

TFT DISPLAY SPECIFICATION



WINSTAR Display Co.,Ltd.
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SPECIFICATION

MODULE NO.: WF40CTYAQMNG10#

General Specifications

Item	Dimension	Unit
Size	3.97	inch
Dot Matrix	480× 3(RGB) × 800	dots
Module dimension	67.14 (H) * 106.85 (W) * 3.8	mm
Active area	51.84(H)*86.4 (V)	mm
Pixel pitch	0.108(H)*0.108(V)	mm
LCD type	TFT, Normally Black, Transmissive	
View Direction	IPS	
Aspect Ratio	Portrait	
TFT Interface	2-Lanes MIPI	
TFT Driver IC	ST7701S or Equivalent	
Backlight Type	LED ,Normally White	
CTP Driver IC	GT911 or Equivalent	
CTP Interface	I2C	
CTP FW Version	65	
CTP Resolution	480*800	
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. Typical Operation Conditions

Item	Symbol	Values			Unit
		Min.	Typ.	Max.	
Interface Supply Voltage	VCI	2.8	-	3.3	V
Power voltage	IOVCC	1.65	1.8	3.3	V
Current for Driver(White)	ICI	-	65	98	mA
Supply CTP	VDDT 2.8V	2.7	2.8	3.3	V
	IDDT 2.8V	-	20	30	mA

2. Backlight Driving Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit
LED current	I _{LED}	-	40	-	mA
LED voltage	V _{LED+}	13.5	15	17	V
LED Life Time		50,000	-	-	Hr

Interface

1. LCM PIN Definition

Pin	Symbol	Function
1	GND	Power ground
2-5	NC	No connect
6	GND	Power ground
7	D0N	MIPI DSI differential data pair (Data lane 0)
8	D0P	
9	GND	Power ground
10	CLK_N	MIPI DSI differential clock pair
11	CLK_P	
12	GND	Power ground
13	D1N	MIPI DSI differential data pair(Data lane 1)
14	D1P	
15	GND	Power ground
16	IOVCC	I/O and interface power supply (1.8V)
17	RESET	Reset input
18	TE	Tearing effect output pin.
19	VCI	Analog power supply
20	VCI	Analog power supply
21	NC	No connect
22	LEDK	Power for LED backlight cathode
23	LEDA	Power for LED backlight anode
24	GND	Power ground

2. CTP PIN Definition

Pin	Symbol	Function
1	VSS	Ground for analog circuit
2	VDDT 2.8V	Power Supply : +2.8V
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	Ground for analog circuit

The technical drawing illustrates the dimensions and components of the LED display module. It includes a top view, a side view, and a cross-sectional view.

Top View Dimensions:

- Overall width: 106.85 ± 0.15 (LENS.OD)
- Overall height: 51.07 ± 0.5
- Internal width dimensions: 96.85 (LCM OD), 87.40 ± 0.2 (LENS. VA), 86.40 (AA)
- Internal height dimensions: 7.00 , 2.50 , 2.65 , 7.15
- Module width: 67.14 ± 0.15 (LENS.OD), 57.14 (LCM OD), 52.84 ± 0.2 (LENS. VA), 51.84 (AA)
- Module height: 480 (RGB)* 800
- Black printing area: $(480,800)$
- EMI film thickness: 1.50 max
- Stiffener thickness: 0.30 ± 0.05
- Contact side thickness: 0.30 ± 0.05
- Bottom dimensions: 22.67 ± 0.5 , 12.50 ± 0.1 , 5.00 , 4.00 , 12.17 ± 0.5 , 5.50 ± 0.1 , 0.50 ± 0.1

Side View Dimensions:

- Overall width: 59.94 ± 0.2 (SENSOR OD)
- Overall height: 98.40 ± 0.2 (SENSOR OD)
- Internal width dimensions: 5.00 , 5.00
- Internal height dimensions: 8.25 ± 0.5 (Bending Area), 1.540
- EMI film thickness: 1.50 max
- Stiffener thickness: 0.30 ± 0.05
- Contact side thickness: 0.30 ± 0.05
- Bottom dimensions: 3.50 , 24 , 1 , 0.30 ± 0.05 , 11.50 ± 0.1 , 23.00 , 6.00 ± 0.3

Cross-sectional View Dimensions:

- Overall width: 59.94 ± 0.2 (SENSOR OD)
- Overall height: 98.40 ± 0.2 (SENSOR OD)
- Internal width dimensions: 5.00 , 5.00
- Internal height dimensions: 8.25 ± 0.5 (Bending Area), 1.540
- EMI film thickness: 1.50 max
- Stiffener thickness: 0.30 ± 0.05
- Contact side thickness: 0.30 ± 0.05
- Bottom dimensions: 3.50 , 24 , 1 , 0.30 ± 0.05 , 11.50 ± 0.1 , 23.00 , 6.00 ± 0.3

Pinout Table:

PIN No.	SYMBOL	PIN No.	Pin Name
1	VSS	1	GND
2	VDDT 2.8V	2	NC
3	SCL	3	NC
4	NC	4	NC
5	SDA	5	NC
6	NC	6	GND
7	/RST	7	DON
8	NC	8	DOP
9	/INT	9	GND
10	VSS	10	CLK_N
		11	CLK_P
		12	GND
		13	D1N
		14	D1P
		15	GND
		16	IOVCC
		17	RESET
		18	TE
		19	VCI
		20	VCI
		21	NC
		22	LEDK
		23	LEDA
		24	GND

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