

TFT DISPLAY SPECIFICATION



WINSTAR Display Co.,Ltd.
華凌光電股份有限公司



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MODULE NO.: WF50FSYBGDST0

General Specifications

Item	Dimension	Unit
Size	5.0	inch
Dot Matrix	800× 3(RGB) × 480	dots
Module dimension	138.7 (W) × 75.8 (H) × 12.8(D)(MAX)	mm
Active area	108(W) × 64.8 (H)	mm
Pixel pitch	0.135(W) × 0.135(H)	mm
LCD type	TFT, Normally Black, Transmissive	
View Direction	80/80/80/80	
Aspect Ratio	5:3	
Backlight Type	LED, Normally White	
TFT Controller IC	BT816Q	
TFT Interface	SPI/QSPI	
Touch Panel	Resistive Touch Panel	
Surface	Anti-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

Operating conditions:

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage For VDD	VDD	—	3.1	3.3	3.5	V
Supply Current For VDD	IDD	VDD=3.3V	—	96	144	mA
Supply Voltage For VLED	VLED	—	4.5	5	5.5	V
Supply Current For VLED	ILED	VLED=+5V	—	334	500	mA

Interface

LCM PIN Definition (CON 5)

Pin	Symbol	I/O	Function
1	VDD	P	3.3V power supply input
2	GND	P	Ground
3	SCK	I	SPI clock input
4	MISO	O	SPI Single mode: SPI MISO output SPI Dual/Quad mode: SPI data line 1
5	MOSI	I	SPI Single mode: SPI MOSI input SPI Dual/Quad mode: SPI data line 0
6	CS	I	SPI slave select input
7	INT	OD/O	Interrupt to host, open drain output(default) or push-pull output, active low
8	PD_N	I	Chip power down mode control input, active low. Connect to MCU GPIO for power management or hardware reset function
9	GPIO2	I/O	General purpose IO 2
10	GPIO3	I/O	General purpose IO 3
11	IO2	I/O	SPI Single/Dual mode: General purpose IO 0 SPI Quad mode: SPI data line 2
12	IO3	I/O	SPI Single/Dual mode: General purpose IO 1 SPI Quad mode: SPI data line 3
13	NC	-	No connection
14	NC	-	No connection
15	NC	-	No connection
16	NC	-	No connection
17	VLED	P	5V power supply input
18	VLED	P	5V power supply input
19	GND	P	Ground
20	GND	P	Ground

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