

TFT DISPLAY SPECIFICATION



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SPECIFICATION

MODULE NO.: WF35UTYAIMNG0#

General Specification

Item	Dimension	Unit
Size	3.5	inch
Dot Matrix	320 × RGB × 480(TFT)	dots
Module dimension	68.7 (W) × 95.6 (H) × 4.61(D)	mm
Active area	48.96 × 73.44	mm
Pixel pitch	0.153 × 0.153	mm
LCD type	TFT, Normally Black, Transmissive	
View Direction	80/80/80/80	
Aspect Ratio	Portrait	
TFT Driver IC	ILI9488 or Equivalent	
TFT Interface	1-Lane MIPI	
Backlight Type	LED, Normally White	
PCAP IC	GT911 or Equivalent	
PCAP Interface	I2C	
PCAP FW Version	0x95	
PCAP Resolution	320*480	
Touch Panel	Projected Capacitive Touch Panel	
Surface	Glare	

*Color tone slight changed by temperature and driving voltage.

Absolute Maximum Ratings

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

Electrical Characteristics

1. Operating conditions:

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage for digital	IOVCC	—	—	1.8/2.8	3.3	V
Supply Voltage for analog	VCI	—	—	2.8	3.3	V
Power Supply for TFT Current	ICC	IOVCC=VCI =VCC=3.3V	—	13.6	—	mA
Supply Voltage For Touch Logic	VDDT	—	2.8	—	3.3	V

2. LED driving conditions

Parameter	Symbol	Min	Typ	Max	Unit
LED current	—	—	160	—	mA
LED voltage	LEDA	2.7	3.2	3.4	V
LED Life Time	—	—	50000	—	Hr

Interface

1. LCM PIN Definition

NO	Symbol	Function	I/O
1	VCI	A supply voltage to the analog circuit. Connect to an external power supply of 2.5 ~ 3.3V. Connect to a stabilizing capacitor between VCI and GND.	P
2	IOVCC	A supply voltage to the digital circuit. Connect to an external power supply of 1.65 ~ 3.3V.	P
3	RESET	Reset input signal Initialize the chip with a low input. Be sure to execute a power-on reset after supplying power.	I
4	GND	Ground	I
5	MIPI_CLK_P	Positive polarity of low voltage differential clock signal Leave the pin open when not in use.	I
6	MIPI_CLK_N	Negative polarity of low voltage differential clock signal Leave the pin open when not in use	I
7	GND	Ground	I
8	MIPI_DATA_P	Positive polarity of low voltage differential data signal Leave the pin open when not in use.	I
9	MIPI_DATA_N	Negative polarity of low voltage differential data signal Leave the pin open when not in use.	I
10	GND	Ground	I
11	VLED+	Anode of LED backlight.	
12	VLED-	Cathode of LED backlight	

2. CTP PIN Definition

Pin	Symbol	Function
1	VSS	Connect to system ground.
2	VDDT	Power Supply
3	SCL	I2C clock input
4	NC	No connect
5	SDA	I2C data input and output
6	NC	No connect
7	RST	External Reset, Low is active
8	NC	No connect
9	INT	External interrupt to the host
10	VSS	Connect to system ground.

The technical drawing illustrates the mechanical specifications of a 320XRGBX480 LCD module. It includes three main views: a top view, a side view, and a bottom view.

- Top View:** Shows the overall dimensions of the module, including the outer dimensions (TP OD 68.70, TFT OD 54.50) and inner dimensions (TP VA 50.36, TFT AA 48.96). The central area is labeled "320XRGBX480". The CTP Zero point(0,0) is indicated. Dimensions for the pull tape and contact sides are also provided.
- Side View:** Shows the profile of the module, highlighting the metal frame, the 3M55260 adhesive (T=0.2mm), and the bending areas. The total height is 95.00 AD, and the frame thickness is 4.61±0.5.
- Bottom View:** Details the component area, including the CTP FPC (10 pins) and TFT FPC (12 pins). It shows the locations of the stiffeners and contact sides, along with specific dimensions for the bending areas and component placement.

Pin Configurations:

CTP FPC		TFT FPC	
NO.	SYMBOL	NO.	SYMBOL
1	VSS	1	VCI
2	VDDT	2	IOVCC
3	SCL	3	RESET
4	NC	4	GND
5	SDA	5	MIPI_CLK_P
6	NC	6	MIPI_CLK_N
7	RST	7	GND
8	NC	8	MIPI_DATA_P
9	INT	9	MIPI_DATA_N
10	VSS	10	GND
		11	VLED+
		12	VLED-

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