



SPECIFICATION FOR LCD MODULE

客户名称(Customer) : _____

产品名称(Product) : _____ 6.2寸液晶显示屏

产品型号(Description): _____ TB062-14012G25A-00

| Compile by 编制 | Checked 审核 | Approved 批准 |
|------------------|---------------|----------------|
| | | |

| Customer Approve (客户确认) | QC品质 | R&D研发 | Approved批准 |
|----------------------------|------|-------|------------|
| | | | |



Record of Revision

| Version | Revise Date | Page | Content |
|------------|-------------|------|-----------------|
| Pre-spec.A | 2022/11/15 | | Initial Release |



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1. GENERAL DESCRIPTION

1.1 DESCRIPTION

TB062-I40 15G25A-00 is a color active matrix TFT LCD module using amorphous silicon TFT's (Thin Film Transistors) as an active switching devices. It is a transmissive type display operating in the normal black. The TFT-LCD has a 6.2 inch diagonally measured active area with U7 resolutions (360 horizontal by 960 vertical pixel arrays). Each pixel is divided into RED, GREEN, BLUE dots which are arranged in vertical stripe and this panel can display 16.7M colors. The TFT-LCD panel used for this module is adapted for a low reflection and higher Luminance type.

1.2 FEATURES:

| No. | Item | Specification | Unit |
|-----|-----------------------|-----------------------------------|--------|
| 1 | Panel Size | 6.2 | inch |
| 2 | Number of Pixels | 360(H) × 960(V) | pixels |
| 3 | Active Area | 55.296 (H) × 147.456 (V) | mm |
| 4 | Pixel Pitch | 0.1536 (H) × 0.1536 (V) | mm |
| 5 | Outline Dimension | 62.30(H)×163.36(V)×4.5(D) | mm |
| 6 | Number of Colors | 16.7M | - |
| 7 | Display Mode | Transmission mode, normally black | - |
| 8 | Viewing Direction | Full viewing | - |
| 9 | Display Format | RGB vertical stripe | - |
| 10 | Surface Treatment | Glare | - |
| 11 | Interface | MIPI | - |
| 12 | Backlight | White LED | - |
| 13 | Operation Temperature | -20~70 | °C |
| 14 | Storage Temperature | -30~80 | °C |
| 15 | Weight | -- | g |



3. PIN DESCRIPTION

FPC Connector is used for the module electronics interface.

| No. | Symbol | Function | Remark |
|-----|------------|--|--------|
| 1 | GND | Ground | |
| 2 | D0P | Positive MIPI differential data input | |
| 3 | D0N | Negative MIPI differential data input | |
| 4 | GND | Ground | |
| 5 | D1P | Positive MIPI differential data input | |
| 6 | D1N | Negative MIPI differential data input | |
| 7 | GND | Ground | |
| 8 | CLKP | Positive MIPI differential clock input | |
| 9 | CLKN | Negative MIPI differential clock input | |
| 10 | GND | Ground | |
| 11 | D2P | Positive MIPI differential data input | |
| 12 | D2N | Negative MIPI differential data input | |
| 13 | GND | Ground | |
| 14 | D3P | Positive MIPI differential data input | |
| 15 | D3N | Negative MIPI differential data input | |
| 16 | GND | Ground | |
| 17 | GND | | |
| 18 | IOVCC1.8V | A power supply for the analog power. | |
| 19 | IOVCC1.8V | | |
| 20 | NC | No connection | |
| 21 | NC | No connection | |
| 22 | NC | No connection | |
| 23 | NC | No connection | |
| 24 | RSTB | Reset pin. | |
| 25 | STBYB | Standby mode control. | |
| 26 | NC | No connection | |
| 27 | GND | Ground | |
| 28 | K | LED Cathode | |
| 29 | K | | |
| 30 | GND | Ground | |
| 31 | NC | No connection | |
| 32 | GND | Ground | |
| 33 | GND | Ground | |
| 34 | NC | No connection | |
| 35 | A | LED Anode | |
| 36 | A | | |
| 37 | GND | Ground | |
| 38 | VDD(3.3V) | A power supply for the analog power. | |
| 39 | VDD(3.3V) | | |
| 40 | NC | No connection | |



4. ELECTRICAL CHARACTERISTICS

4.1 Backlight Driving Conditions (12 White Chips)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Note |
|--|--------|--------|------|-------|-------------------|--------|
| Supply voltage of white LED backlight | VL | --- | 9 | --- | V | Note 1 |
| Current for LED backlight | IL | ---- | 100 | ----- | mA | |
| Luminance (on the module surface, BM-7) | | -- | 500 | -- | cd/m ² | |
| LED life time | - | 30,000 | - | - | Hr | Note 2 |

4.2 Overview

The test of Optical specifications shall be measured in a dark room (ambient luminance ≤ 1 lux and temperature = $25 \pm 2^\circ\text{C}$) with the equipment of Luminance meter system (Goniometer system and TOPCON BM-5) and test unit shall be located at an approximate distance 50cm from the LCD surface at a viewing angle of θ and Φ equal to 0° . The center of the measuring spot on the Display surface shall stay fixed.

The backlight should be operating for 30 minutes prior to measurement.

| Parameter | | Symbol | Condition | Min. | Typ. | Max. | Unit | Remark |
|--------------------------|------------|----------------------|---|------------------|-------|------------------|-----------------|--------------------|
| Viewing Angle range | Horizontal | Θ_3 | CR > 10 | 80 | 89 | - | Deg. | Note 1 |
| | | Θ_9 | | 80 | 89 | - | Deg. | |
| | Vertical | Θ_{12} | | 80 | 89 | - | Deg. | |
| | | Θ_6 | | 80 | 89 | - | Deg. | |
| Luminance Contrast ratio | | CR | $\Theta = 0^\circ$ | 900 | 1200 | - | | Note 2 |
| Color Gamut | NTSC | CIE1931 | $\Theta = 0^\circ$ | 61 | 66 | - | % | Note 5 @C Light |
| Reproduction of color | White | \overline{Wx} | $\Theta = 0^\circ$ | \overline{Typ} | 0.286 | \overline{Typ} | | |
| | | \overline{Wy} | | -0.03 | 0.318 | +0.03 | | |
| Response Time | | GTG \overline{ave} | Ta = 25°C $\Theta = 0^\circ$ | - | 35 | 40 | \overline{ms} | Note 6 |
| Cross Talk | | CT | $\Theta = 0^\circ$ | - | - | 2.0 | % | |