|------|-------------------|------|
| Brightness              | Bp                             | $\theta=0^\circ$<br>$\Phi=0^\circ$ | -                                  | 300   | -    | Cd/m <sup>2</sup> |      |
| Uniformity              | $\Delta$ Bp                    |                                    | -                                  | -     | -    | %                 |      |
| Viewing Angle           | 3:00                           | Cr $\geq$ 10                       | -                                  | 80    | -    | Deg               |      |
|                         | 6:00                           |                                    | -                                  | 80    | -    |                   |      |
|                         | 9:00                           |                                    | -                                  | 80    | -    |                   |      |
|                         | 12:00                          |                                    | -                                  | 80    | -    |                   |      |
| Contrast Ratio          | Cr                             | $\theta=0^\circ$<br>$\Phi=0^\circ$ | 720                                | 900   | -    | -                 |      |
| Response Time           | T <sub>r</sub> +T <sub>f</sub> |                                    | -                                  | 35    | 45   | ms                |      |
| Color of CIE Coordinate | W                              | x                                  | $\theta=0^\circ$<br>$\Phi=0^\circ$ | 0.310 |      | -                 |      |
|                         |                                | y                                  |                                    | 0.336 |      | -                 |      |
|                         | R                              | x                                  |                                    | 0.647 |      | -                 |      |
|                         |                                | y                                  |                                    | 0.317 |      | -                 |      |
|                         | G                              | x                                  |                                    | 0.275 |      | -                 |      |
|                         |                                | y                                  |                                    | 0.582 |      | -                 |      |
|                         | B                              | x                                  |                                    | 0.140 |      | -                 |      |
|                         |                                | y                                  |                                    | 0.088 |      | -                 |      |
| NTSC Ratio              | S                              | -                                  | -                                  | -     | %    |                   |      |

Note: The parameter is slightly changed by temperature, driving voltage and material.