## 1. Scope

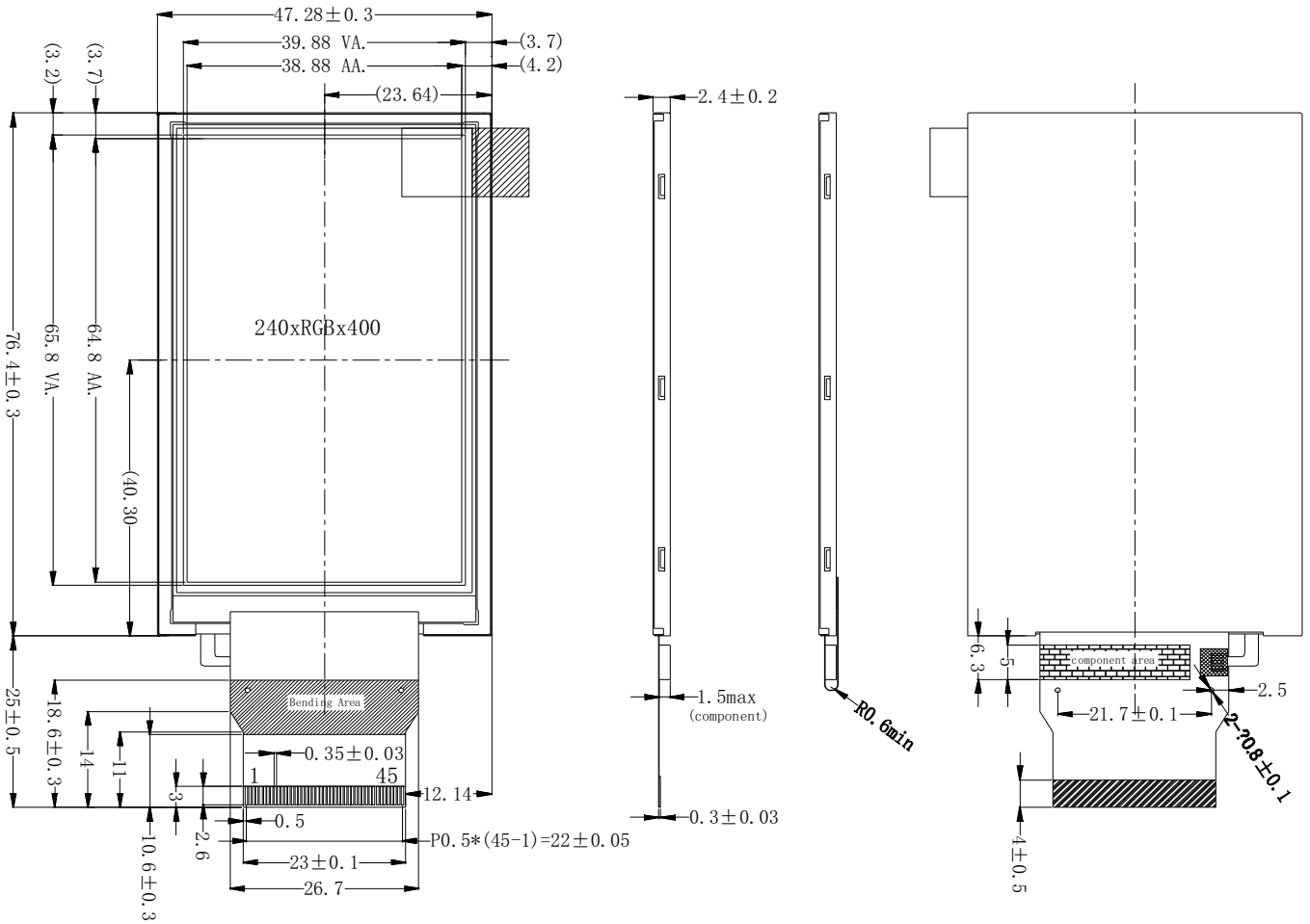
This data sheet is to introduce the specification of DLC0300AMG active matrix TFT module. It is composed of a color TFT-LCD panel, driver IC, FPC and a backlight unit. The 3.0″ display area contains 240(RGB) x 400 pixels.

## 2. Application

Digital equipments which need color display outdoor, mobile phone, mobile navigator/video systems.

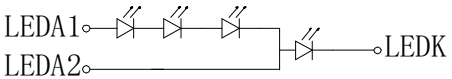
## 3. General Information

| Item | Contents | Unit |
|---|---|---|
| Size | 3.0 | inch |
| Resolution | 240(RGB) x 400 | / |
| Technology type | a-si TFT | / |
| Color depth | 262K | / |
| Pixel pitch | 0.162x0.162 | mm |
| Pixel Configuration | R.G.B. Vertical Stripe | / |
| Outline Dimension (W x H x D) | 47.28x 76.4x2.4 | mm |
| Active Area | 38.88 x 64.8 | mm |
| Display Mode | Transflective (ECB ) | / |
| Viewing Direction | 12 O'clock | / |
| Backlight Type | 3 LEDs | / |
| Driver IC | HX8352B | / |




NOTES:

1. DISPLAY TYPE: TFT
2. POLARIZER MODE: Transflective
3. OPERATING TEMP: -20° C ~ 70° C
4. STORAGE TEMP: -30° C ~ 80° C
5. BACKLIGHT: LED
6. RoHs Complicant




BACKLIGHT CIRCUIT DIAGRAM

| PIN | PIN NAME-RGB | PIN NAME-CPU |
|---|---|---|
| 1 | GND | GND |
| 2 | LED-K | LED-K |
| 3 | LED-A2 | LED-A2 |
| 4 | LED-A1 | LED-A1 |
| 5 | GND | GND |
| 6 | GND | GND |
| 7 | /RESET | /RESET |
| 8 | GND | GND |
| 9 | R5 | DB17 |
| 10 | R4 | DB16 |
| 11 | R3 | DB15 |
| 12 | R2 | DB14 |
| 13 | R1 | DB13 |
| 14 | R0 | DB12 |
| 15 | G5 | DB11 |
| 16 | G4 | DB10 |
| 17 | G3 | DB9 |
| 18 | G2 | DB8 |
| 19 | G1 | DB7 |
| 20 | G0 | DB6 |
| 21 | B5 | DB5 |
| 22 | B4 | DB4 |
| 23 | B3 | DB3 |
| 24 | B2 | DB2 |
| 25 | B1 | DB1 |
| 26 | B0 | DB0 |
| 27 | SDI | GND |
| 28 | SDO | OPEN |
| 29 | NC | /RD |
| 30 | NC | /WR |
| 31 | SCL | RS |
| 32 | CS | /CS |
| 33 | ENABLE | GND |
| 34 | VSYNC | GND |
| 35 | HSYNC | GND |
| 36 | DOTCLK | GND |
| 37 | TE | TE |
| 38 | VCCIO | VCCIO |
| 39 | VCC | VCC |
| 40 | IMO/ID | IMO/ID |
| 41 | IM1 | IM1 |
| 42 | IM2 | IM2 |
| 43 | GND | GND |
| 44 | GND | GND |
| 45 | GND | GND |

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| | | | |
|---|---|---|---|
| DRAWN BY: | TITLE: DLC0300AMG | | |
| CHECKED BY: | | | SCALE: |
| APPROVED BY: | DWG NO: | | UNIT: mm |
| CONFIRMED BY: | DWG NAME: | SHEET NO: | OF |

## 5. Interface signals

| No | Symbol (CPU) | Symbol (RGB) | Description | Remarks |
|---|---|---|---|---|
| 1 | GND | GND | Ground | |
| 2 | LED-K | LED-K | Power supply for LED(Low voltage) | |
| 3 | LED-A2 | LED-A2 | Power supply for LED(High voltage2) | |
| 4 | LED-A1 | LED-A1 | Power supply for LED(High voltage1) | |
| 5 | GND | GND | Ground | |
| 6 | GND | GND | Ground | |
| 7 | /RESET | /RESET | RESET serial(Low active) | |
| 8 | GND | GND | Ground | |
| 9 | DB17 | R5 | CPU: Data bus serial(MSB)<br>RGB:RED data signal(MSB) | |
| 10 | DB16 | R4 | CPU: Data bus serial<br>RGB:RED data signal | |
| 11 | DB15 | R3 | CPU: Data bus serial<br>RGB:RED data signal | |
| 12 | DB14 | R2 | CPU: Data bus serial<br>RGB:RED data signal | |
| 13 | DB13 | R1 | CPU: Data bus serial<br>RGB:RED data signal | |
| 14 | DB12 | R0 | CPU: Data bus serial<br>RGB:RED data signal(LSB) | |
| 15 | DB11 | G5 | CPU: Data bus serial<br>RGB:GREEN data signal(MSB) | |
| 16 | DB10 | G4 | CPU: Data bus serial<br>RGB:GREEN data signal | |
| 17 | DB9 | G3 | CPU: Data bus serial<br>RGB:GREEN data signal | |
| 18 | DB8 | G2 | CPU: Data bus serial<br>RGB:GREEN data signal | |
| 19 | DB7 | G1 | CPU: Data bus serial<br>RGB:GREEN data signal | |
| 20 | DB6 | G0 | CPU: Data bus serial<br>RGB:GREEN data signal(LSB) | |
| 21 | DB5 | B5 | CPU: Data bus serial<br>RGB:BLUE data signal(MSB) | |
| 22 | DB4 | B4 | CPU: Data bus serial<br>RGB:BLUE data signal | |
| 23 | DB3 | B3 | CPU: Data bus serial<br>RGB:BLUE data signal | |
| 24 | DB2 | B2 | CPU: Data bus serial<br>RGB:BLUE data signal | |
| 25 | DB1 | B1 | CPU: Data bus serial<br>RGB:BLUE data signal | |
| 26 | DB0 | B0 | CPU: Data bus serial<br>RGB:BLUE data signal(LSB) | |
| 27 | GND | SDI | CPU: ground<br>RGB: serial data input pin | |

| | | | | |
|---|---|---|---|---|
| 28 | OPEN | SDO | CPU: not use. Leave open or to GND/VCCIO<br>RGB: Serial data output pin | |
| 29 | /RD | NC | CPU: read signal and read data<br>RGB: no connect | |
| 30 | /WR | NC | CPU: write signal and write data<br>RGB: no connect | |
| 31 | RS | SCL | CPU: data/ command selection pin<br>RGB: Serial Clock signal | |
| 32 | / CS | CS | Chip select signal | |
| 33 | GND | ENABLE | CPU: ground<br>RGB: a data enable signal | |
| 34 | GND | VSYNC | CPU: ground<br>RGB: frame synchronizing signal | |
| 35 | GND | HSYNC | CPU: ground<br>RGB: frame synchronizing signal | |
| 36 | GND | DOTCLK | CPU: ground<br>RGB: pixel clock signal | |
| 37 | TE | TE | CPU: tearing effect output<br>RGB: not used ,please open this pin | |
| 38 | VCCIO | VCCIO | I/O Pad and digital power supply | |
| 39 | VCC | VCC | Analog power supply | |
| 40 | IM0/1D | IM0/1D | System interface select | Note2 |
| 41 | IM1 | IM1 | System interface select | Note2 |
| 42 | IM2 | IM2 | System interface select | Note2 |
| 43 | GND | GND | Ground | |
| 44 | GND | GND | Ground | |
| 45 | GND | GND | Ground | |

Note1: The recommended connector: FH19SC-45S-0.5SH(0.5) (HRS)
Note2:

| IM2 | IM1 | IM0 | Interface | WR | RS/SCL | Data Bus use | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 8080 MCU 18-bits Parallel type II | WR | RS | DB8-DB1 | DB17-DB0: 18-bits data |
| 0 | 1 | 0 | 8080 MCU 16-bits Parallel type II | WR | RS | DB8-DB1 | DB17-DB10,<br>DB8-DB1: 16-bits data |
| 0 | 0 | 1 | 8080 MCU 9-bits Parallel type II | WR | RS | DB17-DB10 | DB17-DB9: 9-bits data |
| 0 | 1 | 1 | 8080 MCU 8-bits Parallel type II | WR | RS | DB17-DB10 | DB17-DB10: 8-bits data |
| 1 | 0 | ID | 3-wire serial interface | - | | | |
| 1 | 1 | 0 | 4-wire serial interface | | | | |
| 1 | 1 | 1 | SPI, HSIM interface | | | | |